



# Subjective quality of life factorial structure across mental disorders: should we switch to assessing dimensions?

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## Abstract

A two-factor structure of subjective quality of life (SQoL) was established for patients with schizophrenia with the dimensions being ‘Life and Health’ and ‘Living Environment’. This study investigated whether the same structure applies in patients with mood and anxiety disorders and, if so, whether the dimension scores differ between the three diagnostic groups. SQoL data of 1366 patients with mood and 419 patients with anxiety disorders obtained on the Manchester Short Assessment of Quality of Life (MANSA) were retrieved from 3 multisite studies. We performed Confirmatory Factor Analyses (CFAs) based on the MANSA SQoL items of each diagnostic sample. Next, through a series of Kruskal–Wallis and Mann–Whitney tests, we compared the scores of the two factors across patients with mood disorders, anxiety disorders and schizophrenia. The two CFAs showed adequate fit of the two-factor structure across mood and anxiety disorders. The dimension scores on ‘Life and Health’ differed significantly between all three diagnostic groups. They were lowest in patients with anxiety disorders, higher in patients with mood disorders and highest in patients with schizophrenia. However, on the ‘Living Environment’ dimension, patients with mood disorders had significantly higher scores than patients with schizophrenia, whilst patients with anxiety disorders did not differ significantly from either other group. The findings suggest that a two-factor structure of SQoL applies across mental disorders. The two dimensions vary across diagnostic groups in different ways. Assessing two dimensions of SQoL may provide more specific and relevant information than global scores.

**Keywords** Subjective quality of life · MANSA · Mood · Anxiety · CFA

## Introduction

Subjective quality of life (SQoL) is a widely used patient-reported outcome criterion in the evaluation of mental health care. It is used in different health care settings and across diagnostic groups [1–3]. A range of instruments have been created for assessing SQoL in people with mental disorders. However, a recent review of such instruments calls for their further refinement through systematic analyses of their psychometric properties [4]. Most established SQoL instruments use global scores, rather than empirically established

dimensions that would distinguish between different aspects of SQoL. Identifying dimensions instead of global scores may provide more specific information for service evaluation and planning.

Some of the well-known instruments for patients with mood and anxiety disorders are population-specific, such as the Quality of Life for Depression scale [5]; others are generic in the sense that they can be used across diagnostic groups, which is essential when routine services with diagnostically mixed patient groups are evaluated.

One such generic instrument is the Manchester Assessment of Quality of Life (MANSA) [6]. It was initially developed in studies on patients with psychosis but has since been widely applied in different settings and diagnostic groups, resulting in more than 1000 publications [7]. The MANSA is based on Lehman’s [8] conceptualisation of quality of life and provides a brief but comprehensive approach to assessing SQoL. Patients rate their satisfaction with life as a whole and with 11 life domains, such as physical and mental

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health, friendships and job. The MANSA is brief and easy to administer.

Despite its extensive use in research, no attempt has been made to validate a factorial structure across diagnostic groups. A previous study using the data of large multisite studies [9–11] focussed exclusively on patients with schizophrenia. It identified and confirmed two distinct SQoL dimensions [12]. One is called ‘Life and Health’ and includes the items assessing satisfaction with life as a whole, job/unemployment, financial situation, friendships, sex life, leisure activities, physical and mental health; the other is termed ‘Living Environment’ and encompasses the satisfaction with accommodation, living status, safety and family. The structure was recently used in a study comparing SQoL levels among patients with psychosis, substance abuse difficulties and post-traumatic stress disorder (PTSD). Though beyond the scope of the study, their results suggested similar two dimensions. People with psychosis reported higher levels of ‘Life and Health’ compared to people with PTSD, whilst there was no difference in the ‘Living Environment’ among the three groups [13].

SQoL comparisons across patients suffering from the three mental disorders that dominate in many services across the world, i.e. psychosis, mood and anxiety disorders, are scarce [14], and findings are inconsistent [15]. A previous study comparing global MANSA scores among those groups found higher SQoL for patients with psychotic disorders [16].

The recent identification of two SQoL dimensions in patients with schizophrenia raises the question as to whether these dimensions also apply to patients with mood and anxiety disorders [17–19]. If this was the case, a more accurate and refined assessment across all three major diagnostic groups could be used in the evaluation of services and potentially widen the utility of SQoL measures.

