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ORIGINAL ARTICLE

Quality of life and disability in patients with obsessive-compulsive disorder

J. Bobes[1]*, M.P. González[1], M.T. Bascarán[1], C. Arango[2], P.A. Sáiz[1], M. Bousoño[1]

[1] *Department of Psychiatry, University of Oviedo, Julián Claveria, 6, 33006 Oviedo, Spain;* [2] *Hospital Gregorio Marañón, Madrid, Spain*

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Summary – The aim of this study is to describe the situation of Spanish obsessive-compulsive disorder (OCD) patients and compare it to that of the general population and other patient groups.
Methods. Thirty-six OCD patients on maintenance treatment were evaluated using the Y-BOCS, SF-36, and DAS-S. Their SF-36 scores were compared to Spanish norms and to those obtained from U.S. OCD patients, schizophrenic outpatients, depressed outpatients, heroin dependents, patients on hemodialysis, and kidney transplant recipients.
Results. Sixty-one percent of the patients had severe or extremely severe symptoms. Their quality of life was worse when compared with the Spanish norms in all SF-36 areas, but especially with respect to mental health. In contrast to U.S. OCD patients, social functioning is more impaired in the Spanish OCD patients. OCD patients reported the same quality of life as schizophrenics in the areas of mental health, but better in the areas of physical health. Compared with heroin dependents and depressed patients, their quality of life was worse. On mental health scales, OCD patients scored worse than somatic patients.
Conclusions. OCD in the Spanish population was shown to be associated with worse quality of life than for any other patient group (including physical groups), except schizophrenics. © 2001 Éditions scientifiques et médicales Elsevier SAS

disability / obsessive-compulsive disorder / quality of life / SF-36

INTRODUCTION

Obsessive-compulsive disorder is the fourth most common psychiatric disorder, occurring in 2–3% of the U.S. population [14]. Furthermore, OCD is a chronic and disabling illness that impacts negatively on the academic, occupational, social, and family function of patients [11, 12, 17]. This impact carries over onto their families, friends, and society [12]. Indeed, OCD ranks tenth in the World Bank's and WHO's ten leading causes of disability and, in the case of women aged 15–44 years, OCD occupies the fifth position [22]. In spite of this situation, to our knowledge data on quality of life and disability has scarcely been reported in OCD patients.

Health-related quality of life is a multidimensional construct reflecting an individual's global physical and mental well-being [19]. A more detailed definition is that of Wenger and Furberg: "those attributes valued by patients, including: their resultant comfort or sense of well-being; the extent to which they were able to maintain reasonable physical, emotional, and intellec

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**Correspondence and reprints.*
E-mail address: bobes@correo.uniovi.es (J. Bobes).

tual function; and the degree to which they retain their ability to participate in valued activities within the family, in the workplace, and in the community" [21]. This concept is of special relevance in the field of chronic disorders, since these often have a negative effect upon health-related quality of life. In the case of OCD the few studies that do exist indicate that these patients have a poor quality of life.

We attempt here to describe how the patients' health-related quality of life and functioning are affected by OCD and to compare their quality of life to norms for the general Spanish population and to patients with other psychiatric and physical disorders. Our hypotheses are that 1) health-related quality of life in OCD patients is impaired, especially in the mental health areas; and 2) this impairment is equivalent to the impairment shown by schizophrenic patients and greater than that of depressed patients.

METHODS

Patients

Obsessive-compulsive patients

Thirty-six consecutive outpatients meeting ICD-10 criteria for OCD were included in the study. Patients were under maintenance treatment with different serotonergic medications. After receiving a complete explanation of the study, each patient gave oral consent to participate.

An experienced clinical interviewer administered an 'ad hoc' protocol to collect demographic information (i.e., age, gender, civil status, educational level, and somatic co-morbidity). To quantify the severity of the patients' obsessive-compulsive symptoms, we employed the Yale-Brown Obsessive Compulsive Scale (Y-BOCS) [9]. We used the World Health Organization Short Disability Assessment Schedule (WHO DAS-S) [13] to assess the disability level. The MOS 36-Item Short-Form Health Survey (SF-36) [20] was used for evaluating their health-related quality of life.

