

# Measuring quality of life of people with severe mental illness: Evaluation of the Dutch version of the Manchester Short Assessment of Quality of Life (MANSA) in three different populations and a look into innovative opportunities

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**Abstract:** *Purpose.* The Manchester Short Assessment of Quality of Life (MANSA; [Priebe et al., 1999](#)) is one of the most widely used QoL-measures in psychiatry. We aimed to investigate the psychometric properties of the Dutch version of the MANSA in a broad sample of people with severe mental illnesses (SMI). *Method.* QoL-data from three studies were available (total n = 806). Internal consistency and construct validity were assessed. Furthermore, it was investigated whether the 12 subjective MANSA-items were capable of discriminating between specific psychiatric disorders. *Results.* Cronbach's alpha ranges from 0.78 to 0.85; overall convergent and divergent validity of the MANSA is good. For people with SMI, their financial situation, mental health and life as whole are the most important QoL-domains. *Conclusions.* The psychometric properties of the MANSA are good and the instrument can be used to discriminate between important QoL domains within people with SMI.

**Keywords:** Quality of Life; MANSA; severe mental illness; psychometric properties.

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## Introduction

People suffering from severe mental illnesses (SMIs) are often confronted with many losses in life. Common roles become more difficult to fulfil and symptoms such as delusions feed prejudices against people with SMI (Angermeyer and Dietrich, 2006; Link et al., 2008; Eklund et al., 2021). How these people adapt and the extent to which their quality of life (QoL) is affected by their disability, is a topic of research that has gained much attention in recent decades. The basic philosophy behind QoL as an outcome measure is that by measuring QoL – at the same time as dimensions of recovery like symptomatic, functional and social recovery – a full picture of the impact of treatment interventions can be gained (Depla et al., 2005; Eack and Newhill 2007; Vatne and Bjørkly, 2008; Van Nieuwenhuizen and Nijman, 2009; Whitley and Drake, 2010; Reininghaus et al., 2012; Santesteban-Echarri et al., 2017; Van Eck et al., 2018; Ådnanes et al., 2019; Geerts et al., 2020). Some authors consider QoL as an even more important outcome measure than symptom reduction (Katschnig et al., 2005; Kilbourne et al., 2018).

Nowadays, many instruments are available to assess QoL in psychiatry, and several reviews have been published describing the instruments and their psychometric properties (Lehman, 1997; Van Nieuwenhuizen and Schene, 1997; Van Nieuwenhuizen and Nijman, 2009; Awad and Voruganti, 2012; Muller, 2020; Siette et al., 2021; van Krugten et al., 2021). In the last 15 years, a number of short versions of commonly used instruments have become available – for example, the brief version of the World Health Organisation Quality of Life (WHOQOL-BREF; WHOQOLGroup, 1998) and the Manchester Short Assessment of Quality of Life (MANSA; Priebe et al., 1999) or a digital QoL assessment app with a personalized and visual assessment approach (Buitenweg et al., 2022). The WHOQOL-BREF was derived from data collected using the WHOQOL-100 and consists of 26 items. It is primarily used in patients with physical illnesses and is a valid and reliable alternative to the WHOQOL-100. The MANSA has been developed as a condensed and slightly modified version of the Lancashire Quality of Life Profile (LQoLP). This instrument is one of the most widely used QoL-measures in psychiatry. The psychometric properties of the MANSA are satisfactory and the high correlations with the LQoLP suggest concurrent validity (Priebe et al., 1999, 2010; Björkman and Svensson, 2005). Moreover, the MANSA is sensitive to change – though a small effect size (Slade et al., 2006; Priebe et al., 2011a), MANSA scores are associated with (unmet) needs (Slade et al., 2005; Priebe et al., 2007; Landolt et al., 2012; Bitter et al., 2016), and MANSA scores are not related to type of treatment setting (Färdigk et al., 2011; Priebe et al., 2011b; Dehn et al., 2022). Because of this, the MANSA seems highly suitable for routine outcome monitoring in mental health care. In the Netherlands, the MANSA is used by many organiza-

tions as an instrument for routine outcome measurement (Nugter and Teer, 2011), together with the Health of the Nation Outcomes Scales (NOS; Wing et al., 1998).

In this paper, we will evaluate the psychometric properties of the Dutch version of the MANSA in a broad sample of people with SMI. To this end, the reliability and convergent and divergent validity of the MANSA are described. Moreover, the relations of the subjective MANSA items within different study populations are investigated. Finally, in an epilogue, a personal note is given for Peter Huxley, in which innovative opportunities for measuring QoL are illustrated.

