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Adaptation and validation of the quality-of-life scale: Satisfaction with Life Domains Scale by Baker and Intagliata

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Abstract

Objectives: There are few quality-of-life instruments specifically for schizophrenia; thus, the objective of our study is to adapt and validate the Satisfaction with Life Domains Scale (SLDS) by Baker and Intagliata.
Method: This is a validation study in which the subjects were evaluated on 2 occasions (24-48 hours). The sample is composed of people with schizophrenia from 18 to 65 years old and who were seen in one of the following centers: Sant Joan de Déu-SSM, Hospital Clínic, Hospital de Mataró and Hospital Pere Mata. The SLDS was administered, along with Positive and Negative Syndrome Scale, the Clinical General Impression for Schizophrenia, Global Assessment of Function, Disability Assessment Scale—short version, Beck Cognitive Insight, and the Strauss and Carpenter Prognostic Scale. The Cronbach α test was carried out, and the intraclass correlation coefficient was used to assess test-retest reliability, along with Pearson correlations for discriminating validity.
Results: The intraclass correlation coefficients oscillated between 0.51 and 0.83. The SLDS did correlate with any of the other instruments with the exception of the Positive and Negative Syndrome Scale general subscale and the Strauss and Carpenter prognostic scale.
Conclusions: The Spanish version of the SLDS was shown to be valid and reliable and provides a fast and specific measure for schizophrenia.

1. Introduction

Quality-of-life measures are focused on aspects of human health and activity that are generally affected by health conditions or health services and include physical, emotional, mental, social, and behavioral components of well-being and functioning [1].

Although a notable number of instruments for measuring quality of life have been developed, their use in patients with mental disorders has been less than in patients with physical disabilities [2]. In recent years, instruments to measure quality of life in mental health have been progressively incorporated in such a way that today their use is being increasingly recognized as a means of measuring the results of interventions in terms of symptoms and functioning [3]. However, and particularly in schizophrenia, few instruments have been adapted and validated [4,5].

One of the objectives of the present study has been to evaluate the reliability and validity of a subjective measure of quality of life, the Satisfaction with Life Domains Scale (SLDS) [6], in a sample of people with schizophrenia. This

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scale was originally created to assess the impact of a community program for patients with chronic mental disorder in the United States. The SLDS is an easy-to-administer and understandable instrument for users, needing 10 minutes to be conducted. It is currently one of the most frequently used quality-of-life instruments in schizophrenia [4].

The SLDS is a quality-of-life, autoevaluation scale composed of 15 items. Each item assesses patient satisfaction in each one of the following 15 domains that comprise the test: (1) home, (2) neighborhood, (3) food, (4) clothing, (5) health, (6) cohabitants, (7) friendships, (8) family, (9) relationships with other people, (10) daily activity, (11) free time, (12) leisure, (13) services and facilities at place of residence, (14) economic situation, and (15) place of residence compared with the hospital. There is also a general scale that derives from the total of the quality-of-life items.

The participants answer each question by choosing 1 of 7 faces that express their feelings. From a "pleased" face with a wide smile, scored as 7, to a face with the corners of the mouth pointing down, scored as 1 ("terribly displeased").

This instrument has been used in North American and European countries and is becoming increasingly useful in the study of quality of life in people who suffer from schizophrenia [7].

Various studies have confirmed the test's suitable psychometric characteristics [6], reliable internal consistency (α = .84), divergent validity assessed with the Bradburn Affect Balance Scale, (r = 0.64; P < .001), and the Global Assessment Scale (r = 0.29; P < .001). Neither the creators of the test nor other studies have observed significant differences according to sex, age, or type of residence [6,7].

Another study has also observed quite high reliability in all their domains for a patient sample with severe mental disorders "homeless" (α = .84-.92; test-retest, 0.86) and significant correlation after 3, 6, 9, and 12 months with the following scales: Brief Symptom Inventory (r = −0.28; α = −.47; P < .05), Rosenberg Self-esteem Scale (r = 0.33; α = 0.49; P < .05), Personal and Social Network Adjustment Scale (r = 0.28; α = 0.58; P < .05), and the Alienation Measure (r = −0.28; α = −0.30; P < .05) [5].