We, therefore, investigated whether the two-factor structure of the MANSA that was identified in patients with schizophrenia also applies to patients with mood and anxiety disorders. If these dimensions were indeed also found in patients with mood and anxiety disorders, we intended to compare their scores. For these analyses we included patients with schizophrenia to provide a more complete and comprehensive picture across the three relevant diagnostic groups.

## Methods

### The studies and the sample

We retrieved data of patients above 18 years old with a diagnosis of mood ( $N = 1366$ ) or anxiety disorder ( $N = 419$ ) according to the ICD-10 [20]. Data were extracted on

diagnosis, sociodemographic and MANSA scores from three studies: the EDEN study [21] was a randomised controlled trial that compared patients receiving treatment in acute day hospitals with those in inpatient wards; the EUNOMIA study [9] assessed treatment and outcomes of involuntarily admitted patients; the COFI study [22] explored 1-year outcomes following in patient treatment in different types of service organisations. The design and results of those studies have been published elsewhere [9, 21, 22]. For the EDEN and EUNOMIA studies, we retrieved baseline data as they were the most complete, and for the COFI study, the 1-year follow-up data as this was the only time when SQoL was assessed.

To be included in the analyses, patients had to have (a) a primary clinical diagnosis of mood or anxiety disorder and (b) complete data for the MANSA. Patients with any type of organic mental disorder or a comorbidity with psychosis, anxiety, or mood disorder were excluded to avoid an overlap of patients across disorders.

For the additional analyses comparing dimension scores across diagnostic groups, we also included data from patients with schizophrenia. For this, we used the data from the study that had previously identified the two dimensions in that patient group. That analysis had included 3120 patients with schizophrenia-spectrum disorders from 9 studies (for details, see [12]).

### Measures

SQoL for all patients was assessed on the MANSA [6]. As measure of SQoL, we used 12 items that asked for satisfaction with: life as a whole, job/unemployment, financial situation, friendships, sex life, leisure activities, accommodation, living status, safety, family, physical and mental health. On each item, patients rate their satisfaction on a 7-point Likert scale (1 = “could not be worse” to 7 = “could not be better”). The mean score of all 12 SQoL items reflects global SQoL, and in this analysis, we calculated mean scores of the two dimensions that had previously been found in schizophrenia patients [12], i.e. ‘Life and Health’ (eight items) and ‘Living Environment’ (four items).

### Data analyses

Analyses were performed separately for patients with mood and anxiety disorders. For both samples, first, we checked data normality using the Kolmogorov Smirnov test and by visually inspecting the histograms across the 12 MANSA items using SPSS v.25 for Mac. Following that, we used the Lavaan syntax for R [23] to implement a Confirmatory Factor Analysis (CFA). We used the Diagonal Weighted Least Square (DWLS) method that applies polychoric correlation calculations, as the data were ordinal and did not follow

normal distribution, therefore, Maximum Likelihood is not recommended [24].

We tested the two-factor model fit, using a combination of fit indices. Based on the Schreiber's [25] indications, we used the values of CFI (cut off < 0.95) and the RMSEA (< 0.05 for excellent fit and < 0.08 for good fit, with narrow Confidence Intervals: from 0.00 to 0.08). When using methods other than Maximum Likelihood, such indices should be interpreted with caution as they may be misleading. Following the recent Xia and Yang [26] recommendations, we used the fit indices of the two-factor model to compare it with a single-factor model including all MANSA items, adopting a diagnostic approach to the model fit. In addition, as there are no clear fit indices for DWLS, we also used the SRMR (cutoff < 0.08), that has proven a robust fit across estimation methods [27]. Model fit was also compared across mental disorders: mood, anxiety and schizophrenia-spectrum (for the latter, data were retrieved from Petkari et al. [12]).

Next, the measurement invariance was tested across mental disorders, and across sex and service setting for mood and anxiety disorders using the same fit indices. Measurement invariance in the factorial structure across categories can be assumed when  $\Delta$ CFI is less than < 0.01, paired with  $\Delta$ RMSEA less than < 0.015 and  $\Delta$ SRMR less than < 0.030 [28].

In the additional comparison of scores across groups, we included patients with schizophrenia using the data from a previous study [12]. A Kruskal–Wallis test was performed for comparing MANSA global and dimension scores across the three diagnostic groups with mood, anxiety and schizophrenia-spectrum disorders.

