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## Objective and subjective quality of life of first-admitted women and men with schizophrenia

Received: 2 June 1997 / Accepted: 14 July 1998

**Abstract** Empirical studies have shown that there are differences between women and men with respect to the onset of schizophrenia and the development of their mental and social conditions. It was therefore the goal of this study to assess the objective life situation and subjective quality of life, as well as the differences, similarities and interrelations, at the onset of schizophrenia in women and men. Ninety schizophrenic patients were interviewed between the second and fourth weeks of their first hospital stay using the Berlin Quality of Life Profile, and rated according to the BPRS. Areas of social problems (work, living circumstances, safety and drug abuse) had become manifest with several of the patients, particularly among the young men, prior to first admission. Although objective conditions, gender and psychopathology have an impact on the subjective quality of life, it cannot be fully explained by them. Multivariate analyses have demonstrated that the factors influencing it are probably different for women and men, and schizophrenic women appraise their life circumstances in a different manner from men, as is true for differences between the statements of acutely and chronically ill patients. It can be concluded from the results of this study that psychiatric services should offer specific social support measures before or at first hospital admission and not after the illness has become chronic. The subjective construct of global quality of life apparently differs from one sample to another, and gender-related aspects, among others, have an impact on it.

**Key words** Schizophrenia · Quality of life · First admission · Gender-related aspects in schizophrenia

### Introduction

Maintaining or improving the quality of life of the chronic mentally ill has been a stated goal of psychiatric care. As a result, most quality-of-life studies in the field of psychiatry have thus far focussed on chronic mental patients. Although there is no general consensus on how to define quality of life, there is broad agreement to utilize statements on satisfaction with life in general and with various individual domains of life as indicators of subjective quality of life. Most authors also collect objective data about the patients' life circumstances as criteria of objective individual quality of life. Some important findings have thus been made (for review see Lauer 1993). Studies aimed at understanding the situation of the persons concerned and formulating guidelines of action have investigated mainly the quality of life in various treatment, care and service settings. They have demonstrated the favourable effect of clozapine therapy on the quality of life (Meltzer et al. 1990; Meltzer 1992), the effectiveness of psychiatric community care programs, special interventions and specific methods of case management (Bigelow et al. 1982; Huxley and Warner 1992; McClary et al. 1989; Stein and Test 1980). Advantages and disadvantages of deinstitutionalization as well as of various living situations have been described in detail (Fiore et al. 1991; Gibbons and Butler 1987; Lauer 1991 b; Lehman et al. 1986; McCarthy and Nelson 1991; Oliver 1991 b; Oliver and Mohamad 1992; Pinkney et al. 1991). Studies addressing fundamental issues around the factors influencing the quality of life have established various moderator variables of subjective quality of life. They have shown that objective life circumstances, psychopathology (particularly non-specific depressive symptoms), but also other factors such as self-esteem, have an effect on subjective quality of life (Heinrichs et al. 1984; Lauer 1991 a, b; Lehman 1983 a, b, 1988; Levitt et al. 1990; Meltzer 1992; Mueser et al. 1991; Oliver 1991 a; Simpson et al. 1989), and satisfaction with the various domains of life appears to be decisive for global well-being (Lehman 1983 a;

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Levitt et al. 1990; Oliver 1991 a). Nevertheless, the subjective quality of life of chronic mental patients cannot be reduced to these factors but is a meaningful independent construct (Priebe et al. 1998) for which it has been possible to establish a rough framework of determinants.

In the studies cited, most of the groups investigated were, diagnostically speaking, heterogeneous and not differentiated in terms of stage of illness; gender-related aspects rarely received detailed consideration. However, many studies describing the different mental and social careers of schizophrenic women and men have shown that gender-related approaches may make an essential contribution to the understanding of the course of the illness (for review see Röder-Wanner and Priebe 1995). It therefore was the objective of this study to assess the quality of life of schizophrenic women and men at a defined point in the course of their illness (first hospital admission). Another point of interest was the question as to whether the schizophrenic patients' quality of life at this early stage of their illness compared negatively to that of the general population, as has been shown for chronically sick patients.

The questions to be investigated by this study were defined as follows:

1. What are the objective life situations of first-admitted schizophrenic women and men?
2. What is the patient's subjective quality of life? Are differences in the life circumstances of the women and men interviewed reflected in differences in their satisfaction with the various life areas and with life in general?
3. What are the impacts of objective life circumstances, psychopathology and gender on satisfaction with the individual domains of life?
4. Can the same objective and subjective indicators of quality of life be used to explain global satisfaction with life of both first-admitted female and first-admitted male patients?

