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The quality of life of the mentally ill living in residential facilities

Findings from a national survey in Italy

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Abstract Quality of Life (QOL) is an outcome measure particularly useful to assess the effects of deinstitutionalization policies. To date no large-scale study has been conducted in residential facilities (RFs). Participants included 1492 subjects living in 174 RFs (20% of the total) randomly sampled in 15 Italian regions. Assessment instruments included the WHOQOL-Bref, the GAF, and the Physical Health Index (PHI). WHOQOL scores of residents were compared with those of healthy subjects ($N = 65$) and outpatients with schizophrenia ($N = 162$). Multivariate analyses were used to examine the relationship between selected patients' characteristics and WHOQOL scores. Mean WHOQOL scores of residents were similar to those of

outpatients with schizophrenia, and substantially lower than those of healthy controls. Lower scores on WHOQOL domains were associated with schizophrenia and non-affective psychoses, unipolar depression, anxiety or somatoform disorders, shorter duration of illness, positive, negative or mood symptoms, lower GAF scores, no participation in internal activities, and PHI score. Our findings are consistent with previous studies. The present study highlights a marked difference between patients in RFs and healthy controls in the social domain. This suggests the need of well-designed rehabilitation plans, tailored to patients' needs, to foster the development of their independence and, ultimately, improve their QOL.

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Introduction

In the last two decades Quality of Life (QOL) has become a key outcome measure in medicine and psychiatry (Katschnig et al. 1997). It has also evolved into a key outcome variable to assess the effects of international deinstitutionalization policies. While these policies have promoted a marked reduction in the number of psychiatric patients living in Mental Hospitals (MHs), the number of patients living in different types of Residential Facilities (RFs) with different degrees of supervision has proportionally increased. RFs include a variety of residential settings that have been named in several ways over time, such as group homes, intermediate facilities, wards in the community, boarding-homes, supervised hostels or apartments, etc.

Several critics of deinstitutionalization have argued that the change has sometimes been less substantial than advocated by many, or even only 'cosmetic', and

that several RFs represent indeed ‘small asylums’, despite the small dimensions, the close staff-patients interaction and the efforts to create a home-like environment. A construct such as QOL seems to be an appropriate outcome measure to test the reality of these criticisms and in general to evaluate the effects of deinstitutionalization.

Previous studies assessing severely mentally ill patients living in RFs have shown that they generally report a higher QOL as compared to long-stay patients in traditional MHs (Chan et al. 2003; Horan et al. 2001; Lehman et al. 1986, 1991; Mares et al. 2002; Okin et al. 1995; Shepherd et al. 1996; Warner & Huxley 1993). However, to date most of the studies carried out in residential settings have investigated samples of less than 100 subjects (Horan et al. 2001; Lehman et al. 1986, 1991; Shepherd et al. 1996; Simpson et al. 1989), and only a few 100–250 subjects (Auslander et al. 2001; Chan et al. 2003; Leisse and Kallert 2000; Mares et al. 2002). Therefore, many important questions about residents’ QOL in RFs remain to be answered.

The Italian National Institute of Health launched the ‘PROGRES’ project (PROGetto RESidenze, i.e., Residential Care Project) to evaluate residential care on a nationwide scale. In Phase 1, we gathered data on residents’ demographic and clinical characteristics, staffing arrangements, regional provision of RFs, functioning style and discharge rates of all Italian RFs: in this way 1370 RFs for the mentally ill have been identified, with 17,138 beds (de Girolamo et al. 2002). The aim of the subsequent Phase 2 was to assess in detail a representative sample of 20% of the Italian RFs and the patients living there.

This paper focuses on the subjective QOL of patients in RFs assessed with the WHOQOL-Bref (Skevington et al. 2004a). First, we compared their QOL with that of healthy subjects and of outpatients with schizophrenia recruited at seven Departments of Mental Health in Italy. Then, we examined the relationship between QOL and demographic and clinical variables. Based on previous studies exploring factors associated with QOL in psychiatric patients, we selected gender and age (Duno et al. 2001); diagnosis and psychopathological symptoms (Norman et al. 2000; Ritsner et al. 2000); social support (Yanos et al. 2001); psychosocial functioning, duration of illness (Bengtsson-Tops and Hansson 1999) and physical disabilities (Auslander et al. 2001). We also assessed the interactive effect of other variables, including previous stay in another RF, length of stay in the current facility, and involvement in the facility’s activities.