Finally, we performed a series of non-parametric group comparisons, using Mann–Whitney for comparing sex, living status, the fact of having a close friend, and having seen a friend during the last month, and using Kruskal–Wallis for comparing service setting, marital, accommodation, education and employment status across the MANSA dimensions for patients with mood and anxiety disorders. These analyses were performed to examine whether the two SQoL dimensions displayed differential associations with the sociodemographic characteristics. Defining the specific nature of such associations was beyond the scope of the present paper; thus, the results are reported as supplementary (see Supplementary File 1).

## Results

### Sample characteristics

The sociodemographic characteristics levels of the mood and anxiety disorder samples can be seen in Table 1.

In both groups, there were more women than men. More than 40% were single and had tertiary education, whilst more than 30% were unemployed.

### Confirmatory Factor Analysis results for patients with mood disorders

The CFA confirmed an adequate fit of the two-factor MANSA model ('Life and Health' and 'Living Environment') in the sample of patients with mood disorders. All factor loadings were significant and exceeded 0.04, ranging from 0.044 to 0.082. The between factor correlation was  $r=0.77$ , which is below 0.85 suggesting the existence of two factors under the latent construct of SQoL. When compared to the single-factor model that included all the MANSA items, the two-factor model showed better fit. Again, for the single-factor model, all factor loadings were significant and exceeded 0.04, ranging from 0.043 to 0.080.

Table 2 presents fit indices for the invariance testing analyses. Results revealed that the two-factor structure stands across men and women, proving goodness of fit for configural, metric, scalar and strict invariance. Similarly, for service setting, good measurement invariance was supported across patients from inpatient, outpatient and acute day hospital settings.

### Confirmatory Factor Analysis results for patients with anxiety disorders

Results of the CFA for the sample of people with anxiety disorders suggested an acceptable fit of the two-factor model ('Life and Health' and 'Living Environment'). All factor loadings were significant and exceeded 0.04, except for item 4 (Satisfaction with Friendships), that loaded to the 'Life and Health' factor with 0.036. Correlation between the two factors was 0.82, below the threshold of 0.85, indicating that the two factors are distinct. The two-factor model showed better fit compared to the single-factor model. Again, for the single-factor model, all factor loadings were significant and exceeded 0.04, except for item 4 (0.036).

Configural invariance for the two-factor model was acceptable across male and female, whereas metric and scalar invariance showed borderline fit, and strict invariance was good. The invariance testing across service settings showed a borderline fit of the two-factor model in terms configural, metric and scalar, and a not good strict invariance (see Table 2). Therefore, the model should be used with cautiousness in patients from different settings.

### Factorial structure comparison across mental disorders

Fit indices across mental disorders can be seen at Table 3. As observed, the two-factor model seems to have better

**Table 1** Sociodemographic and SQoL characteristics of the samples

Factor	Patients with mood disorders		Patients with anxiety disorders	
	<i>N</i> = 1366		<i>N</i> = 419	
	<i>N</i> (%)	<i>M</i> (SD)	<i>N</i> (%)	<i>M</i> (SD)
Sex	<i>N</i> = 1365		<i>N</i> = 419	
Male	553 (40.5%)		165 (39.4%)	
Female	812 (59.5)		254 (60.6%)	
Age <i>N</i> = 1358		42.6 (11.6)		39.5 (12.09)
Study				
EDEN	369 (27.1%)		193 (46.1%)	
EUNOMIA	293 (21.4%)		43 (10.3%)	
COFI	704 (51.5%)		183 (43.7%)	
Study country	<i>N</i> = 1366		<i>N</i> = 419	
UK	429 (31.4%)		74 (17.7%)	
Germany	241 (17.6%)		60 (14.3%)	
Italy	151 (11.1%)		48 (11.5%)	
Poland	225 (16.5%)		85 (20.3%)	
Sweden	40 (2.9%)		5 (1.2%)	
Czech Republic	113 (8.3%)		64 (15.3%)	
Slovakia	73 (5.3%)		60 (14.3%)	
Lithuania	15 (1.1%)		1 (.2%)	
Belgium	70 (5.1%)		21 (5.0%)	
Israel	9 (0.7%)		1 (.2%)	
Service setting	<i>N</i> = 1366		<i>N</i> = 419	
Inpatient	492 (36%)		121 (28.9%)	
Acute day hospital	170 (12.4%)		115 (27.4%)	
Outpatient	704 (51.6)		183 (43.7%)	
Marital status	<i>N</i> = 987		<i>N</i> = 226	
Single	402 (40.5%)		107 (47.3%)	
Married/partnership	348 (35.1%)		84 (37.2%)	
Divorced/separated	210 (21.2%)		33 (14.6%)	
Widowed	27 (2.7%)		2 (.9%)	
Education level	<i>N</i> = 697		<i>N</i> = 179	
Primary or less	80 (11.4%)		28 (15%)	
Secondary	255 (36.1%)		70 (38.5%)	
Tertiary	362 (51.5%)		81 (45.5%)	
Employment	<i>N</i> = 996		<i>N</i> = 225	
Employed	345 (34.6%)		100 (44.2%)	
Unemployed	381 (38.3%)		73 (32.3%)	
Student	42 (4.2%)		18 (8.4%)	
Household	34 (3.4%)		10 (4.4%)	
Retired/pensioned	136 (13.7%)		17 (7.5%)	
Voluntary/sheltered	11 (1.1%)		3 (1.3%)	
Other	47 (4.7)		4 (1.8%)	
Living situation	<i>N</i> = 1343		<i>N</i> = 415	
Alone	418 (31.1%)		98 (23.6%)	
With others	925 (68.9%)		317 (76.4%)	
Seen a friend	<i>N</i> = 1366		<i>N</i> = 411	
Yes	832 (62.3%)		264 (64.2%)	
No	504 (37.7%)		147 (35.8%)	
Have a close friend	<i>N</i> = 1356		<i>N</i> = 418	
Yes	1041 (76.8%)		311 (74.4%)	