## Methods

This study was carried out between March 1994 and February 1995 in 90 patients (60 women and 30 men) with a diagnosis of schizophrenia or schizophreniform disorders between the second and fourth weeks of their first hospital stay in one of eight independent, community-centred psychiatric wards in Berlin and Potsdam (Germany). The sample size corresponds to the intended sample size with more women because quality of life in female schizophrenic patients was the special focus of the study. Patients aged under 18 and over 60 years as well as patients whose knowledge of German did not suffice for the interview, were excluded from the study. Preliminary sampling was effected by the respective wards upon initial diagnosis. The final diagnosis was made, according to ICD-10 (F 20: 85 patients and 23: 4 women and 1 man), by the investigator who had no clinical relationship with the patients. Two patients of the preliminary sample were omitted because of differences in diagnosis. None of the remaining 90 patients refused the interview, and 2 women did not complete it. The assessment instrument employed was the Berlin Quality of Life Profile (Priebe et al. 1995), an adapted version of the Lancashire Quality of Life Profile (Oliver 1991 a; Oliver et al. 1996) which has proven useful in several studies conducted by the authors (Hoffmann et al. 1997, 1998; Kaiser et al. 1996, 1997; Priebe et al. 1996, 1998; Röder-Wanner et al. 1997). The questionnaire permits an evaluation of

the patients' objective circumstances, their subjective satisfaction with nine specific life domains as well as their general life satisfaction. The patients were asked to rate satisfaction on a seven-point scale ranging from 1 = absolutely dissatisfied to 7 = fully satisfied. Psychopathology was assessed during the same interview session by means of the Brief Psychiatric Rating Scale (BPRS).

## Results

### Life circumstances of first-admitted men and women

#### *Socio-demographic characteristics*

Statistical comparisons were done either with *t*-tests or with chi-square tests. The mean age of the women admitted to hospital for schizophrenia or schizophreniform disorders for the first time was 33 years ( $32.8 \pm 10.6$ , 20–59 years). Compared with the male patients' mean age of 25 years ( $25.2 \pm 6.0$ , 18–44 years), there was a significant difference of 8 years ( $p < 0.000$ ).

The women's educational level tends to be lower than that of the men who more often finished higher education; however, the difference is not statistically significant. On the whole, the patients' education appears to be about the same as that of the general population. According to the Data Report of 1994, approximately 7% of all pupils leave school without completing lower-level secondary education; in the study sample, 8% of the women and 7% of the men had no school-leaving examination. Sixteen to 26% of the general population aged between 20 and 49 years (subdivided into three age groups) have higher-level secondary or equivalent education. The corresponding rates in our sample were 22% for the female and 34% for the male patients (n.s.).

In contrast to this, there was a marked difference between the schizophrenic women and men at this early stage of their illness with respect to vocational training. Whereas more of the women had completed an apprenticeship or college education (67 vs 43%;  $p < 0.05$ ), the rate of dropouts was higher for men (10 vs 20%; n.s.).

More women than men tended to be in paid employment (60 vs 40%;  $p < 0.1$ ). When working they earned as much as men ( $1802.5 \pm 766.9$  vs  $1805 \pm 725.9$  DM). The proportion of patients registered as jobless was the same for both genders (12% of the women and 23% of the men; n.s.). Related to the number of active persons, this percentage is 16% for the women and 37% for the men ( $p < 0.1$ ) showing, particularly for the male patients, an important deviation from the statistics for the general population of Berlin (13.4% women and 12.9% men in 1994; figures by the Berlin State Bureau of Statistics). In addition to the standardized questions, all patients were asked open-ended questions concerning their work career. During the year preceding their first hospital admission, 27% of the men and 18% of the women (n.s.) interviewed had lost their jobs (this figure also contains patients who, though jobless, had not yet registered as such). Seventeen percent of the men and 7% of the women (n.s.) had been dismissed. In 10% (men) and 12% (women) of cases the patients themselves had decided to leave (some during the trial period, some shortly upon return to employment after

a prolonged period of joblessness or maternity leave). The work situation of 35% of the women and 33% of the men had changed during the year preceding hospital admission. They had either lost their jobs or changed their workplace. Twenty-six percent of the women and almost a third (30%) of the men were convinced that difficulties arising at their workplace were associated with their illness.

First-admitted women on average had more monthly spending money than the men ( $1631 \pm 725$  vs  $1223 \pm 841$  DM,  $p < 0.05$ ). Nevertheless, more than a third of both the female (40%) and the male interviewees (37%) stated that there had been periods during the previous year during which they had not had enough money to get by in their daily lives. Eight and 13%, respectively (n.s.), of the patient sample received state benefits (social security benefits or rent subsidies) because of their financial situation. However, this percentage does not compare negatively with that of the general population of Berlin in which 9% of women and 8% of men collected social security benefits in 1993, and approximately 11% of all Berlin households (198,718 of 1,842,100) received rent subsidies (figures by the Berlin State Bureau of Statistics).