Methods

The methodology of the ‘PROGRES’ project has already been described in detail (de Girolamo et al. 2002, 2005; Santone et al. 2005; Picardi et al. 2006), and will only be briefly summarized here. In Phase 1, all Italian RFs were surveyed and the general characteristics of 1370 facilities and the patients living there ($N = 15,943$) were assessed (de

Girolamo et al. 2002). All regions were officially involved in Phase 2, with the exception of the Abruzzo region that did not provide data because of organizational problems. Among the 20 regions involved in Phase 2, 15 expressed interest for the QOL study; in these regions 174 RFs were randomly selected for Phase 2.

Each RF was visited by a research assistant who completed a standardized assessment of the facility and then of each resident with the facility manager and staff. A structured interview covering socio-demographic, clinical and treatment information was administered to the facility manager. Several assessment instruments were also filled in:

- the Global Assessment of Functioning (GAF) scale, which provides a summary score reflecting the level of psychological, social, and occupational functioning on a scale from 1 (persistent and extremely severe difficulty in functioning) to 100 (superior functioning in every domain) (Moos et al. 2000);
- the Physical Health Index (PHI) for the assessment of physical health status and the level of physical disability; this simple measure was developed in the framework of the Team of Assessment of Psychiatric Services project (O’Driscoll and Leff 1993). The rater is asked to indicate the presence and severity of any physical disability in the following areas: cardiovascular, respiratory, digestive, urogenital, motor, central nervous system, endocrinological-metabolic, and infectious diseases (including HIV+).

Quality of life was assessed using the WHOQOL-Bref, a self-report, patient-centered instrument developed by the World Health Organization, that explores various QOL dimensions considered as the most important across cultures and different disease conditions. It includes 26 items tapping 4 main domains (physical domain, psychological domain, social relationships, and environment). The four domains include the following facets: (1) physical domain: pain and discomfort, energy and fatigue, sleep and rest, mobility, activities of daily living, dependence on drugs and medical aids, and work capacity; (2) psychological domain: positive feelings, thinking, learning, memory and concentration, self-esteem, bodily image and appearance, negative feelings, and religion/spirituality/personal beliefs; (3) social relationships: personal relationships, social support, and sexual activity; (4) environment: physical safety and security, home environment, financial resources, health and social care, opportunities to acquire new information and skills, participation in and opportunities for recreation/leisure, physical environment and transport. Domain scores range from 0 to 100, with higher scores indicating better QOL.

The WHOQOL-Bref was designed as a self-report instrument, although both assisted and interviewer-based administrations are possible. The WHOQOL project has shown evidence of good psychometric properties for this instrument (Skevington et al. 2004). The Italian version has been validated (de Girolamo et al. 2000).

In order to determine to what extent QOL was impaired in patients living in RFs, we compared the WHOQOL domain scores of our sample with those of two different control groups:

- (i) A total of 162 outpatients with schizophrenia, recruited at seven Departments of Mental Health in Italy (112 males, 50 females, mean age 36.8, $SD = 10$, range 18–67) (Becchi et al. 2004);
- (ii) healthy controls (33 males, 32 females, mean age = 42.1, $SD = 14.9$, range 18–74) recruited for the Italian validation study of the WHOQOL-Bref (de Girolamo et al. 2000).

Statistical analyses

Analysis of covariance (ANCOVA) was carried out to compare mean scores on the four WHOQOL-Bref domains in our sample with those of the two comparison groups, adjusting for gender and age. Post-hoc comparisons were conducted using Tamhane test that allows for non-homogeneous variance between groups. A Bonferroni correction to the significance level was applied to adjust for multiple comparisons.

