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The development of the S-QoL 18: A shortened quality of life questionnaire for patients with schizophrenia

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ABSTRACT

Objective: The S-QoL 41 is a French self-administered questionnaire that assesses quality of life (QoL) among people with schizophrenia. This study aims to validate a shortened version of the S-QoL for more widespread use in clinical practice.
Methods: We used data from four studies conducted in four psychiatric hospitals in France ($n = 507$). The item reduction and validation processes were based on both item response theory and classical test theory. The final version of the S-QoL was tested for construct validity, reliability, external validity, reproducibility and sensitivity to change. In addition, differential item functioning (DIF) analyses were performed to see whether all items behave in the same way in subgroups divided by age, gender, educational level and clinical form.
Results: The S-QoL 18 evaluates eight dimensions: psychological well-being, self-esteem, family relationships, relationships with friends, resilience, physical well-being, autonomy and sentimental life. The factor structure accounted for 78% of the total variance. Internal consistency was satisfactory (item-internal consistency greater than 0.40; Cronbach's alpha coefficients ranged from 0.72 to 0.84). The scalability was satisfactory, with INFIT statistics within an acceptable range. In addition, the results confirmed the absence of DIF and supported the invariance of the item calibrations.
Conclusions: The S-QoL 18 is a short self-administered QoL instrument that has a high degree of comparability with S-QoL 41 and presents satisfactory psychometric properties. Future studies should confirm its sensitivity to change.

1. Introduction

Schizophrenia is a disabling and severe psychiatric disorder with either episodic or continuous evolution that can result in physical, psychological and social problems related to both the disease and the potential side effects of its treatment (Green et al., 2000; Kasckow et al., 2001; Kurtz et al., 2008; Lehman, 1983a; Reine et al., 2005). Quality of life (QoL) measurements have become an important way to evaluate the treatments and care provided to patients with schizophrenia (Hofer et al., 2005a; Hofer et al., 2005b). QoL encompasses several important dimensions, which include psychological status, functional abilities, personal well-being, social interaction, economic status, vocational status, and physical health (Cramer et al., 2000). QoL indicators

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require the completion of a well-validated questionnaire that addresses the perceived impact of an individual's health status on physical, mental, social and behavioral components of well-being and function (Heider et al., 2007; Meltzer, 1999; Narvaez et al., 2008). Several psychometrically valid and reliable multidimensional questionnaires are now available for use with schizophrenia (Bobes et al., 2005), but they present several limitations. First, most of the QoL measures used in schizophrenia were developed on patients with various serious chronic mental illnesses that included schizophrenia, affective disorders and other chronic psychiatric diseases. Cramer et al. noted the relative lack of sensitivity in these questionnaires (Cramer et al., 2000). Second, the content of most available questionnaires relies either on the literature or on experts to determine domains and concerns that are important for patients, although it is now generally agreed that the content of QoL measures should be derived directly from relevant patients (Auquier et al., 2003; Berzon et al., 1993; Jachuck et al., 1982; McKenna, 1997). Finally, although the QoL measures used in both clinical trials and other group-level comparisons of health outcomes research for patients suffering from schizophrenia generally present high acceptability, these questionnaires are often considered too lengthy by professionals, and they remain largely under-utilized in clinical practice (Greenhalgh et al., 2005). Some authors have suggested that questionnaires for use with clinical populations should be as brief as possible because of the difficulties of concentration and perception faced by patients with deficit syndrome or thought disorders (McKenna, 1997). Providing shorter questionnaires in schizophrenia QoL measures, as is already done in other chronic diseases (Skinner et al., 2006; Tsai et al., 2008), appears to be necessary.

The S-QoL 41 is a self-administered, multidimensional questionnaire. This questionnaire, which is specific to schizophrenia, was both developed based exclusively on patients' points of view and validated among patients suffering from schizophrenia. It has been found to be sensitive to change (Auquier et al., 2003). The aim of this study was to validate a shortened version of the S-QoL for more widespread use in clinical practice.

2. Methods

2.1. Study population

We established a database of four studies carried out by members of the Schizophrenia Quality of Life Group in which the S-QoL 41 was used to assess the patients' QoL. The database included a total of 517 in- and outpatients recruited from four psychiatric hospitals in France: Lyon (one hospital), Marseille (two) and Toulon (one). The inclusion criteria were diagnosis of schizophrenia according to the DSM-IV criteria (APA, 1994), age over 18 years, informed consent to participate in the studies and French as native language. The exclusion criteria were diagnosis other than schizophrenia on Axis I of DSM-IV, decompensated organic disease and mental retardation. These projects were conducted in accordance with the Declaration of Helsinki and French Good Clinical Practices (CNIL, 2004; WMA., 2008).

2.2. Data collection

The data collected in the different studies comprised socio-demographic information, clinical characteristics and QoL questionnaires. The data collected and the time of their assessment in each study are presented in Table 1. More specifically, the data collected included:

1 Socio-demographic information: gender, age and educational level (primary or high school versus university level).
2 Clinical characteristics: inpatients and outpatients; type of schizophrenia according to DSM-IV; duration of illness; psychotic symptoms based on the Clinical Global Impression of Severity (CGI) and the Positive and Negative Syndrome Scale (PANSS), which comprises three different sub-scales (positive, negative and general psychopathology) (Kay et al., 1986; Lancon et al., 1999b); and depression based on the Calgary Depression Scale for Schizophrenia (CDSS), which is a nine-item scale, specifically designed for schizophrenic patients, that evaluates depression independently of extrapyramidal and negative symptoms (Addington et al., 1993; Lancon et al., 1999a). Drug-induced movement disorders (parkinsonism, akathisia, dystonia, and dyskinesia) were evaluated with the Extrapyramidal Symptoms Rating Scale (ESRS) (Chouinard and Margolese, 2005). Four sub-scales of the ESRS were used in this study. ESRS 1 is based on a subjective examination using a questionnaire and assesses parkinsonism, akathisia, dystonia, and dyskinesia. ESRS 2, 3 and 4 are based on a neurological examination and measure of, respectively, parkinsonism; akathisia and dystonia; and tardive dyskinesia.
3. QoL questionnaires:
The S-QoL 41 is a specific self-administered QoL questionnaire designed for people with schizophrenia (Auquier et al., 2003). It is a multidimensional instrument that was developed based on patients' views and that assesses current QoL. It comprises 41 items describing 8 dimensions: psychological well-being (PsW), self-esteem (SE), family relationships (RFa), relationships with friends (RFr), resilience (RE), physical well-being (PhW), autonomy (AU) and sentimental life (SL); and a total score (index). Dimension and index scores range from 0, indicating the lowest QoL, to 100, the highest QoL.
The SQLS is a specific self-administered QoL questionnaire designed for people with schizophrenia that consists of 30 items describing 3 dimensions: psychosocial (PS), motivation and energy (ME) and symptoms and side effects (SSE) (Wilkinson et al., 2000). Each dimension can be scored from 0 (the best status) to 100 (the worst status).
QoLI is a specific questionnaire designed for assessing QoL in patients with severe mental illnesses (Lancon et al., 2000; Lehman, 1983b). It consists of 74 items describing 8 dimensions: living situation (LS); daily activities and functioning (DA); family relations (FR); social relations (SR); finances (F); work and school (WS); legal and safety issues (LS); and mental and physical health (MPH). Each