## Method

### Sample

In this study, data from three studies were available:

*Study 1:* 204 participants with SMI receiving care from a mental health institute in the south of the Netherlands. The data were gathered as part of routine outcome monitoring (Van Kessel, 2011)

*Study 2:* 261 participants with SMI receiving care from a mental health institute in the north of the Netherlands, which participated in a larger research project investigating the implementation of flexible assertive community treatment (FACT; Nugter et al., 2016)

*Study 3:* 341 participants with (major) psychiatric problems who participated in a nationwide randomized controlled trial (RCT) to evaluate the course 'Recovery is up to you' (Van Gestel-Timmermans et al., 2010a, 2012)

The mean age of the total group was 48.4 years (SD = 16.3; range 17–92) and 55% of the group was female. General demographic and psychiatric characteristics of the total group, and the three studies separately, are given in Table 1. For further analyses, the participants are grouped in five psychiatric disorder groups i.e. Schizophrenia spectrum and other psychotic disorders (n = 419; comorbidity = 15.5%); Depressive disorders (n = 195; comorbidity = 45.5%); Anxiety disorders (n = 108; comorbidity=63.0%); Substance-related and addictive disorders (n = 61; comorbidity = 82.0%); Personality disorders (n = 111; comorbidity = 50.5%). Almost 30% of the participants had more than one psychiatric problem and can therefore be classified in more than one psychiatric disorder group. Prior to participation, all former participants received written information about the study they were now enrolled in. Participation was voluntary. For Study 3 (the RCT), approval was obtained from the medical ethics committee

for mental health institutions in the Netherlands. The trial registration number is ISRCTN47331661.

## Procedure

All 806 participants filled out the MANSA as part of the study they were enrolled in. In Study 2, case managers scored – after they were trained in the use and scoring of these instruments – the Health of the Nation Outcome Scale (HoNOS) and Camberwell Assessment of Need Short Appraisal Schedule (CANSAS) of 261 participants. As part of Study 3, 341 participants filled out the Herth Hope Index (HHI), Mental Health Confidence Scale (MHCS) and RAND-36.

## Measures

### *Manchester Short Assessment of Quality of Life (MANSA)*

The MANSA (Priebe et al., 1999) is a brief and slightly modified version of the Lancashire Quality of Life Profile (LQoLP; Oliver et al., 1996; Oliver, et al., 1997). The MANSA consists of four objective questions and 12 subjective questions. The subjective items assess satisfaction with life as a whole: job (or sheltered employment, or training/ education, or unemployment/ retirement); financial situation; number and quality of friendships; leisure activities; accommodation; personal safety; people with whom the individual lives with (or living alone); sex life; relationship with family; physical health; and mental health. Each item is rated on a 7-point Likert scale ranging from 1 (Could not be worse) through to 7 (Could not be better). The four objective items should be answered with 'yes' or 'no'. Generally, the 12-item or the 16-item version (comprising the 12 subjective and four objective items) of the MANSA is used in routine outcome measurement. In this study, an authorized Dutch translation of the MANSA was used (Van Nieuwenhuizen et al., 2017). The summary score used in this study was the mean of the 12 subjective items (range 1 to 7, the higher the score, the better the QoL).

### *Herth Hope Index (HHI)*

The HHI (Herth, 1992) is a self-report questionnaire, which measures hope. The HHI has 12 Likert-scale items, with scores ranging from 1 ('strongly disagree') through to 4 ('strongly agree'). The Dutch-version of the HHI comprises two factors of each six items, i.e.: 'View on life and future' and 'Self-confidence and inner strength' (Van Gestel-Timmermans et al., 2010b).

