

# The subjective well-being under neuroleptic scale – short version (SWN-K) and the SF-36 health survey as quality of life measures in patients with schizophrenia

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**Purpose:** The desired outcome in schizophrenia treatment has evolved from symptom management to maximization of quality of life and functional recovery. The aim of this study was to assess the relationship between a specific well-being measure, the Subjective Well-being under Neuroleptic Scale – short version (SWN-K), and the SF-36 Health Survey as a generic quality of life measure.

**Patients and methods:** A multicenter, cross-sectional study was conducted with clinically stable outpatients diagnosed with schizophrenia. Spearman's rank correlation was used to assess the associations between the SWN-K total score, its five subscales, and the SF-36 domains.

**Results:** Ninety-seven patients were included in the study. The mean age was 35 years (standard deviation = 10) and 72% were male. All correlations among domains were positive and most were statistically significant. The bodily pain domain of the SF-36 presented the lower correlations with the SWN-K (rho range 0.10–0.25), whereas the other seven domains correlated significantly (rho range 0.49–0.60, all  $P < 0.001$ ). The largest correlations were obtained between the SWN-K and the SF-36 domains of general health (rho = 0.53), mental health (rho = 0.60), and vitality (rho = 0.54).

**Conclusion:** The positive but nevertheless moderate correlations observed between a specific well-being instrument and a generic quality of life scale supports the inclusion of diagnosis-specific tools for outcome assessment of patients with schizophrenia.

**Keywords:** schizophrenia, subjective well-being, quality of life, patient-reported outcomes, generic health status measures, SF-36

## Introduction

In parallel to the steady improvement in treatment of patients with schizophrenia, the desired outcome has evolved from symptom management to maximization of quality of life and functional recovery.<sup>1</sup>

Generic health status measures such as the EuroQol-5D and the SF-36 Health Survey (SF-36) are increasingly being used to inform health policy.<sup>2,3</sup> They are administered in several diseases and their use is spreading in mental health research.<sup>4</sup> There is an increasing awareness of the need to address mental health as an integral part of improving worldwide population health.<sup>5</sup> The self-perception of patients with severe mental disorders is a key factor in adherence, quality of life, and clinical outcome.<sup>6</sup> However, information on the relationship between different aspects of mental health, subjective well-being, and physical health is lacking.

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The aim of this study was to assess the relationship between a specific well-being measure, the Subjective Well-Being under Neuroleptic scale – short version (SWN-K),<sup>7</sup> and the eight domains of the public version of the SF-36 v1 as a generic quality of life measure.

## Material and methods

A non-interventional, cross-sectional study was conducted in 20 mental health centers throughout Spain. The study was approved by the institutional review board of the Fundació Sant Joan de Deu (Barcelona, Spain). Written informed consent was obtained from all patients. The criteria for patient recruitment were: 18–65 years of age; a diagnosis of schizophrenia, schizoaffective disorder, or schizophreniform disorder, according to the Diagnostic and Statistical Manual of Mental Disorder: Fourth Edition; Text Revision; follow-up as an outpatient; and clinically stable as judged by the investigators.

The SWN-K is a self-rated scale consisting of 20 items with a six-point Likert response format, capturing subjective experiences of patients during antipsychotic treatment. It consists of five subscales: physical and mental functioning, self-control, emotional regulation, and social integration. Total scores range from 20 to 120 points, with higher scores indicating greater well-being.<sup>7,8</sup> This questionnaire has been used in several studies to assess quality of life in schizophrenia from a patient's perspective.<sup>6,9</sup>

Patients completed the Spanish version of the SF-36 Health Survey, a self-reported multidimensional survey measure of health-related quality of life.<sup>3</sup> The questionnaire contains 36 items and addresses eight health domains: physical functioning, role limitations due to physical health, bodily pain, general health perceptions, vitality, social functioning, role limitations due to emotional problems, and mental health. It can usually be completed in 5–10 minutes.<sup>10</sup>

In addition, the investigators completed the Positive and Negative Syndrome Scale and the Clinical Global Impression – Severity Scale in order to assess the clinical status of the sample.