Multivariate analyses of variance (MANOVA) and covariance (MANCOVA) were used to explore the relationship between patient characteristics and the four WHOQOL domains, used as dependent variables. This analytical strategy was adopted to take into account the correlation among the four domains. The independent variables were selected a priori based on specific hypotheses and findings of the QOL literature and analyzed individually in separate MANOVA models. The variables included gender, age, diagnosis, current presence of positive and negative psychotic symptoms, mood symptoms, global functioning, social support network, number of physical disabilities, previous stay in another residential facility, length of current stay in the residential facility, and participation in activities in the facility.

All variables significantly ($P < 0.01$) associated with at least one of the WHOQOL domains were used as independent variables in an overall MANCOVA model.

Results

Overall 2151 patients were surveyed: 1492(69.4%) completed the WHOQOL-Bref, whereas 69(3.2%) returned incomplete questionnaires and 590(27.4%) did not fill them out. Incomplete questionnaires were discarded from the analyses. Of the 590 who did not fill out the WHOQOL-Bref, 353 (16.4% of all surveyed patients) were cognitively deteriorated or severely impaired and 237(11.0% of all surveyed patients) refused to undertake the assessment. Compared with those who refused to complete the questionnaire, participants were significantly younger (48 vs. 52, $P < 0.001$), more likely to be female (39.2% vs. 32.1%, $P = 0.04$) and less likely to have a diagnosis of schizophrenia or other psychotic disorders (66.9% vs. 86.4%, $P < 0.001$). There was no significant difference between the two groups on marital status, educational level, and number of severe physical disabilities.

■ Socio-demographic characteristics

Participants ($N = 1492$) had a mean age of 48.1 years ($SD = 13.8$), were mostly males, unmarried, with low-medium education, and unemployed (Table 1). Most patients ($N = 1271$, 86%) had a pension, which was usually a disability pension due to a mental disorder ($N = 1094$, 73%); 251 patients (17.0%) were legally incompetent.

■ Clinical characteristics

Two-thirds of patients had a diagnosis of schizophrenia or other psychotic disorders, with a long duration of illness (mean 24.8 years, $SD = 13.4$) (Table 2). The mean age at first contact with mental health services was 24.8 years ($SD = 9.4$).

■ WHOQOL domain scores in the study sample and in two comparison groups

Mean scores on all WHOQOL domains were fairly similar in patients living in RFs and outpatients with schizophrenia (Table 3). The WHOQOL scores did

Table 1 Demographic characteristics of the sample ($N = 1492$)

		N	%
Gender	Male	907	60.8
	Female	585	39.2
Age groups	16–29	131	8.8
	30–39	313	21.0
	40–49	355	23.8
	50–64	496	33.2
	65+	197	13.2
Marital status	Never married	1185	79.7
	Separated or divorced	182	12.2
	Widowed	44	3.0
	Married or living with partner	76	5.1
Educational level	Illiterate	126	8.8
	Primary school	536	37.2
	Junior high school	530	36.9
	Senior high school	190	13.2
	University degree	56	3.9
Occupational status	Currently unemployed	1231	84.0
	Full or part-time ordinary work	43	2.9
	Supported employment	171	11.7
	Other (housewife, student, etc.)	21	1.4
Best occupational status ever achieved	Never worked (including homemakers and students)	531	36.7
	Unskilled worker	522	36.0
	Skilled worker	380	26.3
	Professional	14	1.0
Former place of residence	Home	404	27.7
	Other RF	311	21.3
	General Hospital Psychiatry Ward	267	18.3
	Mental Hospital	361	24.8
	Forensic Mental Hospital	36	2.5
	Other (e.g., jail, homeless, general hospital, etc.)	79	5.4

not differ between these two groups after adjusting for gender and age in ANCOVA.

On the contrary, patients in RFs had significantly lower WHOQOL scores compared with healthy controls. Differences from controls were substantial, and were greater in the physical, psychological, and social domains (on average, about 18 points) than in the environment domain (9 points).

■ Demographic and clinical correlates of QOL

MANOVAs/MANCOVAs analyses were carried out to identify the variables significantly associated with WHOQOL domain scores. Each variable was tested in a separate model (Table 4).

Male gender and increasing age were associated with higher scores on the 'environment' domain.