**Table 1** (continued)

Factor	Patients with mood disorders		Patients with anxiety disorders	
	<i>N</i> = 1366		<i>N</i> = 419	
	<i>N</i> (%)	<i>M</i> (SD)	<i>N</i> (%)	<i>M</i> (SD)
No	315 (23.2%)		107 (25.6%)	

fit across patients with mood, anxiety and schizophrenia-spectrum disorders, as compared to the single-factor model, though both models show adequate fit across the three categories.

In addition, the measurement invariance results support a good fit of the two-factor model across disorders (see Table 2).

**Comparisons of MANSA levels across mental disorders**

The global MANSA mean scores and the scores for the two dimensions in each of the three diagnostic groups are shown in Table 4.

The Kruskal–Wallis test revealed that patients from the three categories (schizophrenia-spectrum, depression and anxiety) differed in overall MANSA levels [ $H(2) = 29.670; p < 0.001$ ]. Patients with schizophrenia (Median\_range = 2.519) had significantly more favourable scores than patients with mood (Median\_range = 2.397) ( $p = 0.024$ ) and anxiety disorders (Median\_range = 2.138) ( $p < 0.001$ ). Mood disorder patients showed significantly higher scores than patients with anxiety disorders ( $p = 0.003$ ). The findings for ‘Life and Health’ were similar [ $H(2) = 67.646; p < 0.001$ ]. Patients with schizophrenia (Median\_range = 2.567) had higher scores than patients with mood (Median\_range = 2.313) ( $p < 0.001$ ) and anxiety disorders (Median\_range = 2.050) ( $p < 0.001$ ), whilst

**Table 2** Measurement invariance of the MANSA two-factor model across sex and service setting for mood and anxiety disorders, and across diagnoses

Invariance type	Mood disorders			Anxiety disorders			Across diagnoses <sup>a</sup>		
	CFI	RMSEA (95% CI)	SRMR	CFI	RMSEA (95% CI)	SRMR	CFI	RMSEA (95% CI)	SRMR
	<i>Sex</i>						<i>Diagnosis</i>		
Configural	0.98	0.07 (0.06–0.07)	0.05	0.96	0.08 (0.07–0.10)	0.07	0.98	0.06 (0.06–0.06)	0.04
Metric	0.98	0.07 (0.06–0.07)	0.05	0.95	0.09 (0.08–0.10)	0.08	0.98	0.06 (0.06–0.07)	0.05
Scalar	0.98	0.07 (0.06–0.08)	0.05	0.95	0.10 (0.08–0.11)	0.08	0.98	0.06 (0.06–0.06)	0.05
Strict	0.98	0.06 (0.05–0.06)	0.05	0.96	0.07 (0.06–0.08)	0.08	0.97	0.06 (0.06–0.06)	0.05
	<i>Service setting</i>								
Configural	0.97	0.07 (0.06–0.08)	0.05	0.96	0.09 (0.08–0.10)	0.08			
Metric	0.97	0.07 (0.06–0.08)	0.06	0.95	0.10 (0.09–0.11)	0.09			
Scalar	0.97	0.07 (0.07–0.08)	0.06	0.95	0.11 (0.10–0.12)	0.09			
Strict	0.95	0.07 (0.07–0.08)	0.06	0.93	0.10 (0.09–0.11)	0.09			