Spanish normative population

Norms for the Spanish population were obtained in a cross-sectional study of a multi-stage, stratified random sample of non-institutionalized individuals residing in Spain [2]. The final sample included 9,151 individuals (aged 18 or older) with a mean age of 45.2 years; 48.2% were male. Personal home interviews, including the SF-36, were performed. For most SF-36 areas, health-related quality of life was better among men and among younger groups ($P < .01$).

U.S. obsessive-compulsive patients

The data on the quality of life of 60 U.S. OCD patients [15] were used in the analysis. The mean age of this sample was 40.1 (10.6) years, of which 57% were male; the mean total Y-BOCS score at baseline was 26.8 (4.2).

Schizophrenic outpatients

The sample was made up of 362 non-acute schizophrenic outpatients (ICD-10 criteria) who participated in a multi-center Spanish study on quality of life in schizophrenia under maintenance treatment with risperidone [4]. Patients were included in the study when, having been on maintenance treatment with different antipsychotics, their clinicians opted to switch them to monotherapy with risperidone. This decision was made based on intolerance or lack of efficacy of the previous treatment. Quality of life was assessed at baseline and at 2, 4 and 8 months using the SF-36. The mean age was 34.3 (10.6) years, 72% were male, and the mean total score on BPRS (0–4 rating) at baseline was 23.8. Data from the SF-36 at baseline were included in this analysis.

Depressed outpatients

Data on quality of life from 729 depressed patients (ICD-10 criteria) included in a multi-center Spanish study on depression and venlafaxine were used in this analysis [3]. The mean age was 47.3 (13.4) years; 28% were male. For the present analysis, we decided to employ the data of quality of life (SF-36) at month 6, since at that time the patients were clinically stabilized and therefore more similar to the clinical condition of the OCD and schizophrenic patients included in the study.

Heroin dependents

Quality of life data for heroin dependents (ICD-10 criteria) remaining 4 years in a maintenance methadone program (MMP) in Asturias (northern Spain) were employed in the present study [6]. Of 132 patients who initiated treatment in that MMP, 49 remained after 4 years. Their mean age was 32.6 (4.8) years; 89.8% were male. Quality of life was assessed using the SF-36.

End-stage renal failure patients

This sample included all patients with end-stage renal failure who were on renal replacement therapy (hemodialysis or kidney transplant recipients with a function ing graft) in Asturias in 1996. A total of 170 patients on hemodialysis and 210 patients with a functioning graft were assessed using the SF-36 [16]. Mean ages were 63.7 (13.04) years (hemodialysis patients) and 49.7 (12.2) years (transplanted patients). The percentage of males was 51.2% and 66.7% respectively.

Assessment

Measurements of health-related quality of life

As no specific instrument for assessing quality of life in OCD patients exists, we decided to employ the SF-36, a generic instrument, allowing us to compare the health-related quality of life of our patients to that of the Spanish general population and to that of other chronic physical and mentally disordered patients.

The SF-36 is one of the most widely used health-related quality of life instruments. It is a short questionnaire with 36 items in eight multi-item scales: physical functioning, role-physical, bodily pain, general health, vitality, social functioning, role-emotional, and mental health; and two summary measures: physical health and mental health. The physical functioning, role-physical, and bodily pain contribute most to scoring of the physical health summary measure while the mental health, role-emotional, and social functioning scales contribute most to the mental health measure. The raw scores on the eight SF-36 scales range from 0 (worst possible health status measured by the questionnaire) to 100 (best possible health status). In contrast, the summary measures are scored using norm-based methods. They have a mean of 50 and a standard deviation of 10 in the general Spanish population, so scores above or below 50 are above or below the average in the general Spanish population. The Spanish version has demonstrated good psychometric properties [1].

Measurements of disability

The WHO DAS-S is a semi-structured interview developed for assessing and rating the consequences of mental disorders on the patient's life. It records the clinician's assessment of disabilities in the following four areas: maintenance of personal care, performance of tasks usual in one's occupation, functioning in relation to family and household members, and functioning in a broader social context. Each area is rated on a six-point scale where 0 = no disability at any time and 5 = the patient is severely disabled all of the time. In the assessment of the disability in each area, the clinician has to take into account both the severity of the impairment and its duration, and to compare the patient's functioning to that considered normal for a person of the same sex, age, and sociocultural background.