Among clinical variables, diagnostic status, duration of illness and positive, negative, or mood symptoms were significantly associated with QOL. Patients with unipolar depression, anxiety or somatoform disorders as well as patients with schizophrenia or other non-affective psychoses reported significantly lower levels of physical QOL than patients with organic mental disorders, personality disorders, and substance or alcohol dependence (Fig. 1). Moreover, patients with unipolar depression or anxiety/so-

Table 2 Clinical characteristics of the sample ($N = 1492$)

		<i>N</i>	%
Primary diagnosis	Schizophrenia spectrum disorders and delusional disorder	1003	67.2
	Personality disorders, substance or alcohol abuse	191	12.8
	Mental retardation and organic brain disorders (including dementia)	155	10.4
	Bipolar disorders	72	4.8
	Unipolar depression, anxiety disorders, somatoform disorders	64	4.3
	Missing	7	0.5
Symptom course*	Positive psychotic symptoms:		
	Full remission	736	49.3
	Partial remission	303	20.3
	Persistent symptoms	407	27.3
	Negative psychotic symptoms:		
	Full remission	883	59.2
	Partial remission	218	14.6
	Persistent symptoms	340	22.8
	Mood symptoms:		
Length of stay in the RF (years)	Full remission	1055	70.7
	Partial remission	213	14.3
	Persistent symptoms	174	11.7
	Missing		
Moderate and severe physical disabilities (according to PHI)	<1	378	25.3
	1–3	537	36.1
	4–5	222	14.9
	6+	292	19.8
	Missing	63	4.2
Social support in the last year	Cardiovascular	120	8.0
	Respiratory	73	4.9
	Digestive	45	3.0
	Urogenital	57	3.8
	Motor	105	7.0
	Central nervous system	66	4.4
	Endocrinological-metabolic	108	7.2
	Infectious diseases (including HIV+)	26	1.8
	Available and effective	287	19.2
	Available but ineffective	458	30.7
	Potentially available but difficult to mobilize	315	21.1
	Absent	430	28.8
	Missing	2	0.1

*Numbers may not add to 1,492 and 100% respectively, due to some missing data

Table 3 Mean and standard deviation of the four WHOQOL domain scores in the study sample and in two comparison groups of outpatients with schizophrenia and healthy controls

	a. Study sample ($N = 1,492$)		b. Outpatients with schizophrenia ^a ($N = 162$)		c. Healthy controls ($N = 65$)		ANCOVA <i>F</i> (a vs. b, adjusted for age and gender)	ANCOVA <i>F</i> (a vs. c, adjusted for age and gender)
Domains	Mean	SD	Mean	SD	Mean	SD		
Physical	60.5	15.7	58.1	16.7	79.5	12.1	1.5, $P = 0.21$	76.3, $P < 0.001$
Psychological	52.0	15.8	53.7	17.8	70.9	14.1	3.3, $P = 0.068$	64.7, $P < 0.001$
Social	49.2	21.2	50.6	18.2	67.0	17.0	1.7, $P = 0.19$	25.3, $P < 0.001$
Environment	51.8	15.7	54.1	15.7	60.5	12.5	0.001, $P = 0.97$	7.7, $P = 0.006$

^a Scores on the four areas were derived from the WHOQOL-100

matofrom disorders reported lower psychological QOL than patients with substance abuse, organic mental disorders, and schizophrenia or other non-affective psychoses. Scores on the social domain were significantly lower in patients with personality disorders or schizophrenia or other non-affective psychoses compared with patients suffering from organic mental disorders. A longer duration of illness was associated with a higher score on the 'environment' domain. Moreover, patients with persistent negative or mood symptoms had lower scores on all WHOQOL areas, while persistent or only partially remitted po-

sitive symptoms were associated with lower scores only on the physical and environment domains.

As predicted, higher global functioning was strongly associated with all WHOQOL domains, as well as patients' participation in internal activities. Moreover, the number of moderate-severe physical disabilities was significantly associated with lower levels of physical QOL.

At odds with our expectations, neither the availability of social support nor a history of previous stay in another RF, nor the length of the current stay in the RF were associated with QOL scores.