Most patients lived in a rented flat (93% of the women and 86% of the men). As many as 7% of the women and 14% of the men were homeless or lived in a boarding house or residential home provided by the Social Security Office. Discounting those living in residential homes, the percentage of homeless persons came down to 3% for women but remained unchanged at 14% for men ( $p < 0.1$ ). The figures issued by the Berlin State Bureau of Statistics for 1993 show 11,603 homeless persons in the western part of the city who turned to facilities for homeless people; the number of unknown cases is estimated to range from 2000 to 4000 persons. Based on a number of 2,176,474 inhabitants registered in West Berlin in 1993, this is equal to a total percentage of homeless people of 0.5 to 0.7%. By comparison, the proportion of persons without domicile is conspicuously high among first-admitted patients. Among the subjects interviewed, more women than men lived alone (49 vs 28%;  $p < 0.1$ ) or with their own family (40 vs 17%;  $p < 0.05$ ), whereas more men still lived with their family of origin (12 vs 37%;  $p < 0.01$ ). Sixty percent of the women and 40% of the men ( $p < 0.1$ ) had wished to move or make some fundamental change in their living situation during the year before first admission but had not been successful.

#### *Social relations and leisure activities*

Compared with male patients, more first-admitted female patients currently had or had had a partner (70 vs 30%;  $p < 0.001$ ) and/or children (41 vs 10%;  $p < 0.01$ ). This is not surprising because first-admitted women were on average past the mean marriage age of women in Germany (26 years), whereas male patients on average were younger than the mean marriage age for men (29 years; Data Report of 1994). Despite having their own family, almost two thirds of the women and men (65 vs 60%; n.s.) also

had daily or weekly contact with their family of origin, only few had less than monthly contact, and they had often desired even closer contact with their family of origin during the year preceding hospital admission. However, this had not been possible. In contrast to other life areas but in keeping with the statements on their work situation, both women (24%) and men (33%; n.s.) often mentioned that difficulties associated with their illness had arisen with their family or their partner. As may be expected, female patients had a different role in their environment from the men. When living together with other persons they more often carried full responsibility for the household (66 vs 5%;  $p < 0.001$ ) and, in comparison with the men, there was a higher number of women taking care of children living in their households (61 vs 0%;  $p < 0.05$ ). Contrary to expectations, however, the women interviewees tended to experience less role conflict, and if they did, they did not feel as adversely affected by it as the men (too little time for family because of job: 55 vs 67%, n.s.; resulting high stress: 22 vs 83%;  $p < 0.01$ ; too little time/energy for job because of family: 6 vs 33%,  $p < 0.05$ ; resulting high stress: 33 vs 50%, n.s.). These statements have to be considered with two points in mind. The respective subgroups (particularly the men) often tend to become very small, and for male patients the adverse effects of conflicting roles in the family and work situation will concern mainly their family of origin and thus their role as son. In contrast, for female patients such effects concern mainly their role as a partner or mother.

First-admitted patients still had most of their social relationships with friends or acquaintances. More than three quarters of both women and men had a close friend of either gender (78 vs 70%, n.s.) and also a reliable friend to whom they could turn for help (75 vs 80%; n.s.). Prior to hospital admission, they were used to seeing friends or acquaintances on average once or twice weekly (1.6 vs 1.6). The percentage of persons in the general population having a circle of friends is approximately the same (69%; Noelle-Neumann 1993). Neither women nor men frequently experienced difficulties with their friends or acquaintances which were associated with their illness (12 vs 17%; n.s.). However, more men than women felt that their role in the family was adversely affected by relations with friends and acquaintances (too little time for family because of friends: 33 vs 15%,  $p < 0.1$ ; resulting high stress: 50 vs 0%,  $p < 0.1$ ).

With respect to leisure activities, the patients were asked if during the month preceding hospital admission, they had engaged in some sport, had been to a bar or restaurant, to the cinema, the theatre or a concert or had gone shopping, if they had gone on car, bus or train rides, had watched TV or listened to the radio. Both female and male interviewees reported having engaged in four to five of the six leisure activities suggested ( $4.3 \pm 1.1$  vs  $4.4 \pm 1.3$ ; n.s.). Ninety to 95% of them replied in the affirmative to questions concerning TV or radio, shopping, car, bus or train rides. Two thirds recalled having been to a bar or restaurant during this period, and little more than half had participated in a cultural event. The activity least engaged in (one third of the men and a quarter of the women) was

physical exercise or sports. More first-admitted women than first-admitted men would have liked to have had more leisure activities in the past year (80 vs 57%;  $p < 0.05$ ). Female patients judged leisure activities to be the domain in which they experienced the least difficulties associated with their illness, whereas male patients reported such problems significantly more often (7 vs 27%;  $p < 0.01$ ). For the latter, the leisure domain came in third place with respect to difficulties associated with their illness, after the areas of family and work.