<sup>a</sup>Mood/anxiety/schizophrenia-spectrum

**Table 3** Fit indices across diagnostic categories for the single- and two-factor MANSA models

Fit index	Model	Mood disorders	Anxiety disorders	Schizophrenia-spectrum disorders <sup>a</sup>
CFI	Two-factor	0.98	0.96	0.90
	Single-factor	0.97	0.95	0.86
RMSEA (95% CI)	Two-factor	0.07 (0.06–0.08)	0.08 (0.07–0.10)	0.06 (0.06–0.07)
	Single-factor	0.08 (0.08–0.09)	0.09 (0.08–0.10)	0.07 (0.07–0.08)
SRMR	Two-factor	0.05	0.06	0.04
	Single-factor	0.06	0.07	0.05

<sup>a</sup>Data from Petkari et al. [12]

**Table 4** Subjective quality of life scores across diagnostic categories

Subjective quality of life	Mood disorders	Anxiety disorders	Schizophrenia-spectrum disorders
	<i>N</i> = 1366	<i>N</i> = 419	<i>N</i> = 3120
	<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)
MANSA 12-item mean	4.37 (1.06)	4.19 (1.02)	4.47 (1.02)
MANSA life and health	4.09 (1.17)	3.90 (1.08)	4.30 (1.10)
MANSA living environment	4.93 (1.20)	4.79 (1.22)	4.80 (1.24)

patients with mood disorders showed had higher ratings than patients with anxiety disorders ( $p = 0.003$ ). However, for Living Environment, there were significant differences [ $H(2) = 11.293$ ;  $p < 0.001$ ] only between patients with schizophrenia (Median\_range = 2.411) and mood disorders (Median\_range = 2.560), with the latter having more positive ratings ( $p = 0.004$ ).

## Discussion

### Main findings

The findings suggest that SQoL has two dimensions, and that the two dimensions are similar across patients with schizophrenia, mood and anxiety disorders. The two dimensions can be summarised as ‘Life and Health’ and ‘Living Environment’. Based on the fit indices, the two-factor model seems to have more adequate fit than the single-factor solution, especially for patients with anxiety disorders. Measurement invariance testing supports the model validity across sex and service setting categories, suggesting that the two dimensions can be widely used across different patient groups and in different treatment settings.

When global and dimension scores are compared between the three groups, the advantage of the two-dimension model appears obvious: when the comparison is based on global MANSA scores, patients with schizophrenia have a more favourable SQoL than patients with mood and anxiety disorders. However, when assessing the two SQoL dimensions separately, patients with mood disorders have more positive scores on Living Environment than those with schizophrenia.

### Strengths and limitations

The findings provide an evidence base for the use of the two-factor MANSA model in research and in clinical settings and add to the scarce literature on SQoL comparisons across mental disorders. The analysis used a systematic procedure following up-to-date recommendations regarding the CFA implementation with ordinal data that violate normality,

adding robustness. In addition, we used large multisite samples from several countries, which provided sufficient statistical power with a population with a range of characteristics. Furthermore, we followed strict inclusion criteria, excluding patients with mutual comorbidities. This is in line with the recent ICD-11 [29] classification of a distinct diagnostic category with mixed depression and anxiety characteristics (already outlined at ICD-10 [20] under the anxiety disorders category), where patients seem to display higher levels of functional impairment [30]. Therefore, we considered that their SQoL characteristics should be explored separately, and we focussed on homogeneous samples, avoiding the interference of shared disorder characteristics to the results as much as possible.

However, the analysis also has several limitations. First, the inclusion of data was opportunistic. We used previous studies that were available to us and had assessed the data that we intended to analyse. Second, this is a secondary analysis. Therefore, we could not define the variables to be included in the analysis. For instance, SQoL associations with symptoms could not be tested in the current analysis, as symptoms had not been assessed with consistent methods across the included studies. Similarly, comparisons across specific diagnoses within the ICD categories could not be performed. Third, the diagnostic categories were based on clinical diagnoses and not on structured interviews. Fourth, all diagnoses were based on ICD-10 [20], in which the category of mood disorders includes bipolar disorders, which is now a distinct category in the ICD-11 classification [29]. Nonetheless, some research suggests that SQoL in both depression and bipolar disorders are related to the depressive component [31], which may justify the joint analysis of both categories. In addition, though people with mood disorders and comorbid psychosis were excluded, those diagnosed with mood disorders with psychotic features could not be identified. Similarly, patients with PTSD were part of the anxiety disorders sample, following the criteria of ICD-10 [20]. A previous meta-analysis reported no differences among anxiety and stress-related disorders in terms of SQoL. However, PTSD patients seemed to have lower levels in certain SQoL domains, which may have influenced our findings [19].