Table 4 Results of multivariate analyses of variance and covariance

	Physical domain	Psychological domain	Social relationships domain	Environment domain
Gender	0.263	0.067	0.138	0.043
Age	0.746	0.273	0.159	<0.001
Diagnosis	0.001	0.001	0.015	0.307
Positive symptoms	0.001	0.214	0.313	0.013
Negative symptoms	0.001	0.007	0.018	0.001
Mood symptoms	<0.001	<0.001	0.031	0.007
Duration of illness	0.916	0.039	0.062	<0.001
GAF	<0.001	<0.001	<0.001	<0.001
Social support	0.688	0.098	0.377	0.098
Moderate-severe physical disab.	<0.001	0.095	0.785	0.532
Stay in other RF	0.420	0.944	0.614	0.742
Length of stay in the RF	0.639	0.177	0.895	0.031
Participation in activities	0.269	0.443	0.014	0.057

A final MANCOVA model was fit, including all variables associated with at least one of the WHOQOL areas at $P \leq 0.01$. Five of them (diagnosis, negative psychotic and mood symptoms, moderate-severe physical disabilities, and participation in internal activities) remained significantly associated at $P = 0.05$ level with at least one WHOQOL domain score (Fig. 2). Global functioning was not included in the final model because it has a high degree of overlap with QOL and accounts for a high percentage of variance of the WHOQOL domains, therefore canceling out the associations with other independent variables.

Discussion

In this paper, we report about subjective QOL and its correlates in a large sample of patients living in Italian RFs. Previous studies (Lehman et al. 1986, 1991; Kasckow et al. 2001), but not all (Chan et al. 2003), have suggested that the less restrictive the treatment setting, the higher the overall QOL scores. Other investigators have suggested that it is not the place of treatment in itself which affects QOL, but factors which include clinical severity, educational level, personal beliefs about the disorder and its treatment, and social support (Rossler et al. 1999). In this study, we did not find a poorer QOL among patients living in RFs compared with outpatients with a similar level of psychopathology who were living independently or with their families, and were therefore experiencing very different living conditions. While this finding corroborates the common opinion that objective and subjective QOL indices represent two different dimensions of QOL (Khatri et al. 2001; Sainfort et al. 1996), it may also reflect the home-like environment of most Italian RFs. As reported in detail in other papers (Picardi et al. in press), most Italian RFs have an outdoor garden or yard, and the average indoor space per resident is 36 m². The number of residents is usually limited, as the median number of residents per facility is 10. While a variety of internal rehabilitation activities (generally unstructured) are performed,

several external activities are also carried out: joining local clubs, involvement in activities carried out by local associations, and activities aimed to enhance awareness in the neighbors are promoted by about 70% of facilities. Support to the patient in prevocational, vocational training, job placement, and more independent housing is also available in about half of RFs. The relatively low rigidity of rules and the home-like atmosphere in most RFs in Italy may therefore account for the lack of substantial differences in reported QOL between patients living in RFs and patients with schizophrenia living in the community.

■ Socio-demographic and clinical variables, and patients' QOL

Consistently with previous studies (Bengtsson-Tops and Hansson 1999), we found that socio-demographic variables were only weakly associated with QOL levels. Age was associated only with environmental QOL, and this association was likely to be due to physical disability rather than age itself. Also, we did not find quantitative differences in QOL between men and women. This result suggests that gender-specific differences in QOL among psychiatric patients have more to do with qualitative than with quantitative aspects (Roder-Wanner et al. 1997). Gender differences in QOL might be more apparent among patients living in the community, where single male patients generally show low levels of QOL (Salokangas et al. 2001).

Also the finding of a negative relationship between QOL and the presence and severity of negative or depressive symptoms has been reported by other authors (Browne et al. 1996, 2000; Dickerson et al. 1998; Koivumaa-Honkanen et al. 1999; Reine et al. 2003; Hofer et al. 2005). On the other hand, the relationship between QOL and both positive psychotic symptomatology and the diagnosis of schizophrenia or other non-affective psychoses was much weaker. This finding, reported in other studies (Fitzgerald et al. 2001), may partly depend on the poor insight often associated with positive symptoms. Another