### Safety and legal aspects

During the 12 months prior to their admission, the male patients lived in less safe circumstances than the women. In comparison with the latter, they were more often assaulted or beaten (40 vs 23%,  $p < 0.1$ , or accused of having committed a legal offence, (33 vs 8%;  $p < 0.01$ ). In the general population, too, six times more men than women come into conflict with the law (Data Report of 1994).

### Health and drug abuse

There was no difference in BPRS total score between the first-admitted women and men; neither was there any in the subscores, with the exception of the category of anergia, where men had a higher mean value (see Table 1).

The proportion of first-admitted women using medical services is higher than that of men, which coincides with the proportions in the general population (Elkeles and Seifert 1992); however, it shows significantly only in the treatment of physical problems. In the year before hospital admission more women than men had seen a doctor for physical ailments or illnesses (57 vs 27%;  $p < 0.01$ ).

Fifty-three percent of the men but only one woman (2%;  $p < 0.000$ ) reported hashish abuse over periods from 1 to 10 years (mean period 4 years). More than half of them regularly consumed 0.5–2 g daily according to their own statements. Seen in retrospect, in more than half of the hashish users the first drug abuse occurred some time before the subjectively perceived changes in behaviour (in most cases social retreat) or emotional experience. (The two questions were posed at different points in the interview so as to avoid any association.) More men than women stated periodic alcohol abuse (13 vs 3%;  $p < 0.1$ ).

**Table 1** BPRS total score and subscores in first-admitted patients

|                        | Women       | Men        |            |
|------------------------|-------------|------------|------------|
| BPRS sum score         | 47.8 ± 11.1 | 48.8 ± 9.4 | n.s.       |
| Anxiety/depression     | 11.4 ± 3.2  | 10.8 ± 3.2 | n.s.       |
| Anergia                | 10.2 ± 3.4  | 11.9 ± 3.3 | $p < 0.05$ |
| Thought disturbance    | 10.4 ± 4.1  | 10.7 ± 3.7 | n.s.       |
| Activation             | 6.8 ± 3.2   | 7.0 ± 2.5  | n.s.       |
| Hostile-suspiciousness | 9.0 ± 3.4   | 8.4 ± 2.9  | n.s.       |

**Table 2** Mean satisfaction of first-admitted schizophrenic patients with life domains

| Satisfaction with      | Women     | Men                      |
|------------------------|-----------|--------------------------|
| Life in general        | 3.9 ± 1.7 | 3.9 ± 1.5                |
| Mental health          | 4.0 ± 1.8 | 4.3 ± 1.9                |
| Work situation         | 4.3 ± 1.9 | 3.9 ± 1.7                |
| Finances               | 4.4 ± 1.8 | 3.8 ± 1.7                |
| Living situation       | 4.3 ± 1.8 | 4.9 ± 1.8                |
| Personal safety        | 4.2 ± 1.6 | 4.8 ± 1.3 <sup>(x)</sup> |
| Leisure activities     | 4.9 ± 1.5 | 4.7 ± 1.3                |
| Family                 | 4.9 ± 1.3 | 5.4 ± 1.4 <sup>(x)</sup> |
| Getting on with others | 5.0 ± 1.3 | 4.9 ± 1.3                |
| Friends                | 5.1 ± 1.5 | 4.8 ± 1.1                |

<sup>(x)</sup> $p < 0.1$

**Table 3** Percentage of satisfied women and men

| Satisfaction with | Schizophrenic patients <sup>a</sup> |                     | General population <sup>b</sup> |     |
|-------------------|-------------------------------------|---------------------|---------------------------------|-----|
|                   | Women                               | Men                 | Women                           | Men |
| Work (employed)   | 53.8                                | 52.9                | 78                              | 81  |
| Finances          | 50.0                                | 23.3*               | 71                              | 69  |
| Partnership       | 48.1                                | 88.9*               | 92                              | 91  |
| Living situation  | 48.8                                | 66.6 <sup>(x)</sup> | 89                              | 88  |
| Health in general | 56.7                                | 73.3                | 82                              | 85  |
| Life in general   | 33.3                                | 36.7                | 89                              | 89  |

<sup>a</sup>Satisfied: scores of 5–7 (rather satisfied, satisfied or completely satisfied) on the seven-point satisfaction scale

<sup>b</sup>Rather satisfied or completely satisfied; EMNID Jan./Feb. 1994

<sup>(x)</sup> $p \leq 0.1$

\* $p \leq 0.05$

### Subjective quality-of-life indicators

#### Global life satisfaction and satisfaction with specific life domains

The patients were least satisfied with their life in general, with their mental health, work situation and financial circumstances. The domains of living situation and personal safety were judged somewhat more favourably, especially by men. The greatest satisfaction was stated for the domains of leisure activities, family, the way of getting on with others and relations with friends and acquaintances (see Table 2).