Table 1  
Demographic and psychiatric characteristics of the participants (N = 770–798)

	Total group	Study 1	Study 2	Study 3	Test chi-square/F
Age (mean/sd)	43.9 (10.9)	43.9 (10.0)	44.3 (12.1)	43.4 (10.4)	F(2,797)=0.561
Gender (%)					
Women	53.9	52.5	43.1	65.8	Chi(2)=34.46**
Men	46.1	47.5	56.9	34.2	
Psychiatric disorders (%)					
Schizophrenia spectrum/ other psychotic disorders	54.1	79.2	63.5	33.3	Chi(2)=114.06**
Depressive disorders	25.2	7.7	23.0	36.3	Chi(2)=52.58**
Anxiety disorders	14.0	3.8	9.9	22.8	Chi(2)=40.50**
Substance-related/addictive disorders	7.9	0.5	14.5	6.9	Chi(2)=29.44**
Other (including ADHD/ASD)	14.0	5.5	13.7	18.8	Chi(2)=17.66**
Personality disorders	14.3	3.3	-	31.3	Chi(2)=139.12**
Objective Mansa-items (% yes)					
Close friend	79.2	74.4	74.1	86.1	Chi(2)=16.74*
Seen a friend	64.5	52.8	65.6	71.0	Chi(2)=19.01*
Accused of a crime	4.7	1.9	6.2	5.3	Chi(2)=5.33
Victim of physical violence	10.2	2.8	2.8	10.6	Chi(2)=21.38*

Note

\* p <.000; \*\* p<.01; ADHD = Attention deficit hyperactivity disorder; ASD = Autism Spectrum Disorder

The Cronbach's alpha coefficients for the two scales in this study were .82 and .68, respectively.

#### *Mental Health Confidence Scale (MHCS)*

The MHCS (Carpinello et al., 2000) assesses the health-related self-efficacy beliefs of persons dealing with mental disorders. The MHCS comprises 16 Likert-scale items with scores ranging from 1 ('totally no confidence') through to 6 ('full confidence'). The instrument has three subscales: 'optimism', 'coping' and 'advocacy' point. The Cronbach's alpha coefficients for the three scales in this study were .85, .86 and .75, respectively.

#### *RAND-36*

The RAND-36 (Van der Zee et al., 1996) comprises 36 items that assess eight health concepts: physical functioning; role limitations caused by physical health problems; role limitations caused by emotional problems; social functioning; emotional well-being; energy/fatigue; pain; and general health perceptions. It includes a single item that provides an indication of perceived change in health. Six subscales have items on 3- through to 6-point Likert scales and two scales have items that can be answered with 'yes' or 'no'. Questions reflect the previous four weeks. On all subscales, lower scores indicate worse QoL. Cronbach's alpha coefficients in this study ranged from .75 to .88; four of the eight scales had an alpha of .82 and higher.

#### *Health of the Nation Outcome Scales (HoNOS)*

The HoNOS is developed to measure mental health status and social functioning (Wing et al., 1998). It is a 12-item rating scale that measures symptoms (3 items), disabilities (2 items), behavioural problems (3 items) and social problems (4 items). Each item is scored on a 5-point scale ranging from 0 (no problem) to 4 (very severe problem). The total score assesses the severity of the patients' mental disorder. Cronbach's alpha coefficient of the total score in this study was .72.

#### *Camberwell Assessment of Need Short Appraisal Schedule (CANSAS)*

The (CANSAS) (Slade et al., 2005) assesses needs in 22 health and social domains – for instance, accommodation, food, self-care, daytime activities, physical health and psychotic symptoms. For each domain, the possible ratings are unmet need (current serious problem, regardless of any help received), met need (no/moderate problem because of help given), no need or not known. The 'unmet need score' is the proportion of unmet needs (number of unmet needs divided by number of needs), the 'met need score' is the proportion of needs (number of needs divided

by all possible needs). The reliability of the CANSAS is good for patient ratings (Kappa .84 for met needs and Kappa .91 for unmet needs) (Andresen et al., 2000).

## Statistical analysis

The statistical software used was SPSS for Windows, release 19. Internal consistency reliability of the MANSA was tested using Cronbach's alpha. The construct validity of the MANSA was assessed by computing the Pearson correlations between the scales of the MANSA, HHI, MHCS, RAND-36, HoNOS and CANSAS. Adequate convergent validity was assumed if correlations were medium to high between the mean of the MANSA total scale with the two HHI subscales, the three MHCS subscales, the RAND-36 subscales 'role limitations caused by emotional problems', 'social functioning', 'emotional well-being', and 'energy/fatigue', the HoNOS subscales 'symptoms' and 'social problems', and the two CANSAS subscales. Note: According to Cohen (1988), a medium correlation ranges from 0.30 to 0.49 and a high correlation is  $r > 0.50$ . Adequate divergent validity was assumed if correlations were low (i.e.  $< .30$ ) between the mean of the MANSA total scale and the RAND-36 scales 'physical functioning', 'role limitations caused by physical health problems', 'pain', and 'general health perceptions', and the HoNOS subscales 'impairment'. Because of multiple testing, the p-value for the convergent and divergent validity was set at  $p < .001$ .