## Comparison with literature

The existence of a two-factor structure for the MANSA SQoL was previously proposed [32, 33] and confirmed [12], with patients with schizophrenia-spectrum disorders. Much of the SQoL literature in mental health addressed patients with schizophrenia-spectrum disorders; therefore, it remains quite unclear whether our current knowledge on SQoL may be diagnosis-specific. The evidence provided by the current analysis expands the findings further suggesting that the two-factor model can also be used across patients with mood and anxiety disorders and, hence, for the large majority of patients in many psychiatric services and settings.

Previous studies suggested lower SQoL in patients with mood disorders than in patients with schizophrenia [16]. Patients with mood disorders were consistently reported to have a lower SQoL [34, 35]. Depressive symptoms were assumed to be the main factor for low ratings, and analyses of different patient-reported outcomes suggested a mood-related general appraisal tendency for all patient-reported outcomes including SQoL [36]. Our findings are consistent with this, but only if exclusively global SQoL scores are considered. When the dimensions are analysed separately, a completely different picture emerges. The difference between patients with schizophrenia and mood disorders in ‘Life and Health’ is as expected and pronounced, as one would assume based on the mentioned literature. For the dimension ‘Living Environment’, however, this is reversed, and patients with mood disorders have a significantly better SQoL. At this stage, one can only speculate about the reasons behind this finding. Assuming that the onset of schizophrenia for many patients can be earlier and more disruptive than for those with mood disorders, they may have fewer opportunities for establishing meaningful intimate relationships [37], and often live with their family of origin or in sheltered accommodation [38]. In addition, paranoid symptoms can make them feel unsafe and uncomfortable in their living environment, and symptoms of hostility can lead to serious problems. A severe life course disruption is less common in patients with mood disorders, and their symptoms do not typically lead to conflict in their living situation. In fact, it seems that patients with mood disorders specifically value and appreciate their immediate relationships more than patients with schizophrenia. This challenges the assumption of the negative cognitive triad of depression [39] and suggests a more differentiated picture of the appraisal of patients with mood disorders. Again, about the reasons for this more appraisal of the ‘Living Environment’ one can only speculate. Perhaps, they feel supported by the people around them and are grateful for that [40]. Importantly, this finding suggests which domains of life treatment of patients with mood disorders may focus on, and—on the

other hand—which domains may constitute strength and resources that treatments can tap into.

People with anxiety disorders had lower scores in ‘Health and Life’ than both patients with schizophrenia and mood disorders, which is in line with other findings [41]. Patients with anxiety disorders are less often included in quality of life research, and their poor SQoL tends to be overlooked as compared to other diagnostic groups.

## Implications and future research

The identification of two SQoL dimensions that as such apply across diagnostic categories and provide more differentiated results for each group than global scores corroborates the assumption of a multidimensional nature of SQoL and suggests a solid composition of the two dimensions. This may be a step towards addressing the concerns raised by Awad and Voruganti back in 2012 [3] about the lack of an empirical basis for the concept of QoL, as the data now go beyond global scores and allow for concepts considering two distinct dimensions. Future research should consider the two dimensions separately in the evaluation of treatments and services, test whether their sensitivity to change and their response to treatment varies, and explore whether they can be specifically addressed in therapeutic interventions. This should be feasible since the consideration of two dimensions does not require additional data and, therefore, does not increase any burden on patients.

One may conclude that the findings make a strong case for the assumption of two distinct SQoL dimensions that can be consistently found in different diagnostic groups and provide specific findings for each group that go beyond—and are sometimes contrary to—what global scores can show. The findings appear robust but would still benefit from further replications and testing in other diagnostic groups such as patients with personality disorders.

Following Barrera and Norton’s [42] recommendations “*not only to assess, but to address*” SQoL, the findings of this study may represent a step forward and allow for more focussed considerations of how to do this for different diagnostic groups.

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**Data availability** Data are available upon request from the authors.

## Declarations

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