Despite their more favourable life circumstances, first-admitted women did not state greater satisfaction than their male counterparts, neither with life in general nor with any specific life area. In the domain of personal safety and family (and, when the question was asked, for couple relationships) they even tended to be less satisfied than male patients (see Table 2). Similarly, irrespective of their better situation in some life domains, the proportion of satisfied women was not larger in any life domain, with the exception of finances, where there was no objective difference (see Table 3).

**Table 4** Satisfaction with one life domain: effect of an objective variable and of gender (age as a covariate, entered first)

| Satisfaction with  | Independent objective variable                   | Effect of objective variable |          |          | Effect of gender |          |          | Effect of interaction |          |          |
|--------------------|--|------------------------------|----------|----------|------------------|----------|----------|-----------------------|----------|----------|
|                    |  | <i>df</i>                    | <i>F</i> | <i>p</i> | <i>df</i>        | <i>F</i> | <i>p</i> | <i>df</i>             | <i>F</i> | <i>p</i> |
| Friends            | Having a close friendship                        | 1                            | 26.2     | < 0.000  | 1                | 4.4      | < 0.05   | 1                     | 15.8     | < 0.000  |
|                    | Support  | 1                            | 11.4     | < 0.001  | 1                | 3.6      | < 0.1    | 1                     | 7.0      | < 0.1    |
| Living situation   | Living alone                                     | 1                            | 0.2      | n.s.     | 1                | 3.6      | < 0.1    | 1                     | 0.0      | n.s.     |
|                    | Living with family                               | 1                            | 2.1      | n.s.     | 1                | 3.5      | < 0.1    | 1                     | 2.6      | n.s.     |
|                    | Living with parents                              | 1                            | 5.4      | < 0.05   | 1                | 3.6      | < 0.1    | 1                     | 0.0      | n.s.     |
| Leisure activities | Number of leisure activities                     | 1                            | 3.0      | < 0.1    | 1                | 0.3      | n.s.     | 1                     | 3.6      | < 0.1    |
| Work situation     | Employed or not                                  | 1                            | 10.5     | < 0.01   | 1                | 0.5      | n.s.     | 1                     | 0.6      | n.s.     |
| Family             | Frequency of contacts                            | 1                            | 9.7      | < 0.01   | 1                | 0.7      | n.s.     | 1                     | 0.2      | n.s.     |
| Safety             | Having been a victim                             | 1                            | 5.1      | < 0.05   | 1                | 0.5      | n.s.     | 1                     | 0.6      | n.s.     |
| Mental health      | BPRS total score (separated according to median) | 1                            | 7.9      | < 0.01   | 1                | 0.7      | n.s.     | 1                     | 0.3      | n.s.     |
|                    | anxiety/depression                               | 1                            | 9.9      | < 0.01   | 1                | 0.7      | n.s.     | 1                     | 0.7      | n.s.     |
|                    | Anergia  | 1                            | 3.6      | < 0.1    | 1                | 0.7      | n.s.     | 1                     | 0.0      | n.s.     |
|                    | Thought disturbance                              | 1                            | 6.0      | < 0.05   | 1                | 0.7      | n.s.     | 1                     | 0.1      | n.s.     |
|                    | Activation                                       | 1                            | 0.9      | n.s.     | 1                | 0.7      | n.s.     | 1                     | 0.2      | n.s.     |
|                    | Hostile–suspiciousness                           | 1                            | 2.2      | n.s.     | 1                | 0.7      | n.s.     | 1                     | 0.0      | n.s.     |

The patients' global life satisfaction and satisfaction with all specific life domains were less than those of women and men in the general population. At the time of first admission the proportion of satisfied persons was already clearly lower than in the general population in any life domain (see Table 3).

#### *Factors influencing satisfaction with specific life domains*

To establish the influencing factors, analyses of variance were performed using satisfaction with a specific life domain as dependent variable, and objective circumstances in the same life domain and gender as independent variables. In two different procedures, age and the BPRS total score were taken as covariates. The results of analysis of variance were as follows (see Table 4):

1. With only one exception, the respective objective situation in each life domain was shown to contribute to explaining satisfaction. Only the satisfaction of first-admitted patients with their financial situation was independent of the amount of their monthly spending money. However, this is not surprising in view of the fact that the patients were asked how much monthly spending money they had. In the case of the young men who often lived with their family of origin, for instance, this amount may not have met their actual financial requirements, and most probably the same applied for most married women. One may thus suspect that in this domain the objective and subjective quality-of-life indicators do not refer to exactly the same thing, and consequently the objective indicator does not significantly contribute to explaining the variance of the subjective indicator.