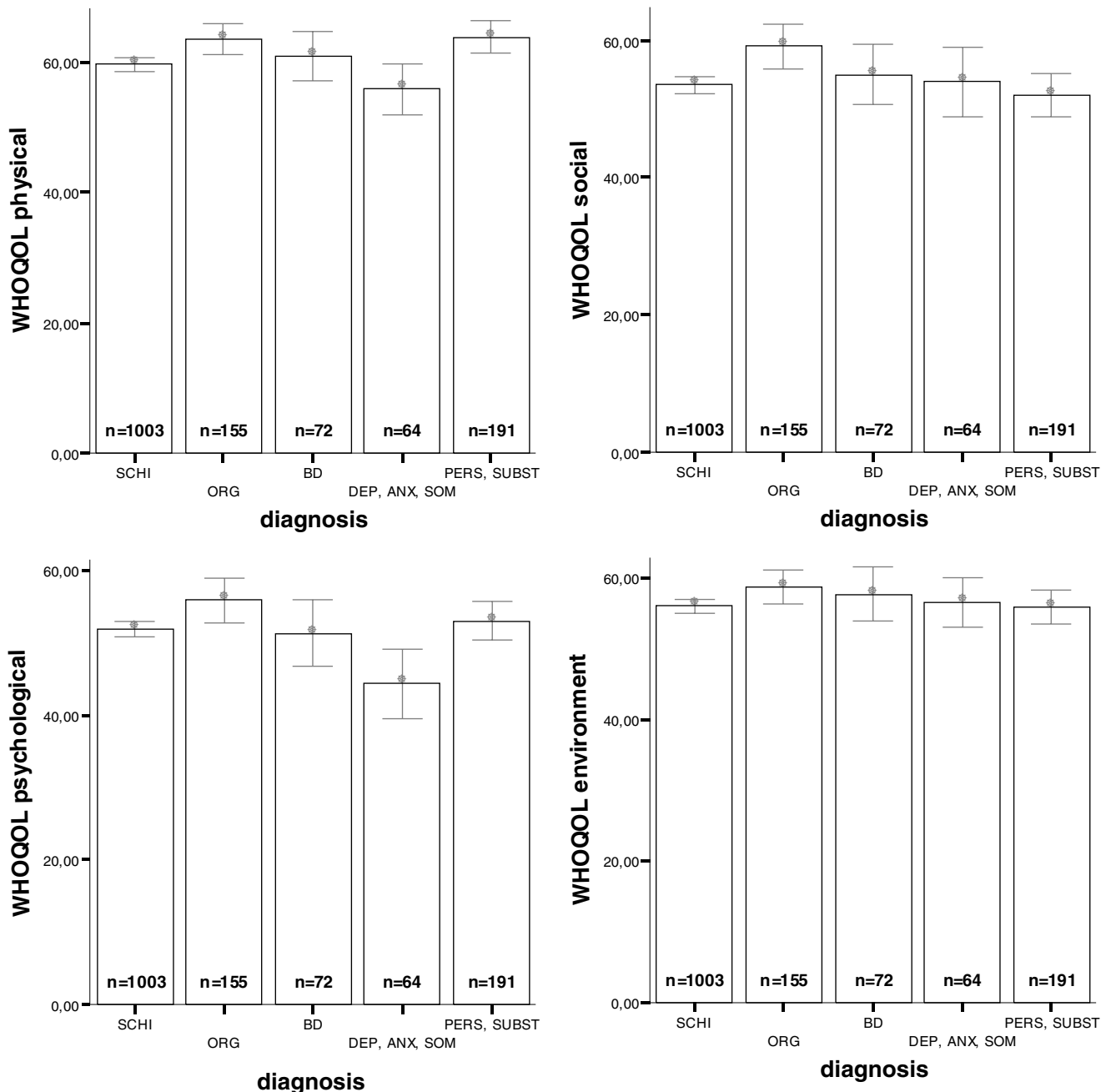


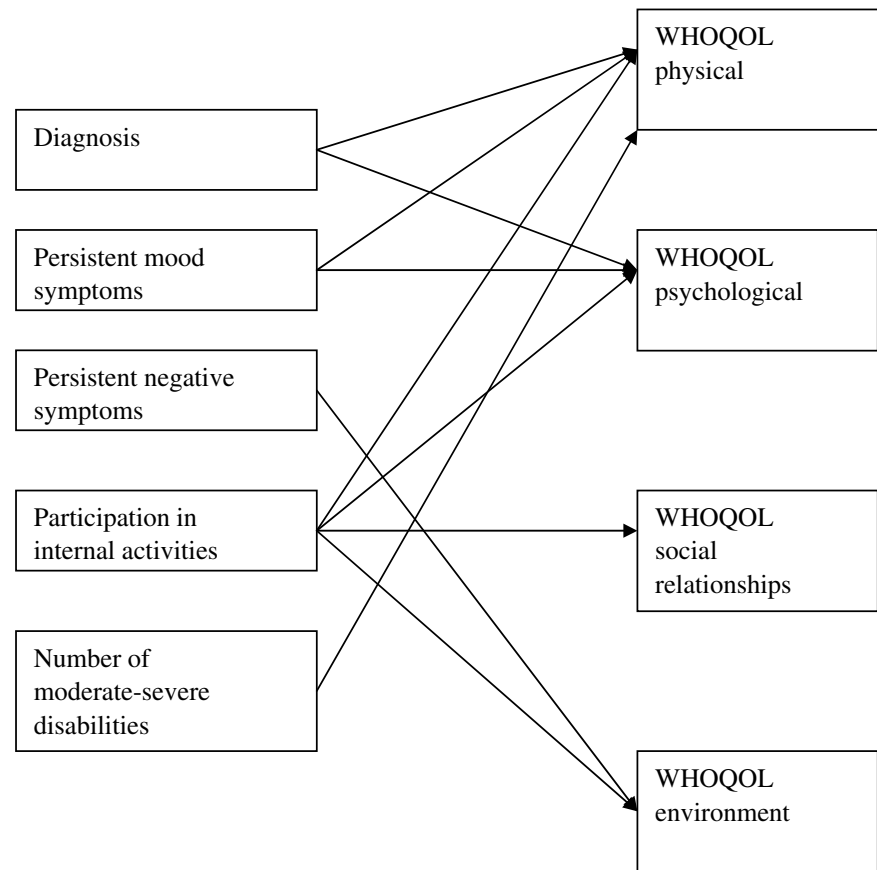
Fig. 1 Mean scores of WHOQOL physical and psychological domains by diagnosis (Diagnosis: SCHI = schizophrenia and related disorders; ORG = mental retardation and organic brain disorders (including dementia); BD = bipolar disorders; DEP, ANX, SOM = unipolar depression, anxiety disorders, somatoform disorders; PERS, SUBST = personality disorders and substance or alcohol abuse)

possible explanation (Norman et al. 2000) is that the assessment instruments do not tap specific QOL dimensions affected by positive symptoms.

Our finding of a correlation between social relationship-related QOL and involvement in internal activities is consistent with reports of an association between attitudes towards treatment and global QOL among psychotic patients (Hofer et al. 2005). At odds with previous reports (Rossler et al. 1999; Salokangas 1997), we did not find a significant relationship between QOL and the presence of a well-functioning

social support network. All patients received at least some level of social support from staff, and this might have partly obscured the relationship between QOL and the social support network outside the facility. In our study the assessment of the presence and adequacy of the social support network was also performed by the facility staff, while patients' QOL is mainly affected by their subjective perception of social support (Koivumaa-Honkanen et al. 1996; Rossler et al. 1999). Moreover, the actual interactions between patients and their support network to cope with life

Fig. 2 Clinical and social variables showing a significant association with WHOQOL domains



stressors and difficulties are another important issue possibly correlated with QOL (Rudnick and Kravetz 2001), which we did not assess.