Table I. Demographic characteristics (age and gender) across the samples included in the health-related quality of life analysis.

	Mean age	*Gender (% of male)*
OCD patients	34.08	55.6
Spanish normative population	45.2[b]	48.2
U.S. OCD patients	40.1[b]	57
Schizophrenic outpatients	34.3	72[a]
Depressed outpatients	47.3[d]	28.3[c]
Heroin dependents	32.6	89.8[c]
Hemodialysis patients	63.7[d]	51.2
Kidney transplant patients	49.7[d]	66.7

Statistically significant differences (Student t-test and Z test) compared to OCD patients: a: $P < .05$; b: $P = .01$; c: $P < .0005$; d: P .0000

Data analysis

Demographic comparisons were made using the Student's t-test and the Z test. Quality of life comparisons were made using the Student t-test. The two-tailed P-values were used for all analyses, and P-values < .05 were considered to be statistically significant.

RESULTS

Demographic and clinical characteristics

The mean age of the OCD patients was 34.08 (11.4) years (range 13–85); 55.6% males. Marital status was single (50%), married (44.4%), and divorced (5.6%). Educational level was primary school (25%), high school (36.1%), and college or university degree (33.3%). Some 5.6% had not received any educational training. Only 13.9% had serious somatic co-morbidity. Compared with the other samples, our OCD patients were significantly younger than OCD patients from the US, Spanish normative population, depressed outpatients, and somatic patients (hemodialysis and kidney-transplanted). The percentage of women in our OCD sample was significantly higher than in the schizophrenic outpatients and heroin-dependent samples, and was significantly lower than that of depressed outpatients *(table I)*.

Our OCD patients' mean total score on the Y-BOCS was 23.66 (9.03), which is consistent with moderately severe symptoms. The mean subtotal scores were 12.11 (4.86) for obsessions and 11.56 (5.85) for compulsions.

Table II. Comparison between SF-36 mean scores from OCD patients and Spanish population norms.

	OCD *(N = 36)*	*Spanish population norms* *(N = 9,151)*	*Difference in standard deviation units*
Physical functioning (PF)	82.36 (24.21)	84.70	–.09
Role-physical (RP)	71.52 (36.91)	83.20	–.33
Bodily pain (BP)	72.80 (29.43)	79.00	–.22
General health (GH)[a]	51.11 (22.58)	68.30	–.77
Vitality (VT)[a]	45.27 (19.81)	66.90	–.97
Social functioning (SF)[a]	50.00 (31.48)	90.10	–2
Role-emotional (RE)[a]	37.03 (41.99)	88.60	–1.71
Mental health (MH)[a]	45.88 (21.77)	73.30	–1.36
Physical health	51.96		.19
Mental health	29.21		–2.07

Student *t*-test: a: $P = .0000$

Almost two-thirds (61.1%) of the patients have total scores on the Y-BOCS corresponding to severe or extremely severe symptoms. The mean age at onset of the illness was 27.5 (11.4) years. The Hamilton depression scale mean score was 14.72 (8.16), and 44.8% obtained scores ≥ 18.

Quality of life and disability data

Mean scores obtained in the SF-36 are displayed in *table II*. This table also shows the Spanish norms and the differences between both groups expressed in standard deviation units (mean score for OCD patients minus mean score for Spanish normative population divided by the standard deviation of the Spanish normative population score). OCD patients mean scores on all SF-36 scales fall below the Spanish norms. The area with the lowest level of health-related quality of life was social functioning (two standard deviation units below the Spanish population) followed by role-emotional and mental health (1.71 and 1.36 respectively). These differences between the OCD patients and the Spanish population reached statistical significance in the general health, vitality, social functioning, role-emotional, and mental health scales ($P = .0000$). The physical health summary measure is similar to that of the general population, while the mental health summary measure falls two standard deviation units below the average in the general Spanish population *(table II)*.