Demographic and clinical characteristics were described using mean, standard deviation (SD), and a 95% confidence interval for continuous measures. Spearman's rank correlation test was used to assess associations between SWN-K total score, its five subscales, and the SF-36 domains. The SF-36 estimates were calculated using public code (SF36 v2.2.2 Stata ado, written by Philip Ryan).

## Results

A total of 97 patients were included in the statistical analysis. The mean age was 35 years (SD = 10), and males accounted for 72% of the sample. Most patients had a diagnosis of schizophrenia (n = 77), followed by schizoaffective disorder (n = 18), and schizophreniform disorder (n = 2). Demographic and clinical characteristics of the sample are shown in Table 1.

All correlations between domains were positive and most of them were statistically significant. As expected, the lowest correlations with the SWN-K were seen in the bodily pain domain of the SF-36 (rho range 0.10–0.25). On the other hand, all other SF-36 domains significantly correlated with the SWN-K total score (rho range 0.49–0.60, all values of  $P < 0.001$ ). The largest correlations were recorded between the SWN-K and the SF-36 domains of general health (rho = 0.53), mental health (rho = 0.60), and vitality (rho = 0.54) (Table 2).

## Discussion

Outcomes research in patients with schizophrenia should take into account the subjective interpretation of the mood and physical changes that are usually associated with medication intake.<sup>1</sup> Agents involved in health technology assessment are already incorporating these other important aspects into the basic aims of discerning new treatments' efficacy and safety.<sup>11</sup> There is published evidence on the appropriateness and accuracy of self-administered evaluations in patients with severe chronic mental disorders.<sup>12–14</sup> These changes will influence behavioral response to treatment and ultimately the patient's clinical outcome as mediated by their treatment compliance.<sup>6,15</sup>

Many efforts have been made to develop specific instruments to assess patients' affectation within different domains. Perception of quality of life may differ depending on the

**Table 1** Patient demographics and clinical characteristics

	<b>N = 97</b>
Age (years), mean (SD)	35.0 (10.0)
Gender (male) (%)	72.0
Age at onset (years), mean (SD)	22.0 (8.0)
Married or cohabiting (%)	5.1
Number of hospitalizations (median) (SD)	3.0 (3.7)
Participating in psychoeducational programs (%)	46.9
CGI-S score (mean) (SD)	3.6 (1.3)
PANSS total score (mean) (SD)	65.0 (21.4)
SWN-K total score (mean) (SD)	83.5 (14.0)

**Abbreviations:** CGI-S, Clinical Global Impression – Severity scale; PANSS, Positive and Negative Syndrome Scale; SWN-K, Subjective Well-being under Neuroleptic scale – short version.

**Table 2** Spearman's rank correlations between SWN-K and SF-36 domains

	SF-36 domains							
	Physical functioning	General health	Vitality	Mental health	Role physical	Role emotional	Social functioning	Bodily pain
SWN-K total score	0.50***	0.53***	0.54***	0.60***	0.52***	0.52***	0.49***	0.25*
Mental functioning	0.41***	0.46***	0.48***	0.50***	0.41***	0.45***	0.41***	0.20
Social integration	0.43***	0.38***	0.39***	0.45***	0.39***	0.48***	0.48***	0.10
Emotional regulation	0.37***	0.39***	0.44***	0.46***	0.31**	0.33***	0.23*	0.11
Physical functioning	0.44***	0.50***	0.46***	0.60***	0.51***	0.40***	0.37***	0.25**
Self-control	0.28**	0.34***	0.41***	0.39***	0.43***	0.40***	0.38***	0.19

Notes: \* $P < 0.05$ ; \*\* $P < 0.01$ ; \*\*\* $P < 0.001$ .

Abbreviations: SWN-K, Subjective Well-being under Neuroleptic scale – short version; SF-36, Short Form – 36 Health Survey.

patients' perspective. Patients typically rate their utilities much higher than the general public or proxies, while physicians tend to give the lowest ratings.<sup>16</sup> Therefore, more specific tools in terms of health-related quality of life are still needed.<sup>17,18</sup>

The positive but nevertheless moderate correlations noted between a specific well-being scale, the SWN-K, and a generic quality of life scale, such as the SF-36, support the inclusion of diagnosis-specific instruments for outcome assessment in patients with schizophrenia.

## Disclosure

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