The influence of psychiatric disorders on the MANSA was investigated using an ANOVA, with the 12 subjective MANSA items as a dependent variable, and five psychiatric disorder groups (coded 1 = patient classified with psychiatric disorder; 2 = patient not classified with psychiatric disorder) as fixed factor, corrected for gender and age. Using t-tests, the mean differences of the MANSA items between the psychiatric disorder groups were investigated. Furthermore, it was investigated whether the 12 subjective MANSA items had the capability to discriminate between specific psychiatric disorders. Six separate discriminant analyses were therefore conducted in which the independent variables were the 12 subjective items of the MANSA and confounding factors gender and age, and the grouping variables were the five psychiatric disorders (coded 1 = patient classified with psychiatric disorder; 2 = patient not classified with psychiatric disorder). The discriminant function is comparable with a regression function and indicates the strength of the relation between the items of the MANSA and the grouping variable (psychiatric disorder group). The significance of the discriminant model can be tested, using a Wilk's Lambda. To describe the most relevant items that represent the discriminant function, inspection of the correlations between the discriminant function and the items of the MANSA was performed (i.e. the dis-

criminant loadings). The larger the correlation, the more relevant the item of the MANSA was for the QoL of the participants classified with a specific psychiatric disorder. The discriminant loadings can be treated as a factor loading indicating that a loading of .30 is a cut-off between important and less important variables.

## Results

### Internal consistency

The Cronbach's alpha coefficient for the 12 items of the MANSA was .84 if all participants were considered. The Cronbach's alpha coefficient for the subgroups was .82 (Study 1), .78 (Study 2), and .85 (Study 3).

### Convergent and divergent validity

Table 2 shows the correlations between the mean MANSA-total scale and the subscales of the HHI, MHCS, RAND-36, HoNOS and CANSAS. According to expectations, a significant medium to high correlation was found with the two HHI subscales ( $r = .36$  to  $.57$ ;  $p < .000$ ), the three MHCS subscales ( $r = .36$  to  $.56$ ;  $p < .000$ ), the RAND-36 subscales 'role limitations caused by emotional problems', 'social functioning', 'emotional well-being', and 'energy/fatigue' ( $r = .41$  to  $.59$ ;  $p < .000$ ), the HoNOS subscales 'symptomatic problems' and 'social problems' ( $r = -.47$  to  $-.49$ ;  $p < .000$ ), and the CANSAS subscales 'met need score' and 'unmet need score' ( $r = -.44$  to  $-.47$ ;  $p < .000$ ).

As for the divergent validity, low correlations were found between the mean MANSA-total score and the RAND-36 subscales 'physical functioning', 'role limitations caused by physical health problems', and 'pain' ( $r = .15$  (ns),  $.28$  and  $.29$ ;  $p < .000$ , respectively). A low correlation was also found with the HoNOS subscale 'impairment' ( $r = -.19$  (ns)). A medium correlation, however, was found with the RAND-36 scale 'general health perception' ( $r = .45$ ;  $p < .000$ ).

### Subjective MANSA-items across the six psychiatric disorders

In Table 3, the corrected means for the 12 subjective MANSA items are depicted. The means were corrected for age and gender. Participants with schizophrenia spectrum and other psychotic disorders scored significantly higher on all subjective MANSA

items except for item ‘personal safety’. Participants with personality disorders scored lowest on nine of the subjective MANSA items except for item ‘life as a whole’, which was scored lower by participants with depressive disorders. Participants with anxiety disorders scored lowest on ‘personal safety’ and ‘mental health’.

Table 2

Correlations of the mean MANSA-total scale with subscales of validating instruments

	Mean MANSA-total scale
Convergent validity	
HHI (n=340)	
view on life and future	.57**
self-confidence and inner strength	.36**
MHCS (n= 339)	
optimism	.56**
coping	.49**
advocacy	.36**
RAND-36 (n= 333-336)	
role limitations caused by emotional problems	.41**
social functioning	.50**
emotional well-being	.59**
energy/fatigue	.51**
HoNOS (n=249-252)	
symptomatic problems	-.47**
social problems	-.49**
CANSAS (n=248)	
unmet need score	-.47**
met need score	-.44**
Divergent validity	
RAND-36 (n=330-336)	
physical functioning	.15
role limitations caused by physical health problems	.28**
pain	.29**
general health perceptions	.45**
HoNOS (n=252-255)	
impairment	-.19