Table 1 describes the average and standard deviations found in each one of the instrument's domains in the different studies previously described. The domains of quality of life less punctuated in the 3 studies are economic situation, health, and leisure; therefore, patients with schizophrenia have more problems in these areas. The higher punctuation in the Baker and Intagliata study [6] was when patients compare usual place of residence with the hospital; but the studies of Calsyn et al [5] and Massoubre et al [4] did not assess this domain. The other domains assessed in 3 studies with higher punctuations are food, clothing, and friendships. Therefore, the results in 3 studies are similar in punctuations of domains.

In summary, the objectives of the current project are (*a*) to translate and adapt the quality-of-life questionnaire SLDS and (*b*) to assess the validity and reliability of this instrument in Spanish for the evaluation of quality of life among people with schizophrenia.

Table 1
Descriptions of SLDS domains in previous studies

Domains	Baker and Intagliata	Calsyn et al	Massoubre et al
		Average (SD)	Average (SD)
Home	5.51	4.98 (1.43)	4.80 (2.00)
Neighborhood	5.38	4.66 (1.53)	4.90 (1.80)
Food	5.37	5.20 (1.33)	5.30 (1.50)
Clothing	5.17	5.01 (1.32)	5.30 (1.40)
Health	4.75	4.98 (1.39)	4.60 (1.60)
Cohabitants	5.59	4.93 (1.46)	4.90 (1.70)
Friendships	5.65	5.39 (1.22)	5.00 (1.80)
Family	5.16	4.30 (1.76)	5,00 (1.70)
Interpersonal relationships	5.46	5.45 (0.97)	4.90 (1.60)
Daily activities	5.27	5.01 (1.23)	4.50 (1.60)
Free time	5.10	4.98 (1.22)	4.60 (1.70)
Leisure	4.82	4.85 (1.43)	4.60 (1.70)
Services and facilities at place of residence	5.25	4.91 (1.43)	4.90 (1.70)
Economic situation	4.56	3.97 (1.43)	4.40 (1.80)
Usual place of residence compared with the hospital	6.39	[a]	[a]
General quality of life	[a]	[a]	4.50 (1.70)

[a] Not evaluated or not published in this study.

2. Methods

2.1. Design

This is a descriptive study that attempts to assess the quality of life of people with schizophrenia on 2 occasions: a basal evaluation followed by another after 24 to 48 hours.

2.2. Participants

This was a multicentric study in which various institutions that have mental health services in Catalonia (Spain) have participated: Hospital Clínic, Hospital Pere Mata, Hospital Mataró, and Sant Joan de Deu Mental Health Service.

Inclusion criteria were age of 18 to 65 years (inclusive); a *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, diagnosis of schizophrenia; and being a resident in the service catchment area. Included in the study were those patients hospitalized in the acute and subacute facilities as well as those attended to in primary health care centers. Patients who had been admitted to the Medium and Long-Stay Unit were excluded along with those who presented comorbidity with intellectual incapacity.

2.3. Assessment instruments

The patients were evaluated using the Baker and Intagliata [6] SLDS. The scale was translated and back-translated from English into Spanish and vice versa by 2 native, English-speaking translators sensitive to matters relating to mental health. The discrepancies were approved by consensus in the validation group.

For the purposes of validation, before the application of the instrument, a pilot test was conducted in a group

of people with schizophrenia to check the comprehensibility of the scale. The pilot-test results demonstrated that the adaptation into Spanish had been appropriate.

