



The Quality of Life of Patients with Schizophrenia 1 "Jordan - Saudi Project" : the reliability and validity of the modified version of schizophrenia quality of life scale QLS	العنوان:
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Self-report quality of life for people with Schizophrenia SQLS

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findings provide evidence for the reliability and validity of the modified version of the SQLS. Thus, its main use is likely to be in clinical trials and the evaluation of clinical interventions. To provide further support to

its validity a multi-site work (Jordan and Saudi Arabia) is underway to assess its criterion validity by comparing this version with the original one.

المخلص

أهداف الدراسة: تهدف هذه الدراسة لقياس خاصتي الثبات والمصدقية لمقياس SQLS المعدل طرق البحث: أجريت الدراسة على عينه من المرضى الفصامين (عدد ٩٩) وتم تشخيصهم حسب التصنيف الأمريكي الرابع للأمراض النفسية وتم تطبيق عدة استبيانات على هؤلاء المرضى مثل استبيان الجوانب الإجتماعية والديموغرافية، ٢٤ SRQ وإستبيان SQLS المعدل والأصيل. كما تم تصنيف درجة الإعاقة لدى هؤلاء المرضى. وتم مقارنة المقياس المعدل بالأصل ودرجة الثبات والمصدقية للأخير.

النتائج: أظهرت الدراسة أن المقياس المعدل SQLS يملك من خصائص الثبات والمصدقية لدرجة تؤهله للإستعمال السريري وأن التركيبة المعولية لهذا المقياس تطابق لدرجة كبيرة التركيبة المعولية للمقياس الأصيل.

الإستنتاجات: المقياس المعدل يملك الخصائص المطلوبه من حيث درجة الثبات والمصدقية.

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modifications made on the original scale not only made the scale easier but preserved its validity. The high magnitude of internal reliability found in this study indicated that not only the items were highly inter-correlated but that there were also redundant or unnecessary items which suggests that there was a number of items asking the same questions but in a slightly different way^{15,16}. Nunally¹⁷ suggests that alpha coefficient should be above 0.70 but

probably not higher than 0.90. The findings indicate not only a high level of reliability but also the questionnaire could be shortened without losing its validity. This indeed is of practical importance, as this would save more time by utilizing a shorter version than the current one. The other question this study was aiming to answer was whether the dimensions on the scale yielded by factor analysis corresponded with those dimensions on the original scale.

Table 3: Mean scores on the SQLS by education, employment, and by impairment or disability

Education	N	Mean score (s.d)
< 6 years	19	18.2(6.3)
7-12 years	47	17.7(6.5)
> 13 years	30	12.8(8.8)
Total	96	16.3(7.5)
F= 5.1; df 2, 93, P=0.008		
Employment	N	Mean score (s.d)
yes	42	13.6(7.7)
no	55	18.1(7.1)
Total	97	16.1(7.5)
t=8.9; df 1, 95; P= 0.004		
Impairment (disability)	N	Mean score (s.d)

The findings suggest that the scale has three dimensions that tap the psychosocial symptoms, side effects of neuroleptic drugs and the motivational aspect of patients. The findings in this regard approximate those of the original study. The significant positive correlation between the factor score of the corresponding dimensions and measures of well being as measured by the SRQ and its depression and anxiety total scores¹² supports the validity of this questionnaire. The ability of the scale to discriminate between patients with different levels of impairment, educational levels and

employment status provide further support to its construct validity. The feasibility and easy administration of this brief and self-administered QoL measure argues not only against the untested assumption that people with schizophrenia cannot reliably complete the self-report but it can yield results consistent with in-depth interviews¹⁸. The multidimensional structure of the questionnaire is congruent with the assumption that QoL is commonly defined as a multidimensional concept based on the patient's self-report about their quality of life^{11,19}. In conclusion, the

Motivation		0.58
I am able to carry out my day-to-day activities	0.69	
I take part in enjoyable activities	0.63	
I like to plan ahead	0.63	

Validity

Concurrent validity between the SQLS and SRQ total scores was 0.76 indicating a high a magnitude of correlation between scores on the modified scale and scores on a general measure of wellbeing like the SRQ. Table 2 shows correlation coefficients between dimensions on the SQLS and the anxiety and depressive sub-scales on the SRQ. We tested the hypothesis as to whether the new questionnaire would discriminate between the actively employed and the unemployed and would also discriminate between patients with different levels of impairment or disability and between patients with varying levels of formal education (Table 3). As expected

the unemployed had significantly higher scores on the SQLS than the employed ($T=8.9$; $P=0.004$); patients with a low to moderate level of impairment had significantly lower scores than those with moderate to severe and severe to very severe levels of impairment or disability ($F=3.2$; $df\ 2, 81$; $P=0.044$) and patients with lower level of education scored significantly higher on the SQLS than those with higher level of education ($F=5.1$; $df\ 2, 93$; $P=0.008$). In brief, employed patients, those with lower level of impairment and those with higher level of education showed better QoL as measured by this version of the scale.