Note

\*\*  $p \leq .000$

## Rankings of subjective MANSA items across psychiatric disorders

All discriminant functions were significant (Wilk's Lambda .865 to .966;  $p < .05$ ). In [Table 4](#), the within-group correlation for the significant discriminant functions are depicted. The correlations revealed different rankings of subjective MANSA-items across patients; the ranking indicates the importance of the item for the QoL of the participants. The most important items for participants with schizophrenia spectrum and other psychotic disorders were 'mental health' (Rank 1), 'family' (Rank 2) and 'life as a whole' (Rank 3); 'personal safety' had no significant contribution to the QoL ( $r = 0.17$ ). For participants with depressive disorders, 'life as a whole' (Rank 1), 'leisure activities' (Rank 2) and 'mental health' (Rank 3) were the items with the most importance for their QoL; 'personal safety', 'accommodation', 'financial situation' and 'friendship' did not significantly contribute to their QoL (all  $r < 0.3$ ). For participants with anxiety disorders, the three most important QoL variables were 'mental health' (Rank 1), 'sex life' (Rank 2) and 'personal safety' (Rank 3); 'leisure activities' had no significant contribution to the QoL ( $r = 0.24$ ). For participants with personality disorders, the best discriminating variables were 'financial situation' (Rank 1), 'accommodation' (Rank 2) and 'family' (Rank 3); 'personal safety', 'leisure activities', 'physical health', 'friendship', 'life as whole' had no significant contribution to their QoL (all  $r < 0.3$ ). For participants with substance-related and addictive disorders, three subjective MANSA items were relevant for their QoL: 'financial situation' (Rank 1); 'leisure activities' (Rank 2); and 'friendship' (Rank 3).

## Discussion

This study offers evidence that the Dutch version of the MANSA is a reliable, valid measure and that the importance of the subjective QoL-domains varies between patient groups. These results are important for the Dutch-speaking countries but may also – in a more general manner – underpin the applicability of the MANSA across countries. Results show that the Cronbach's alpha of the MANSA ranges from acceptable (.78) to good (.85) and the overall convergent and divergent validity is good. The QoL of participants with SMI is related to aspects such as optimism, emotional well-being and self-confidence, and inner strength and is inversely associated with, for instance, symptomatic problems and unmet needs. The intercorrelations are substantial but not too high, which implies that QoL measured with the MANSA is of added value. The findings indicate that the MANSA can be validly used in patient reported outcomes ([Priebe et al., 2012](#)).

Table 3  
Corrected means (SE) of the item scores for the total group and the six psychiatric classification groups and significant effects of the ANOVA model

	Schizophrenia spectrum/ other psychotic disorders (n=419)	Depressive disorders (n=195)	Anxiety disorders (n=108)	Substance- related addictive disorders (n=61)	Personality disorders (n=111)	Significant mean differences between psychiatric classification groups
MANSA-total score	4.7 (.05)*	4.2 (.07)*	4.1 (.09)*	4.4 (.12)	4.0 (.09)*	SCH>SUB>DEP>ANX, PD
Life as a whole	4.6 (.07)*	3.9 (.10)*	4.0 (.14)*	4.3 (.18)	4.0 (.14)*	SCH>SUB>DEP, ANX, PD
Job/unemployment	4.5 (.09)*	3.9 (.13)*	3.8 (.17)*	4.4 (.23)	3.8 (.16)*	SCH, SUB>DEP>ANX, PD
Financial situation	4.4 (.09)*	3.9 (.13)*	3.6 (.17)*	3.7 (.23)*	3.4 (.17)*	SCH>DEP>SUB>ANX, PD
Friendship	4.7 (.08)*	4.3 (.12)	4.2 (.16)*	4.1 (.21)	4.0 (.16)*	SCH>DEP>SUB, ANX, PD
Leisure activities	4.9 (.07)*	4.3 (.11)*	4.5 (.14)	4.4 (.19)	4.4 (.14)*	SCH>SUB>DEP>ANX, PD
Accommodation	5.3 (.08)*	5.0 (.11)	4.8 (.15)*	5.2 (.20)	4.5 (.14)*	SCH, SUB>DEP>ANX, PD
Personal safety	5.1 (.07)*	5.0 (.10)	4.6 (.13)*	5.1 (.18)	5.0 (.13)*	SCH, SUB, DEP, PD>ANX
Living situation	5.1 (.08)*	4.6 (.12)*	4.6 (.15)*	5.1 (.21)	4.3 (.15)	SCH, SUB>DEP, ANX>PD
Sex life	4.2 (.10)*	3.6 (.14)*	3.6 (.18)*	3.7 (.25)	3.4 (.18)*	SCH>SUB, DEP, ANX>PD
Family	4.8 (.09)*	4.3 (.13)*	4.3 (.16)	4.5 (.22)	3.8 (.16)*	SCH>SUB, DEP, ANX>PD
Physical health	4.5 (.08)*	4.1 (.11)*	4.1 (.15)*	4.2 (.20)	4.1 (.15)*	SCH>SUB, DEP, ANX, PD
Mental health	4.3 (.08)*	3.7 (.11)*	3.5 (.15)*	4.1 (.20)	3.6 (.15)*	SCH>SUB>DEP, ANX, PD