2. The proportion of the variance of the satisfaction with specific domains explained by the respective objective indicator is low; it ranges between 2 and 10% for the specific life domains.

3. With the objective condition kept constant, gender plays a role in the domain of social relations and tends to influence the living situation. Schizophrenic women, even in the same objective circumstances, feel more satisfied with friends and less satisfied with the living situation. Interactions were found in the areas of social relations and of leisure activities. The impact of the objective condition on satisfaction with these areas is stronger in the female patients.

4. Age as a covariate made no contribution to the explanation of the satisfaction with life domains in this sample, except on satisfaction with personal safety, where older age meant less satisfaction.

5. The BPRS total score, i.e., the extent of overall current psychopathology, entered as a covariate, also played no role in explaining the variance of satisfaction with any life domain except that of mental health, where its impact could also be shown, when total score or subscores were separated according to the mean.

#### *Determinants of global life satisfaction*

Three stepwise multiple regression analyses were carried out to establish the essential determinants of global life satisfaction. The first was conducted with variables indicating objective life circumstances and symptomatology. Objective indicators covered each of the interesting life domains: age, monthly spending money, number of leisure

**Table 5** Determinants of global well-being

| <b>Objective variables (BPRS included)</b> |   |
|--|---|
| <i>Women</i>                               | <i>Men</i>                                      |
| BPRS sum score                             | No. of leisure activities                       |
| No. of leisure activities                  | Spouse or partner                               |
| $r^2 = 20\%$                               | $r^2 = 29\%$                                    |
| multiple $R = 0.45$                        | multiple $R = 0.53$                             |
| <b>Subjective variables</b>                |   |
| <i>Women</i>                               | <i>Men</i>                                      |
| Satisfaction with mental health            | Satisfaction with way of getting on with others |
|  | Satisfaction with mental health                 |
| $r^2 = 25\%$                               | $r^2 = 41\%$                                    |
| multiple $R = 0.50$                        | multiple $R = 0.64$                             |
| <b>Objective and subjective variables</b>  |   |
| <i>Women</i>                               | <i>Men</i>                                      |
| Satisfaction with mental health            | Satisfaction with way of getting on with others |
|  | Satisfaction with mental health                 |
|  | No. of leisure activities                       |
| $r^2 = 25\%$                               | $r^2 = 51\%$                                    |
| multiple $R = 0.50$                        | multiple $R = 0.71$                             |

activities (out of six leisure items suggested) in the month prior to admission and BPRS total score. The following items were entered as dummy variables: employment, living with the family, existence of a partnership, existence of close friendships, contact with the family of origin, involvement in physical violence or clashes with the law, contact with the medical care system prior to admission because of psychological problems. Altogether 11 objective indicators entered in the first regression analysis. A second analysis was made taking as independent factors

eight subjective quality-of-life indicators: satisfaction with financial situation, living circumstances, personal safety, leisure activities, the way of getting on with others, relations with friends and acquaintances, family, mental health – and BPRS total score. In a third regression analysis, the impact of those objective variables which had shown to be of a significant influence in the first regression analysis and subjective variables (altogether ten predictors) was examined. The results are given in Table 5.

Compared with other studies on mental patients (Lehman 1983a) and the authors' studies on populations of mainly chronic schizophrenic patients (Hoffmann et al. 1997, 1998, Kaiser et al. 1996, 1997, Röder-Wanner et al. 1997, Priebe et al. 1998), the explanatory value of the objective variables is relatively high at 20 and 29%, respectively. Only for first-admitted men were the subjective variables alone clearly a better predictor of life satisfaction than the objective variables alone. For this group, the consideration of both subjective and objective indicators of life quality results in a still better prediction, whereas for the women's group the subjective determinants alone already reach the highest explanatory value.

The predictors of global life satisfaction differ slightly between female and male patients. The BPRS total score plays a role only for women; however, it comes to nought in view of the paramount importance of their satisfaction with mental health (which evidently functions as an independent factor) when, in addition to the objective variables, the subjective ones are taken into consideration. In the given situation of their first hospital stay, the female subjects rated their global life satisfaction with respect to their satisfaction with mental health, and neglected all other life domains. When only the objective circumstances were evaluated, the number of leisure activities was decisive for the male subjects' rating of global life satisfaction, whereas having a partner ranked second and was much less important. With regard to the subjective predictors, the men, unlike the women, attributed much greater

