Measuring Mental Health in the Clinical Setting: what is important to service users?

The mini-Service user Recovery Evaluation scale (Mini-SeRvE)

Abstract

Background: Since 2001 a policy of positive mental health recovery has been promoted in the UK, with service user involvement. This has not been easy to implement in the clinical setting.

Aims: To develop and validate a brief self-report, service user-designed, outcome measure, (Mini-SeRvE), for clinical use, including spiritual and religious issues.

Method: From the previously developed Service user Recovery Evaluation scale, (SeRvE), 15 questions were selected for Mini-SeRvE which was self-completed by 207 people; 100 service users and, for comparison, 107 staff. Results were analysed using SPSS software.

Results: Mini-SeRvE is reliable, Chronbach's alpha 0.852. Correlation with another recovery scale, Mental Health Recovery Measure, was high, r=.819. Three reliable subscales emerged; existential well-being, mental ill-being and religious well-being. Scores of the existential well-being and mental ill-being subscales were higher for staff, consistent with higher mental well-being. Religious well-being scores were higher in service users, who also rated religion as more important to them.

Conclusions: Mini-SeRvE is a valid measure of service user recovery. The importance of religion/spiritual belief for our users is highlighted, this being reflected in the subject

matter of Mini-SeRvE. Mini-SeRvE assessments could show individual priorities, evaluate therapy and aid clinical decision-making.

Declaration of interest: None

Introduction

Policy for mental health treatment in England has emphasised the importance of recovery rather than cure since 2001 (Department of Health, 2001). This has been accepted by providers of care (Gordon, 2013) and prioritised by service users (Perkins, 2001). Here, the term "recovery" means moving towards mental well-being and living a satisfying and meaningful life with or without on-going symptoms (Corrigan et al., 1999, Slade et al., 2008). Clinical staff sometimes have a different view of recovery and prioritise remission of clinical symptoms of illness (Fawcett, 2007). Service user involvement in their own care seeks to redress this balance (Borg et al., 2009).

Clinical use of a short patient-reported outcome measure could facilitate such service user involvement (Gordon, 2013). We hypothesise that some service users do not feel that they are recovering mentally, despite being considered clinically well by staff. A self-report measure of recovery could help identify such people, so that their individual needs can be more effectively met. It would need to be based on issues that service users themselves find particularly important for their personal mental recovery. This present study focuses on developing such a measure suitable for clinical use.

One issue prioritised by service users is spirituality (Borras et al., 2007, Fallot, 2001). Spirituality is hard to define, (King & Koenig, 2009). Briefly it is that which gives a sense of meaning, purpose and hope in life. This usually concerns the transcendent and may or

may not involve a specific religious faith, (Barber & Wilson, 2014, Cook, 2004). There is evidence for a positive association between religion/spirituality, mental health, and recovery, (Koenig, 2009, Pargament & Lomax, 2013), however this is not well understood, (Dein et al., 2012). Most studies are cross-sectional, so causes and effects cannot be established. Differing definitions of the terms "spirituality" and "religiousness" are used. More studies are needed for different faith and ethnic backgrounds. One longtitudinal study clearly shows the positive impact of having a faith /spiritual belief on recovery over 3 years in people with schizophrenia, (Mohr et al., 2011). A confounding factor is the finding that for a minority of service users religious/spiritual experiences are not helpful and can adversely affect recovery, (Mohr & Huguelet, 2004, Pargament, 2002, Webb, 2011). Causes could include the religious-type experiences accompanying some psychoses, (Cook, 2015), or the hopelessness of depression. Despite this, the great majority say how important spirituality is for their recovery, (Fallot, 1998, Yangarber-Hicks, 2004). This includes spiritual issues in general, eg. finding meaning and purpose in life, ("existential"), (Galanter et al., 2011, Huguelet, 2016), and a religious faith in particular, (Borras et al., 2007, Mohr et al., 2012). Clinicians often find these issues difficult to address, (Borras et al., 2010). Including spiritual issues in a self-report recovery measure is therefore important.