Note: means are corrected for gender and age.

\*: p<.05 mean significant different from the total group; SE = Standard Error; SCH = Schizophrenia spectrum and other psychotic disorders; DEP = Depressive disorders; ANX = Anxiety disorders; SUB = Substance-related and addictive disorders; PD = Personality disorders.

Table 4  
Correlation between discriminant function and items of the MANSA for each psychiatric disorder

	Schizophrenia spectrum/ other psychotic disorders	Depressive disorders	Anxiety disorders	Substance- related addictive disorders	Personality disorders	Overall
	r*	r*	r*	r*	r*	Rank
	Rank	Rank	Rank	Rank	Rank	Rank
Life as a whole	0.46	0.58	0.38	-0.01	0.29	5
Job/ unemployment	0.30	0.34	0.43	-0.13	0.34	6
Financial situation	0.41	0.18	0.49	0.46	0.53	2
Friendship	0.33	0.21	0.31	0.31	0.28	10
Leisure activities	0.34	0.50	0.24	0.32	0.19	7
Accommodation	0.30	0.15	0.40	-0.01	0.50	11
Personal safety	0.17	0.11	0.51	-0.09	0.06	12
Living situation	0.33	0.34	0.36	-0.15	0.43	8
Sex life	0.30	0.39	0.54	0.24	0.32	3
Family	0.49	0.37	0.32	-0.05	0.50	4
Physical health	0.43	0.38	0.38	0.08	0.24	9
Mental health	0.58	0.48	0.64	-0.06	0.34	1

Note

\* pooled within-groups correlation between MANSA items and standardized canonical discriminant function, corrected for gender and age.

As for the validity of the Dutch version of the MANSA, the associations were mainly as expected. QoL was positively related with hope, self-efficacy beliefs with mental disorders, RAND-36 scales ('role limitations caused by emotional problems', 'social functioning', 'emotional well-being', and 'energy/fatigue') and negatively related with HoNOS scales ('symptomatic problems' and 'social problems') and unmet and met needs. However, an unexpected relationship was found with the more health-related aspects, i.e. general health perceptions (RAND). In general, the assumption is that QoL and general health status have different determinants and therefore are not related (Priebe et al., 2011b). The high correlation with general health perceptions in our study might imply that personal beliefs about health bias self-perception of functioning more globally, and potentially have a favourable effect on QoL.

On most of the MANSA-items, the mean item scores of the patient groups differed. The patients with schizophrenia spectrum and other psychotic disorders reported overall higher levels of MANSA-items than, for instance, patients with mood disorders. Prior studies also found that patients with depressive disorders report lower levels of subjective QoL compared to patients with schizophrenia, schizotypal and delusional disorders (Priebe et al., 2011b; Tan and Rossell, 2016). Patients with personality disorders and anxiety disorders reported the lowest levels of QoL. Several studies investigated the impact of anxiety on QoL, for instance in older adults, and emphasize the impact on all domains of QoL, while depressive symptoms mainly influenced the environmental aspects of QoL (Porensky et al., 2009; Sarma and Byrne, 2014). The results of the present study, in line with other studies (*cf.* Priebe et al., 2011b), indicate that group differences in QoL are ubiquitous.