Table 2: Correlation coefficients between dimensions on the SQLS and anxiety and depressive subscales of the SRQ

	Psychosocial and Symptoms	Side effects	Motivation
SRQ -anxiety	0.56**	0.76**	0.26*
SRQ-depression	0.77**	0.68**	0.47**

** $P<0.001$

* $P<0.05$

Discussion

As stated, the purpose of this study was to test the validity and reliability of the modified version of the SQLS. The original scale was found to be acceptable and its items were easy to read and understand¹¹. We believe there was a substantial reason to modify the items of this self-reported measure of QoL so as to suit the preference of our patients. People with schizophrenia

as well as their relatives had clearly indicated that it was easier for them to answer each item by 'yes' or 'no' rather than on a 5-point scale. For this reason, we set up this study to answer the question as to whether the induced modification would necessarily affect its psychometric properties. The high magnitude of correlation between the modified and the original total scores suggests that the

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wouldn't get better" whose loading on first dimension was .38. The first dimension explains 34.9 per cent of the total variance and possesses a reliability coefficient of .91. This sub-scale appears to underline the "psychosocial and symptoms" dimension. The second sub-scale explains 6.3 per cent of the total variance and includes 9 items that tap the side effects of medications. The

third sub-scale explains also 6.01 per cent of the total variance and comprises only 3 items that tap the motivational aspect of patients. The correlation coefficients between the factor scores of the resulting dimensions and SRQ-20 total scores were 0.76, 0.79, and 0.42 respectively and they were all statistically significant ($P=0.01$).

Table 1: Factor structure of the modified SQLS and internal reliability of the underlying dimensions

	Loadings	Cronbach's alpha
<i>Psychosocial and symptoms</i>		0.91
I feel very mixed up and unsure of myself	0.69	
I take things people say the wrong way	0.67	
I feel hopeless	0.66	
I feel that I can cope	0.66	
I feel lonely	0.63	
I feel very jumpy and edgy	0.61	
I feel angry	0.59	
I feel down and depressed	0.59	
I worry about things	0.58	
I find it difficult to mix with people	0.56	
I tend to stay at home	0.55	
I lack the energy to do things	0.51	
I worry about my future	0.51	
I can't be bothered to do things	0.50	
My muscles get stiff	0.48	
I feel that people tend to avoid me	0.45	
My feelings go up and down	0.38	
I am concerned I wouldn't get better	0.38	
<i>Side effects</i>		0.84
I am bothered by my shaking/ trembling	0.71	
I get dizzy spells	0.70	
My vision is blurred	0.67	
I am troubled by a dry mouth	0.64	
My sleep is disturbed	0.62	
I feel unsteady walking	0.56	
I get muscles twitches	0.52	
I get upset thinking about the past	0.46	
I find it hard to concentrate	0.45	

total score ranged from zero (best health) to maximum 30 (worst health). The main author reassessed the sample. Only 99 patients had their diagnosis confirmed as per the definition of the DSM-IV¹³, and only in 85 patients the global level of impairment as guided by the Disability Assessment Schedule¹⁴ was ascertained. The following socio-demographic data were collected from patients, files and / or relatives: age, sex, educational status, marital status and employment record. A few months later a sub-sample (n=27) were given the original SQLS and the modified version again for the purpose of evaluating the concurrent validity and the test retest reliability of the modified scale. The internal consistency of the translated scale was estimated and factor analysis of the 30 items was also carried out. The concurrent validity of the scale was tested via correlating its total score with the SRQ- 20 total score. We tested the hypothesis whether a forced three-factor solution of the modified scale corresponds with the three-factor solution of the original scale. Its construct validity was tested against levels of impairment, educational levels and employment status. It was hypothesized that severely impaired patients would have a poor quality of life than those with mild impairment. Patients with higher level of education were expected to have a better QoL than those with a lower level of educational attainment and people in full employment should also have a better QoL than the unemployed. All statistical analyses were performed by using the SPSS version 9.0 under Windows.

Results

General Characteristics

The sample comprised 75 male and 24 female patients. All patients were receiving conventional neuroleptics and anticholinergic drugs on an outpatient basis at the main outpatient psychiatric clinic in Irbid, the capital of northern part of the country. Their mean age was 33.9(s.d 10.9) years. Thirty six (n=36) patients were married, 49 patients were single and the rest were either divorced or widowed. Forty three (n= 43) patients were actively employed and/or functionally independent. Nineteen (n=19) patients had 6 years or less in formal education, 49 patients had 7 to 12 years in formal education and 30 patients had 13 years or more in formal education. Thirty nine per cent (n=33) were found to have mild to moderate impairment, 46 per cent (n=39) were found to have moderate to severe impairment and 15 per cent (n=13) were found to have severe to very severe impairment. Assessment of impairment in 14 patients was not carried out or was not completed due to lack of information.