Compared to U.S. OCD patients *(table III)*, our patients reported significantly lower levels of quality of life in the areas of general health (69.4 vs 51.1) and social functioning (68.7 vs 50). Schizophrenic patients have significantly worse levels of quality of life in areas related to physical health: physical functioning (73.4 vs 82.3), role-physical (48.1 vs 71.5), and general health (42.3 vs 51.1). No significant differences were found between these two groups in the scales related to mental health summary measures. Both depressed and heroin-dependent patients showed significantly better levels of quality of life than OCD patients in the following scales: social functioning, role-emotional, and mental health. Furthermore, depressed patients also had better levels of quality of life in bodily pain and in vitality scales *(table III)*.

As expected, hemodialysis patients reported significantly worse levels of quality of life in the physical functioning (54.2 vs 82.3) and in the general health (35.1 vs 51.1) scales and better levels in the social functioning, role-emotional, and mental health scales than our OCD patients *(table III)*. However, scores on the physical health scales for kidney-transplanted patients were equal or better (general health) than those of OCD patients *(table III)*.

Table IV reflects the ratings given by clinicians in the DAS-S scale. The areas considered as most disabled were social and occupational. Compared to the ratings of schizophrenic patients, OCD patients were significantly more disabled in these two areas (3.21 vs 2.61 and 3.18 vs 2.64 respectively).

DISCUSSION

Our results demonstrate that OCD patients, along with the schizophrenics, had the lowest health-related quality of life across the eight groups analyzed, especially in mental health areas, as evidenced by the lowest

Table III. Comparison between SF-36 mean scores from OCD patients and other psychiatric and somatic patients.

	PF	*RP*	*BP*	*GH*	*VT*	*SF*	*RE*	*MH*
OCD (*N* = 36)	82.36	71.52	72.80	51.11	45.27	50.00	37.03	45.88
U.S. OCD (*N* = 60)	88.80	77.50	79.40	69.40[c]	44.30	68.70[b]	52.80	51.70
Schizophrenics (*N* = 346)	73.4[a]	48.1[b]	71.6	42.3[a]	38.7	46.5	35.4	47.3
Depressed (*N* = 729)	85.46	74.58	81.16[a]	56.62	55.01[a]	78.76[d]	77.10[d]	68.79[d]
Heroin dependents (*N* = 49)	86.53	82.65	80.85	52.40	46.42	80.93[d]	68.44[c]	58.61[b]
Hemodialysis patients (*N* = 170)	54.20[d]	64.00	65.60	35.10[c]	51.60	80.90[d]	72.40[d]	67.70[d]
Kidney transplant recipients (*N* = 210)	83.30	87.40[a]	80.20	65.30[b]	73.60[d]	93.50[d]	87.50[d]	79.60[d]

PF: Physical functioning; RP: Role-physical; BP: Bodily pain; GH: General health; VT: Vitality; SF: Social functioning; RE: Role-emotional; MH: Mental health. Statistically significant differences (Student *t*-test) compared to OCD patients' mean scores: a: $P < .05$; b: $P < .005$; c: $P < .0005$; d: $P = .0000$

mean SF-36 subscale scores. The areas showing the greatest impairment were social functioning, role-emotional and mental health, so our first hypothesis concerning the greater impairment of the areas related to the mental health summary measure was confirmed. Koran et al. [15] also reported more impairment in the mental health domains; they found vitality to be the area most impaired, followed by the mental health and role-emotional areas. The greatest level of disability in our OCD patients corresponded to social and occupational areas. These results are consistent with several studies [7, 10, 12, 17], which have reported that the greatest impact of OCD on the patients' lives was disruption of their careers and their relationships with family and friends. Up to 60–70% reported 'much' or 'very much' interference with their school, work, social and family lives [10]. Stein et al. [17] found that socializing and family relationships were the areas reported as moderately or severely dysfunctional for the majority of patients (60.5% and 59% respectively). Severe or moderate interference with work was reported by 40% and with academic achievement by 54.5%. In our study clinicians rated work and social life as the areas with the greatest disability followed by family life. The mean level of disability in these areas (between 50% and 60%) is consistent with the levels reported by Steketee [18] in her review.

Table IV. Scores on the World Health Organization Short Disability Assessment Schedule (WHO DAS-S): OCD patients vs schizophrenic patients.