While stabilization over time of the level and structure of subjective QOL among long-stay psychiatric inpatients has been reported (Kaiser et al. 1997), in our study the length of the current stay in the RF was only weakly associated with QOL scores, whereas a longer duration of illness was associated with higher environmental QOL. This finding might suggest that the effect of illness on perceived QOL is stronger than the effect of inpatient stay. Arguably, experiencing a severe psychiatric disorder has a particularly strong negative effect on a patient's QOL initially, but if the disorder becomes chronic, its subjective impact on QOL decreases through a change in personal plans and a lowering of expectations. Another recent study has found higher life satisfaction among long-term compared with short-term patients with schizophrenia, and this difference was indeed related to the direction of social comparisons (Franz et al. 2000). Patients with longer duration of illness and length of stay might also have developed a stronger therapeutic relationship with their treating staff, and there is some evidence suggesting that the quality of the therapeutic relationship may become more central to QOL in longer-term patients (McCabe et al. 1999).

■ QOL of residents and of healthy subjects

Compared with healthy subjects, patients living in RFs reported substantially lower levels of QOL. The differences were substantial in the physical, psychological, and social domains, while they were less evident in the environmental domain. While lower scores on the WHOQOL physical and psychological domains were expected, given the substantial level of impairment of these patients, the marked difference from healthy controls in the social domain raises concerns, given that the establishment of satisfactory social relationships both inside and outside the RF is a key prerequisite for patients in order to achieve an independent life. Patients appeared to be relatively more satisfied with their living conditions as measured by the WHOQOL environment domain. Other authors reported that psychiatric patients tend to display a relatively high level of satisfaction with 'material domains' of life, such as living conditions (Tempier et al. 1998).

■ Limitations of the study

First, the cross-sectional design of this study does not allow causal inferences to be made. A second, more important, limitation is that our assessment of QOL relied only on subjective appraisals by patients. There

is no single, universally accepted definition of QOL (Stedman 1996), and we mainly referred to the World Health Organization definition, which focuses on a subjective perspective. However, subjective appraisals and objective information about QOL are probably best viewed as different kind of data, because patients' subjective ratings of life satisfaction often bear little relation to their objective life circumstances (Warner 1999). Factor analytic studies also suggest that objective QOL variables and subjective life satisfaction ratings are distinct domains (Ruggeri et al. 2001; Warner 1999). Therefore, our study would have gained in strength if we had collected objective information about QOL to complement subjective appraisals by patients. The availability of information about living conditions, and patients' life in general, would have enabled us to grasp a more comprehensive and valid picture of patients' QOL. However, it is widely recognized that patients' personal views are particularly important and should be properly acknowledged (Warner 1999). Although subjective evaluations might be impaired to some extent in psychotic patients with poor insight (Doyle et al. 1999), clinically stable patients, even those with schizophrenia, seem to be able to evaluate and report their QOL with a high degree of reliability and concurrent validity (Voruganti et al. 1998). In conclusion, while there are no serious threats to the validity of our findings as far as subjective QOL is concerned, caution should be applied in generalizing our results. For instance, our findings do not rule out the possibility that psychotic patients living in RFs differ from psychotic patients living in the community on objective QOL variables such as living situation, safety, work, income, leisure, etc, despite the similarities in QOL subjective perception in these two groups.

Moreover, we were unable to obtain information about patients' extrapyramidal symptoms, particularly akathisia; indeed, side-effects of antipsychotic drugs have been found to be significantly associated with impaired QOL in several studies (Browne et al. 1996; Awad et al. 1997).

Finally, this study focused on patient-related determinants of QOL. Arguably, specific facility-related variables such as size, type of management (public vs. private), level of supervision, might be associated with QOL. A proper clarification of this issue requires a different analytical strategy, and will be the subject of another paper.

Conclusions

In the last decades, mental health care has seen a shift from symptom management to promotion of QOL, as both patients and their relatives consider QOL as one of the main targets of mental health care (Sartorius 1997), and users are more and more ac-

tively involved in research (Salvi et al. 2005). Overall, our findings underscore the need to carry out evidence-based rehabilitation activities in order to provide residents with a chance to be involved in social interactions outside the facilities, and possibly with sheltered work opportunities and social integration. Indeed, work, social relationships, and independence are aspects of QOL recognized as important by both patients and their treating clinicians (Angermeyer et al. 2001). Well-designed rehabilitation plans, tailored to each patient's needs, are mandatory to foster the development of independence, increase the likelihood of discharge, and, ultimately, improve patients' QOL.

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