**Table 6** Dimensions of satisfaction

|    |                        | <i>Women</i>      |                | <i>Men</i>             |                |
|----|------------------------|-------------------|----------------|------------------------|----------------|
|    |                        | Satisfaction with | Factor loading | Satisfaction with      | Factor loading |
| F1 | Mental health          |                   | 0.86           | Life in general        | 0.85           |
|    | Life in general        |                   | 0.79           | Getting on with others | 0.80           |
|    |                        |                   |                | Mental health          | 0.58           |
|    |                        |                   |                | Leisure activities     | 0.43           |
| F2 | Living situation       |                   | 0.78           | Living situation       | 0.84           |
|    | Family                 |                   | 0.75           | Family                 | 0.71           |
|    | Safety                 |                   | 0.44           | Leisure activities     | 0.63           |
|    |                        |                   |                | Safety                 | 0.51           |
| F3 | Work situation         |                   | 0.77           | Work situation         | 0.80           |
|    | Finances               |                   | 0.68           | Finances               | 0.78           |
|    | Safety                 |                   | -0.47          | Safety                 | 0.43           |
| F4 | Leisure activities     |                   | 0.73           | Friends                | 0.87           |
|    | Getting on with others |                   | 0.72           | Work situation         | -0.47          |
|    | Friends                |                   | 0.60           |                        |                |

Personal resources

Private resources

Social resources

Interpersonal resources

importance to satisfaction with the way they got on with others than to satisfaction with mental health. The former predictor retained its decisive weight even when both subjective and objective variables were evaluated. A common feature in first-admitted female and male patients was the fact that during their first hospital stay, only few life domains were important for their global life satisfaction.

Not unlike this sample of first-admitted patients, a population of mostly chronic schizophrenic patients investigated by the authors in another study (Röder-Wanner et al. 1977) rated their global life satisfaction mainly with regard to the subjective criteria, i.e. satisfaction with life domains. However, whereas the first-admitted patients considered just one or only few aspects of their life circumstances important for appraising their quality of life, the chronic mental patients took a broader view and included most of the aforementioned life domains in their ratings of global life satisfaction.

### *Dimensions of satisfaction*

To probe further into the question of possible gender-related structural differences in stated satisfaction, the investigators performed a factor analysis (principal component analysis with Varimax rotation) of satisfaction with the specific life domains and global life satisfaction (see Table 6).

Four factors can be discerned: personal, private, sociostructural factors and a social relations factor.

Overall appraisal of global life satisfaction coincides with the "personal factor".

The women and men hardly differ on these dimensions. There are slight differences within the four factors which, however, do not affect the differentiation between factors. The men grouped their satisfaction with the way they got on with others together with the personal factor, satisfaction with leisure activities with the private one and a fraction of it with the personal factor, whereas women rated both more in connection with their social relations. The discrete negative loading of satisfaction with work situation on the social-relations factor demonstrated for male subjects and the less clear loading of female subjects' satisfaction with safety might reflect the specific situation of the young men (who belong to a "clique" but have no job) and of the women (who draw their subjective sense of safety more from the private area). In an overall perspective, however, there are more similarities than differences in the structure of satisfaction with respect to the female and male subjects. The slight differences may, in part, be seen as contingent on gender-related role aspects.

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## **Discussion**

The objective situation of first-admitted schizophrenic patients and possible clinical consequences

For clinical practice it is, above all, important that there are four very critical life domains even at first admission

of the patients: work, living situations, safety and legal aspects, and drug abuse. The patients (particularly men) often have no or incomplete vocational training, a higher percentage of them are jobless than in the general population, they had often lost their jobs or experienced a change in their work situation during the year prior to hospital admission and had problems at work associated with their illness. A small number of patients were homeless, but their percentage is disproportionately high compared with that in the general population. Approximately half of them had wished in vain for a substantial change in their living situation during the year preceding admission. During the same period, they had often been involved in physical violence, be it as a victim or aggressor. Half of the young male patients, moreover, were regular hashish users, and a markedly lower but clinically still remarkable number of them periodically abused alcohol. These conditions which are essentially unfavourable for future social development had already evolved before the first hospital admission.

The domains of family of origin, social relations with friends and acquaintances and leisure activities, on the other hand, appeared at first sight to pose no problems. However, difficulties in these domains were relatively often reported to have arisen in association with the illness.

The differences between female and male patients with respect to health or previous visits to the doctor, aggressive encounters and drug abuse are comparable to those in the general population, with women consulting a doctor more often, having fewer aggressive encounters and abusing drugs and alcohol less than men. Concerning vocational training, work situation, money and living circumstances, the women investigated in this study had a more favourable situation and carried more responsibility than the men. At this point in life, fewer men were independent in the areas of work, money and private life. The men had less responsibility to carry for others, more and sometimes drastic changes in their social roles and subjectively experienced more stress in connection with their different social roles. The comparatively less favourable social circumstances of schizophrenic men in general described in the literature can thus be perceived already at their first contact with a psychiatric hospital.