While some self-report service user recovery scales have already been developed, none address spiritual or religious beliefs, (recent reviews: Law & Morrison, 2012, Shanks et al. 2013, and Sklar et al., 2013). The Mental Health Recovery Measure, (MHRM), (Young & Bullock, 2003), is the only one that does but only in 2 out of 41 questions. Available scales have other serious limitations. The Recovery Assessment Scale, (Giffort et al., 1995) is based on only 4 service user narratives, and includes questions about

"symptoms", a term that service users often cannot recognise, (Jansen et al., 2014). The Questionnaire about the Process of Recovery, (Neil et al., 2009), is limited to positive recovery, omitting common mental difficulties of many service users, eg. loss of motivation or agitation, (Fusar-Poli et al., 2014). Other scales mix practical issues with personal recovery, (Jerrell et al., 2006), or have minimal service user involvement in design, (Andreson et al., 2006).

An alternative tool designed to overcome these difficulties has recently been developed for use in research in a UK city mental health trust, the Service user Recovery Evaluation scale, (SeRvE), (Barber et al., 2012). This scale was entirely user-designed, with the prinicipal investigator and steering group of 6 members all having years of lived experience of mental health problems. During its development, involving a service user research forum (Suresearch) from University of Birmingham, the importance of spiritual and religious issues for recovery emerged (Barber et al., 2012).

Since service users may have impaired concentration, (Moeser et al., 2006), and clinical time is short, at 40 questions SeRvE is too long for clinical use; a problem found with other questionnaires eg. the quality of life questionnaire, (Boyer et al., 2006). A measure for clinical use would contain less than 20 questions, so that it would take only about 5 minutes to complete, (Rush et al., 2013). It was therefore decided to develop a shortened version of SeRvE for this purpose.

Thus, the primary aim of this study was to develop and validate a shortened version of SeRvE, the Mini-Service user Recovery Evaluation scale, (Mini-SeRvE), for use as a patient-reported outcome measure in secondary mental health care.

A second aim was to investigate the possibility of setting a score on Mini-SeRvE below which any person is likely to need extra help even if regarded clinically well. For this, Mini-SeRvE was also completed by a sample of staff members in Birmingham and Solihull Mental Health NHS Foundation Trust, (BSMHFT). These were assumed to resemble the general population in having fewer and less severe mental health problems than our service user sample. The intention was to compare scores and see if these could usefully discriminate between the two samples. This could show a "normal range" of Mini-SeRvE scores below which someone could be regarded as struggling with their personal mental recovery.

A third aim of this study was to confirm that religion/spiritual belief is of crucial importance for many of our service users. This would strengthen the idea that these issues should be addressed clinically. One question for all participants was included about the importance to them of a religious/spiritual belief, so that this could be quantified and compared in the 2 samples.

Methods

Phase 1: Development of Mini-SeRvE

The validation of SeRvE is described elsewhere (Barber et al., 2012). Briefly, the provisional SeRvE was completed by 107 service users in secondary care. Scores were analysed using Statistical Package for Social Scientists software, (SPSS). SeRvE has good reliability, (Chronbach's alpha 0.911). Principal Component Analysis, (PCA), revealed 9 meaningful factors with existential and religious well-being contributing the most,

(Barber et al., 2012). Validity is suggested by high correlations with MHRM and the Spiritual Well-being Questionnaire, (Gomez et al., 2003). The finalised main SeRvE scale consists of 40 statements, ("items"), rated for relevance using a 5 point Likert scale. The religious section is marked optional. Sensitivity to change has yet to be established.

The aim of developing Mini-SeRvE was to produce a 15-20 item version of SeRvE, retaining as many concepts as possible from SeRvE while maintaining acceptable internal consistency; an aim similar to "concept-retention", (Beaton et al., 2005). Qualitative service user feedback and statistical methods were used, (Muhlan et al., 2008, Wardenaar et al., 2010). The 9 different factors/subscales from SeRvE were taken as concepts to represent in Mini-SeRvE. Items with a high specific loading on each subscale were retained, as in Pargament et al., 2011 and Wardenaar et al., 2010. Each subscale was shortened as near as possible to 50% of its original number of items. Discussions about the importance of items were held in our service user steering group. As a result 3 more items, ("I have lost inner motivation", "I believe in my ability to overcome my problems" and "I am confident I can cope with most things in life"), were included, forming the provisional Mini-SeRvE.