	OCD (N = *34)*	*Schizophrenics* (N = *365)*
Personal care	1.35 (1.35)	1.60
Occupation[a]	3.18 (3.34)	2.64
Family and household	2.41 (2.12)	2.16
Broader social context[a]	3.21 (3.40)	2.61

Student *t*-test: a: $P < .05$

The poorer quality of life of the OCD patients compared to the Spanish general population cannot be attributed to differences in age or gender. Young people and males, who in Spain report better quality of life, were over-represented in the OCD patient group.

Health-related quality of life was found to be quite similar in OCD and in schizophrenic patients, as in the case of Calvocoressi et al. [5]. This is particularly relevant because schizophrenia has traditionally been considered the most devastating psychiatric illness. However, our results suggest that in the areas related to the mental health summary measure, the quality of life of OCD patients is exactly as poor as that of schizophrenic patients. The lack of statistically significant differences between both groups can scarcely be imputed to clinical or demographic factors. Clinically, both samples were similar as evidenced by their scores on the severity instruments. Demographically, mean ages were identical, but the higher proportion of males in the schizophrenic group may have contributed to this group's higher quality of life scores. The differences found in the areas related to the physical health summary can be, to some extent, surprising. They would seem to point out that schizophrenia would affect the lives of their sufferers more widely than OCD. But, upon closer examination as to the exact meaning of the physical areas, we think that there may be other interpretations. Taking into account the fact that the role-physical area refers to role limitations due to physical problems, it could be that schizophrenic patients were less able to differentiate if their role limitations are due to physical or to emotional problems. Another factor that could contribute to this difference is the medication. When the baseline SF-36 was administered, all schizophrenics were on neuroleptic depot medication. This type of medication is known to have secondary effects that could influence the impairment on the physical scales. Finally, the clinicians' disability ratings support our hypothesis that OCD is as devastating as schizophrenia. Clinicians rated the social and occupational lives of the OCD patients as significantly more disabled than those of schizophrenic patients.

Spanish OCD patients reported worse levels of health-related quality of life than U.S. OCD patients in the areas of general health and social functioning. Social functioning was the area most affected by the OCD in the Spanish sampling, while in the U.S. sample it ranks fourth. This difference may be interpreted in the context of cultural differences between both populations, in that the social component of a Spaniard's life tends to be more important to him.

With respect to the rest of the psychiatric disorders included in the analysis, no doubts exist. The quality of life of the OCD patients was worse than that of the depressed or heroin-dependent patients. However, Koran et al. [15] reported better quality of life in all SF-36 areas except in role-emotional for OCD than for depressed patients. It is necessary to point out, however, that these authors used the median and not the mean scores to compare the quality of life across the groups.

Patients with OCD showed lower levels of health-related quality of life in the areas corresponding to the mental health domain and equal or higher levels in the areas of physical health domain than patients on hemodialysis. These findings are consistent with expected differences in the effects of mental and physical disorder on health-related quality of life. The fact that kidney transplant recipients reported equal or better quality of life than OCD patients highlights the success that kidney transplantation has achieved, not only in the clinical field but in the patients' daily lives [8].

Methodological limitations necessitate viewing our results with caution. First, there is the cross-sectional nature of our study. Second, our private outpatients are unlikely to be a representative sample of OCD patients in Spain. Third, the small size of the sample limited the ability to control for gender and co-morbid disorders. And finally, we have only used a generic health-related quality of life instrument with no specific instrument for psychiatric patients, since no such instrument for OCD exists. Nevertheless, the results of this study are consistent with clinical experience and with similar studies carried out in other countries.

REFERENCES

1 Alonso J, Prieto L, Antó JM. La versión española del SF-36 Health Survey (Cuestionario de Salud SF-36): un instrumento para la medida de los resultados clínicos. Med Clin (Barcelona) 1995 ; 104 : 771-6.

2 Alonso J, Regidor E, Barrio G, Prieto L, Rodríguez C, de la Fuente L. Valores poblacionales de referencia de la versión española del Cuestionario de Salud SF-36. Med Clin (Barcelona) 1998 ; 111 : 410-6.

3 Bobes J, Baca E, Casais L, Roca M, González MP. Quality of life in depressed Spanish patients after six-months of treatment with venlafaxine. American Psychiatric Association Annual Meeting-New Research Abstracts. Washington DC: APA; 1998. p. 135.