For this reason, it would evidently be beneficial to offer social service and support measures at first hospital admission and not after the illness has become chronic. A third of first-admitted men and even more women were in psychiatric treatment during the year before first admission. Family physicians and practicing psychiatrists should therefore have at their disposal ways and means of offering or, at least, of helping their patients to obtain support through family therapy, supporting services in daily life, at work and with living situations, and financial aid. Family therapy could take into account the described specific roles of schizophrenic women and men in their own family or family of origin. To counteract developing social deficiencies, it may be advantageous to give more importance to social work and offer more work therapy in hospitals or daycare facilities for first-admitted schizophrenic

patients. The existing social problems need to be considered as adverse factors for the further course of the illness, no matter whether they result from the course of the illness prior to first admission or are independent of the schizophrenic condition, and they should be relieved as early as possible by means of the measures mentioned previously or other specific measures.

The process of appraisal of life circumstances and some conclusions for further research

The patients' difficult circumstances are also reflected in their emotional experience. Not unlike chronically ill persons, first-admitted schizophrenic patients are less satisfied with all life domains and with life in general than the general population. The mean value for the global life satisfaction of the female and male subjects was just below 4, i.e. in the undecided range and lower than the mean life satisfaction generally stated. Such low values have thus far been demonstrated neither for the general population nor for chronic schizophrenic patients. It may be assumed that they express either the special circumstances and life crisis leading to the first treatment in a psychiatric hospital, or the stress with which the treatment situation itself is associated for many patients. This finding is remarkable because it contradicts the general belief that the comparatively low subjective quality of life of chronic schizophrenic patients (when compared with that of the general population) results mainly from a gradual deterioration over a long period of time. The first-admitted patients are most dissatisfied with their life in general, with their health, work and financial situations. Their subjective quality of life is best in the domains of family, social relations and leisure activities. Contrary to expectations and despite their objectively more favourable life circumstances, the first-admitted women were no more satisfied with life in general nor with any life domain than the men. In fact, they were even less satisfied with the (objectively more favourable) domains of personal safety and family. Nevertheless, a significant though quantitatively minor relation of objective life circumstances to satisfaction with the specific life domains can be demonstrated. It is surprising that the overall degree of psychopathology affected only satisfaction with mental health but not with other life domains. However, individual aspects of psychopathology, and above all non-specific anxious-depressive symptoms, do have a relation to satisfaction with a few life areas. Gender-related aspects are shown to play a role in subjective satisfaction, though only with few life domains. The relation of objective criteria of life circumstances to satisfaction with specific life domains also seems to be gender related. This may indicate that the appraisal processes of women and men in these life domains differ.

When appraising all life circumstances, the patients' view, upon first hospital admission, is clearly limited to their current situation (in contrast to the view of chronic patients). Although the similarities prevail, there are again

indications that the process of appraisal is not the same in schizophrenic women and men and varies also between acutely sick and chronic patients. This is true for both the ratings of global life satisfaction and the groupings of those life domains which, in view of the results of factor analysis, are rated from the same perspective. Some conclusions, although speculative, may be drawn from these results for further research.

Even with acutely ill patients, satisfaction with specific life domains, which are the essential indicators of subjective life quality, cannot be reduced to a reflection of current psychopathology or objective life circumstances.

Similarities in the scores of subjective quality-of-life indicators sometimes seem to obscure qualitative differences. The appraisal processes for specific life domains and life in general, and the subjective grouping of life domains, are not identical in schizophrenic women and men. The construct of global life satisfaction does not mean the same thing to acutely ill persons and to chronic patients. What follows from these hypothetical conclusions for future studies is the realization that comparisons of the subjective quality of life of different groups cannot be made without reservations. Comparisons of mean values of satisfaction therefore have only limited value as evidence, and the appraisal processes in different groups should be specially investigated.

Although this study has yielded constructive results, the explanation of satisfaction with the specific life domains achieved by means of the variables analysed is not altogether satisfactory. While it has indeed been possible to explain a relatively high percentage of the variance of global life satisfaction by the examined variables as compared with other studies, possibly due to the homogeneity of the sample, it would be desirable for future studies to be conducted with the objective of obtaining a broader basis for valid conclusions. Further essential determinants of subjective quality of life should be investigated in order to draw still more concrete and specific conclusions as to the psychiatric care of defined target groups. Investigations of comparative processes such as subjective comparison with friends and acquaintances (which constitute essential determinants of satisfaction in the general population; see Glatzer and Zapf 1984), qualitative approaches and process analyses may be conducive to further development in research and clinical care.

**Acknowledgements** The authors thank the following institutions for their support: Ernst-von-Bergmann-Klinikum, Karl-Bonhoeffer-Nervenlinik, Krankenhaus Moabit, Nervenlinik Spandau, Krankenhaus Neukoelln, St.-Joseph-Krankenhaus. This study was supported by the Federal Minister of Education and Research through the Berlin Public Health Research Association.

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