Internal Reliability

The questionnaire as a whole shows very good internal consistency (Cronbach's alpha .93) and .91, .84 and .58 for the yielded three subscales respectively via factor analysis (Table 1). Test-retest reliability coefficient was found to be high (0.94), as well as the convergent validity of the modified scale (0.82).

Factor Structure

The forced three-factor solution explained approximately 47 per cent of the total variance. The first sub-scale comprises 18 items whose loadings were .4 or above with the exception of item 26 "I am concerned I

During the past decades the interest in quality of life and health-related quality of life (QoL) has grown steadily. In general medicine the number of publications about QoL increased rapidly in the 1970s¹. This increase has been explained as an answer to the growing concern about the advantages of the new and powerful 'weapons against disease'^{2,3}. In the field of psychiatry, lacking the same immense development of technocratic practice as in general medicine, the QoL concept emerged in the scientific literature in the early 1980s, initiated by a humanisation of mental health care and the trend towards community psychiatry; first in Sweden⁴, followed by the United States^{5,6}, the United Kingdom⁷, and the Netherlands⁸. People with schizophrenia suffer distress, disability, reduced productivity and lowered quality of lives⁹. Researchers have argued strongly for the development of a robust quality of life instrument specific to schizophrenia, based on the subjective judgment of patients and including only relevant items that are expected to change¹⁰. Quality of life instruments are not designed to guide diagnosis, but are intended to be as measures of patient-assessed health and well being and are constructed to include issues of importance to patients. Although there are a number of measures available for the assessment of QoL in people with schizophrenia, these measures cannot be considered appropriate for evaluating interventions for many reasons¹¹. The latter researchers have developed a practical, brief self-report measure according to a standardized methodology and possessing good psychometric properties (the Schizophrenia Quality of Life Scale (SQLS))¹¹. The SQLS is a 30-item questionnaire, comprising three scales

("psychosocial", "motivation and energy" and symptom and side effects"). Respondents could select a response to each question from: 'Never (0); 'Rarely' (1), 'Sometimes' (2), 'Often' (3), or 'Always' (4). The purpose of this study is to explore the psychometric properties of the Arabic translation of the modified version of the new scale. This study is a joint venture between the university departments of psychiatry in Irbid (Jordan) and Riyadh (Saudi Arabia).

Method Translation

The original SQLS was translated into Arabic by three senior bilingual psychiatrists according to WHO standards. The author, who is also a bilingual psychiatrist, translated back the original translation into English. An independent psychiatrist was asked to translate back the retranslated English version into Arabic. The four psychiatrists then finally approved the final Arabic translation. Patients' understanding of the items was tested on a sample of outpatients (n= 30). The scale was finally modified by incorporating the suggestions and comments made by patients and by relatives of illiterate patients. The feedback from patients clearly indicated that they would find it easier to answer the questionnaire should the answer to each item take the form of "yes", and "no".

Patients and Procedures

A consecutive sample of patients with the clinical diagnoses of DSM-IV schizophrenia was given the SQLS and the SRQ-24¹². A score of one was assigned if patients responded affirmatively and zero if they responded negatively with the exception of items no: 12, 13 and 15. The

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جودة حياة المرضى الفصامين - الجزء الاول من المشروع الاردني السعودي

ثبات ومصداقية مقياس SQLS المعدل

طارق الحبيب وتوفيق درادكه

Abstract

Objectives: The main objective of the study was to determine the psychometric properties of the Arabic language version of the modified Schizophrenia Quality of Life Scale (SQLS). **Methods:** 99 patients with DSM-IV schizophrenia attending the main psychiatric clinic in Irbid, Jordan, were the purpose of this study. Patients were given a socio-demographic questionnaire, the modified version of the SQLS and the Self-reporting Questionnaire (SRQ-24). The impairment in social and functioning domains was assessed on a 3-point scale (mild-moderate, moderate-severe and severe-very severe). Internal reliability and factor structure of the modified scale were first determined. The original SQLS and its modified version were returned to 27 patients from the previous sample of patients a few months later. This allowed us to assess the test – retest reliability of the modified scale and its concurrent validity. Convergent and construct validity were also evaluated.

Results: alpha reliability coefficient was found to be 0.93; Spearman correlation coefficient between the SQLS and SRQ total score was significantly high 0.77; Spearman correlation coefficient between the original and modified versions was 0.82 and test retest reliability of the modified scale was 0.94. Factor analysis yielded three dimensions “ psychosocial and symptoms”, “side effects” and “motivation”. The SQLS total scores discriminated significantly patients with different levels of impairment, education and work status, confirming its construct validity.

Conclusion: The modified Arabic version of the SQLS was easy to complete, stable over time and possesses internal reliability, convergent and construct validity.

Declaration of Interest: none.