In addition, the patients included in the sample were assessed using the following questionnaires:

- Positive and Negative Syndrome Scale for schizophrenia by Kay [8], translated and validated by Peralta and Cuesta [9], which evaluated positive, negative, and general symptoms.
- The Clinical Global Impression scale (CGI) for Schizophrenia [10] evaluated total symptoms and breakdown by positive, negative, depressive and cognitive.
- The Global Assessment Scale [11]. This scale assesses global functioning at the clinical and social level, indicating better functioning with a higher score.
- The Disability Assessment Schedule—short version [12] equates greater incapacity with higher score: personal care, level of activity, family relationships, and other social relationships.
- The Beck Cognitive Insight Scale Questionnaire [13] evaluates illness awareness as assessed by the patient.
- The Strauss and Carpenter prognosis scale [14] that assesses functioning in people with schizophrenia.

2.4. Procedure

The quality-of-life scale was administered on 2 occasions: at basal evaluation and after 24 to 48 hours. On the second occasion, the CGI for Schizophrenia was also administered with the aim of assessing the psychopathologic stability of the patients evaluated.

Table 2
Sociodemographic and clinical characteristics of the sample

	n (%)
Sex	
Male	99 (72.3)
Female	38 (27.7)
Marital status	
Single	110 (80.9)
Married	18 (13.2)
Separated	8 (5.9)
Cohabitation	
Alone	12 (8.8)
Family of origin	102 (74.5)
Own family	16 (11.7)
Other	7 (5)
Employment situation	
Active	30 (21.9)
Incapacity	87 (63.5)
Domestic work	5 (3.6)
Student	3 (2.2)
Other	12 (8.8)
Family history	
Yes	72 (52.6)
No	65 (47.4)
	Average (SD)
Age	36.9 (10.25)
Years of schooling	10.25 (2.98)
Illness duration (in years)	23.36 (7.18)

Table 3
Scores on the SLDS scale at the 2 evaluation times and intraclass correlation coefficient comparison

	Average first occasion (SD)	Average second occasion (SD)	Intraclass correlation coefficient
SLDS 1: residence	5.29 (1.6)	5.26 (1.6)	0.62
SLDS 2: neighborhood	4.82 (1.6)	4.91 (1.5)	0.76
SLDS 3: food	5.51 (1.3)	5.56 (1.2)	0.79
SLDS 4: clothing	5.49 (1.2)	5.56 (1.2)	0.57
SLDS 5: health	4.52 (1.5)	4.60 (1.5)	0.56
SLDS 6: cohabitants	5.49 (1.5)	5.37 (1.5)	0.66
SLDS 7: friends	5.16 (1.4)	5.22 (1.3)	0.76
SLDS 8: family relationships	5.22 (1.6)	5.38 (1.5)	0.83
SLDS 9: relationships with others	4.98 (1.4)	5.09 (1.3)	0.76
SLDS 10: occupation/work	4.92 (1.3)	5.00 (1.4)	0.67
SLDS 11: free time	5.11 (1.3)	5.02 (1.4)	0.65
SLDS 12: leisure environment	5.26 (1.3)	5.20 (1.4)	0.69
SLDS 13: neighborhood services	5.21 (1.4)	4.97 (1.5)	0.51
SLDS 14: economic situation	4.39 (1.7)	4.46 (1.5)	0.69
SLDS 15: hospital/community	5.74 (1.4)	5.63 (1.4)	0.68
SLDS total	76.74 (12.1)	77.33 (12.9)	0.90

2.5. Statistical analysis

Regarding the reliability analysis, the assessment of the homogeneity of the items in the interview (internal consistency) was carried out by calculating the Cronbach α test coefficient. To calculate test-retest reliability, the intraclass correlation coefficient was applied to both total score and each of the items.

Discriminating validity was tested using Pearson correlation for the relationship between data from the SLDS and the variables of psychopathology, general functioning, disability, prognosis, and illness insight.

Normality tests were conducted on the distribution in each of the analyses evaluated, applying nonparametric tests (Spearman coefficient) when criteria were not met.

The Statistical Package for Social Sciences, version 14.0 (SPSS, Chicago, Ill), was used.

2.6. Ethical aspects

The study was evaluated by each one of the research ethics committees in the participating centers. The study was explained to each participant, and informed consent was requested. It was pointed out that nonparticipation in the study would not alter the frequency or the quality of the attention they would receive from the service.