Although group differences in QoL are well known, the reasons why are not clear. An explanation could be the differences in the relevance of the QoL-domains for patient groups. Although several studies investigated individual importance rating or preference-weighting of QoL instruments (Hsieh, 2014; Wu et al., 2014), the importance of domain on group level has, to our knowledge, not been investigated. In our study, we found that for patients with schizophrenia spectrum and other psychotic disorders, depressive disorders and anxiety disorders, satisfaction with their mental health and life as a whole were important for their QoL. For patients with substance-related and personality disorders, on the other hand, satisfaction with their financial situation was the most important part of their QoL. The most important items are related to one of the two identified factors of the MANSA 'life and health-related aspects', whereas items related to the factor 'quality of the environment' differentiated less between the diagnosis groups (Petkari et al., 2020). This is in line with people with SMI in which satisfaction with safety and living situation is less

demarcated between profiles of QoL (Buitenweg et al., 2018a). Although in our study differences in the total QoL score were only small, the importance of the underlying domains differed significantly between the patient groups. These differences indicate that a broad measure with multiple domains is capable of describing the overall QoL of psychiatric patients. However, for individual care planning, it is essential to take into account the domains that are important for the individual patient. Because individual importance weighting of domains does not have positive effects on the predictive value of QoL (Wu et al., 2014). The importance of the domains has to be established on group level to capture the population variation.

In conclusion, the Dutch version of MANSAs has a satisfactory to good reliability and the convergent and divergent validity of the scale is adequate. This indicates that the MANSAs can be used as a patient-reported outcome measure. The insight into the differences between domains of QoL for patients with psychiatric classification might also be informative for the changeability and stability of QoL across the life span (Sprangers and Schwartz, 2008; Rapkin and Schwartz, 2019; Vanier et al., 2021). Further research should investigate whether these differences in QoL can be used to personalize treatment of people with SMI and consequently might increase their well-being.

## **Epilogue by Chijs van Nieuwenhuizen**

In this paper, we have described the Dutch version of the MANSAs, which is based on the Lancashire Quality of Life Profile (LQoLP). My acquaintance with Peter Huxley started with this instrument. About thirty years ago, I worked as a PhD-student at the Academic Medical Center in Amsterdam on the Quality of Life of people with SMI. After a thorough search in the literature, we<sup>1</sup> decided that the LQoLP was the best instrument to be used in the Netherlands (Van Nieuwenhuizen and Schene, 1997). I contacted the late Joe Oliver, and Peter Huxley for their permission to make an authorized translation of the LQoLP and they agreed! (Van Nieuwenhuizen et al., 1998, 2001). In one of my studies, we evaluated a case management project in the province of Flevoland, in which the LQoLP was used. Together with colleagues from this mental health organization, we invited Peter and Joe to come to Amsterdam to discuss the moderations we would like to make based on a concept mapping study we had conducted (Boevink et al., 1995). There is one thing I vividly remember prior to this pleasant and inspiring meeting. We agreed that I would fetch Peter and Joe from Schiphol Airport. Of course, I went by train – being a poor PhD-student. According to them, I could not miss them: “Look for a short man with a very long beard and a very tall man with not so much hair”. And they were right... During

my PhD-study, we met at several conferences and always enjoyed talking about Quality of Life and, of course, about many other topics.

After my PhD-study, I explored other fields but kept working on Quality of Life, but more as a hobby until we got a grant to develop a QoL assessment app for people with severe mental health problems. David Buitenweg was the PhD-student on this project and this study resulted in the QoL-ME: a digital QoL assessment app that utilizes a personalized and visual assessment approach. The app consists of two main components: a core version and additional modules. The core version involves a few mandatory QoL domains that every respondent has to answer. In addition, respondents are free to select any combination of eight additional modules and only answer questions on their modules of choice. This structure, involving both a mandatory core version and optional additional modules, makes the QoL-ME a flexible QoL assessment app (see [Buitenweg et al., 2018a](#); [Buitenweg et al., 2018b](#); [Buitenweg et al., 2019](#); [Buitenweg et al., 2020](#); [Maathuis et al., 2020](#); [Buitenweg et al., 2022](#) for more background information). In developing the QoL-ME, we also used the MANSA and the LQoLP. As such, it feels like the circle is complete. I am sure that Joe would have loved this visual version and that its innovative aspects fit with the work of Peter. It was such a great pleasure to work with you, Peter!

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## **Note**

1. <sup>†</sup>This choice was made together with my promoter Aart Schene and co-promoter Maarten Koeter. Both have died from cancer and are deeply missed.

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