4 Bobes J, Gutiérrez M, Gibert J, González MP, Herraiz L, Fernández A. Quality of life in schizophrenia: long-term follow-up in 362 chronic Spanish schizophrenic outpatients undergoing risperidone maintenance treatment. Eur Psychiatry 1998 ; 13 : 158-63.

5 Calvocoressi L, Libman D, Vegso SJ, McDougle CJ, Price LH. Global functioning of inpatients with obsessive-compulsive disorder, schizophrenia, and major depression. Psychiatr Serv 1998 ; 49 : 379-81.

6 Fernández Miranda JJ, González G, Portilla MP, Sáiz Martínez PA, Gutiérrez Cienfuegos E, Bobes García J. Calidad de vida y severidad de la adicción en heroinómanos en mantenimiento prolongado con metadona. Adicciones 1999 ; 11 : 43-52.

7 Gallup Organization. A Gallup study of obsessive-compulsive disorder sufferers. Princeton, NJ: Gallup Organization; 1990.

8 González MP, Sudilovsky A, Bobes J, DiMartini A. Quality of life of geriatric patients following transplantation: short- and long-term outcomes. In: Trzepac PT, DiMartini A, Eds. Transplantation psychiatry. New York: Cambridge University Press; in press.

9 Goodman WK, Price LH, Rasmussen SA, Mazure C, Fleischmann RL, Hill CL, et al. The Yale-Brown Obsessive Compulsive Scale. I. Development, use, and reliability. Arch Gen Psychiatry 1989 ; 46 : 1006-11.

10 Hollander E. Obsessive-compulsive disorder: the hidden epidemic. J Clin Psychiatry 1997 ; 58 (Suppl 12) : 3-6.

11 Hollander E. Treatment of obsessive-compulsive spectrum disorders with SSRIs. Br J Psychiatry 1998 ; 173 (Suppl 35) : 7-12.

12 Hollander E, Kwon JH, Stein DJ, Broatch J, Rowland CT, Himelein CA. Obsessive-compulsive and spectrum disorders: overview and quality of life issues. J Clin Psychiatry 1996 ; 57 (Suppl 8) : 3-6.

13 Janca A, Kastrup M, Katschnig H, López-Ibor JJ, Mezzich JE, Sartorius N. The World Health Organization Short Disability Assessment Schedule (WHO DAS-S): a tool for the assessment of difficulties in selected areas of functioning of patients with mental disorders. Soc Psychiatr Epidemiol 1996 ; 31 : 349-54.

14 Karno M, Golding JM, Sorenson SB, Burnam A. The epidemiology of obsessive-compulsive disorder in five US communities. Arch Gen Psychiatry 1988 ; 45 : 1094-9.

15 Koran LM, Thienemann ML, Davenport R. Quality of life for patients with obsessive-compulsive disorder. Am J Psychiatry 1996 ; 153 : 783-8.
16 Rebollo P, Bobes J, González MP, Sáiz PA, Ortega F. Factores que influyen en la calidad de vida relacionada con la salud de los pacientes en terapia renal sustitutiva. Nefrología in press.
17 Stein DJ, Roberts M, Hollander E, Rowland C, Serebro P. Quality of life and pharmaco-economic aspects of obsessive-compulsive disorder. S Afr Med J 1996 ; 36 : 1579-85.
18 Steketee G. Disability and family burden in obsessive-compulsive disorder. Can J Psychiatry 1997 ; 42 : 919-28.
19 Ware JE. SF-36 Health Survey: manual and interpretation guide. Boston: Health Institute, New England Medical Center; 1993.
20 Ware JE, Sherbourne CD. The MOS 36-Item Short-Form Health Survey (SF-36). I. Conceptual framework and item selection. Med Care 1992 ; 30 : 473-83.
21 Wenger NK, Furberg CD. Cardiovascular disorders. In: Spilker B, Ed. Quality of life assessment in clinical trials. New York: Raven Press; 1990. p. 335-45.
22 World Health Organization. The "newly defined" burden of mental problems. Fact Sheets nº 217. Geneva: WHO; 1999.