3. Results

Basal information was collected on quality of life from a total of 137 people with schizophrenia. Of these, 93 were reinterviewed after 24 to 48 hours.

The profile of the sample revealed a greater proportion of men (72%), single people (80%), and those who live with their family of origin (74%); of the total sample, only 12% were working.

Regarding clinical characteristics, the average duration of illness was 23 years (SD, 7.18), and 47% of patients had a family history of mental illness (Table 2).

At the time of investigation, the point of origin of the users was acute unit (n = 57, 42%), subacute unit (n = 4, 3%), day hospitals (n = 6, 4%), day centers (n = 31, 23%), and from adult mental health centers (n = 38, 28%).

The variable total quality of life were distributed in a homogenous way, showing *P* values equal to .69.

The Cronbach α test, which measured the internal consistency of the instrument, gave a value of .8396.

Table 3 shows the instrument scores at the 2 evaluation times and the interclass correlation coefficient, which compares the 2 occasions for each of the domains and in the total quality-of-life scores. The results demonstrated that the coefficients oscillated between 0.51, for satisfaction with neighborhood services, and 0.90, for total satisfaction. Only 3 domains obtained scores below 0.60 in the intraclass correlation coefficient: neighborhood services, health, and clothing. In the other domains, the correlation for the 2 evaluations is high.

Regarding divergent validity, we found that the SLDS did not correlate with other instruments that evaluated different constructs. Only a light correlation was found, although significant with the Positive and Negative Syndrome Scale general subscale and with the score in the Strauss and Carpenter (r = 0.2) (Table 4).

4. Discussion

The results of this study show that the SLDS quality-of-life instrument translated into Spanish and adapted in a Spanish sample is valid and reliable for the evaluation of this construct in people with schizophrenia. It is easy to understand for the users, independent of their level of functioning or psychopathologic severity.

Few instruments assessing quality of life have been validated with Spanish populations. Of these, only the Sevilla Questionnaire [15] is specific for schizophrenia, but it is only validated with Spanish population. The main advantage of the validation of the SDLS is that it would allow comparing quality of life of patients with schizophrenia across different countries. Other instruments have been validated in different European countries such as the Lancashire Quality of Life Profile [16]. The main advantage of the SDLS over the Lancashire Quality of Life Profile is that it is a fast, self-administered, and easily understandable schedule.

The internal consistency of the instrument is high, giving values superior to those found in the original validation. This indicates to us that the SLDS is a homogenous measure in the measurement of quality of life.

Test-retest reliability demonstrates that it is an instrument that remains stable as it is reliable for the evaluation of quality of life in these patients.

With respect to divergent validity, we found that the instrument is not related to other measures of functioning, incapacity, or illness awareness. However, it is related to general psychopathology, and with the prognosis scale, patients who perceive improved quality of life show less general psychopathology and a better prognosis.

The validation of this questionnaire is useful to us for a variety of reasons: (1) when dealing with a chronic and persistent mental illness, an attempt is made to discover which aspects make the patients feel more comfortable; (2) validating instruments allow us to evaluate programs and interventions; (3) it directs us toward prioritizing patient satisfaction in the evaluation of intervention programs; (4) it permits us to assess the patients' problems from a holistic perspective, not solely centered on psychopathology; (5) and it helps to shape current policies because the search for quality of life is a fundamental part of the constitutions of most countries.

Table 4
Discriminating validity between the SLDS and psychopathology, incapacity, illness awareness, and prognosis

	SDLS total	*P*
Psychopathology		
PANSS positive	−0.12	
PANSS negative	−0.09	
PANSS general	−0.14	<.05
CGI total	−0.17	
Strauss and Carpenter prognosis scale	0.22	<.05
Beck Insight Questionnaire	−0.09	
DAS-sv	−0.14	
Global Assessment Scale	0.16	

DAS-sv indicates Disability Assessment Schedule—short version.

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