Phase 2: Validation of Mini-SeRvE

Instruments used

Provisional Mini-SeRvE and the MHRM, (Young & Bullock, 2003) were the major tools used. MHRM has itself been confirmed as reliable, valid and sensitive to change, (Armstrong et al., 2014). As the tool nearest in subject matter, it was chosen to assess validity of Mini-SeRvE.

A single question asked the extent to which religion/spiritual belief was important personally to participants, (ImpR); 1(very little), 2(somewhat), 3(don't know), 4(quite a lot), 5(very much so).

Data collection

Ethical permission for the study was obtained from the Black Country Research Ethics Committee, reference number 10/H1202/52.

Mini-SeRvE was tested with a convenience sample of 100 service users from a variety of BSMHFT care units to ensure suitability for following people through different secondary care settings: in-patient wards (50%), day units (25%) and outpatient clinics (25%).

Each unit was visited on several occasions and all available service users were asked by staff if they would consider participating. Exclusion criteria were age below 18 or suffering organic brain disease. Those who agreed met with the researcher, were given an information sheet to read, an opportunity to ask questions and invited to give signed consent. Of those initially approached, 80% consented and were asked to complete the provisional Mini-SeRvE and the MHRM. Help reading the items was available from the researcher if required. The location and the participants' age, gender, ethnicity and nominal religious affiliation, if any, were noted. A decision was taken not to include retrieving diagnoses in data collection, since 67% of participants did not consent to have clinical notes scrutinitsed by the research team. However as all were in secondary care, it is likely that they were experiencing severe mental ill-health. All participants were invited to rate the importance for them of a religion/spiritual belief, (ImpR) and asked

to give qualitative feedback about ease of completing and relevance of Mini-SeRvE. Six service users withdrew from the study after consenting, leaving the sample of 100.

Phase 3: Completion of Mini-SeRvE by staff members

All staff members from BSMHFT (4500) were invited to anonymously complete Mini-SeRvE for themselves online for comparison with our service user sample. This was to investigate the possibility of defining normal values of Mini-SeRvE. They were asked to give their age, gender and rate the importance to them of a religion/spiritual belief as in the service user sample. Ethnicity and religious affiliation were not collected due to the impossibility of obtaining consent in an anonymous survey. The survey was closed when 107 had completed Mini-SeRvE.

Data analysis

All results were analysed using SPSS software and 3 datasets created; service user, staff and joint. Omitted items were entered as missing values and negative items were reversed scored, i.e. a score of 4 for agitation was entered as a 2. Thus, a low score on any item in Mini-SeRvE indicates mental distress, with a high score representing mental wellness or "personal recovery". For each person, the mean of responses to all items answered was taken as an overall score.

The provisional Mini-SeRvE was finalized as follows. During service user data collection, service users consistently found two items to be hard to understand and requested explanation. "I feel I have lost my sense of self" was a problem for 12 people and "I feel content" for 11 people. Since this was more than 10% of the total sample for each item,

these items were removed. In addition, the item "I feel loved by some others" did not correlate with other items, Pearson's correlation with Mini-SeRvE: .194 and only one inter-item correlation greater than .171. This item was therefore also removed. After this, the number of items retained from the existential wellbeing factor in SeRvE was over 50%, while 50% or fewer items were present from the other SeRvE factors. After discussion with the steering group, one item, "I can do satisfying things despite my problems", from the existential well-being factor was removed to more closely maintain the structure of SeRvE in Mini-SeRvE. This left a total of 15 items in finalised Mini-SeRvE, main part (11) and religious part (4), (Figure 1).

Psychometric analysis of finalized Mini-SeRvE was performed in the service user dataset. Normality was assessed by calculating skewness, kurtosis and a Shapiro-Wilk test. Reliability was assessed using Cronbach's alpha. Factor analysis was run to identify meaningful subscales. Since this was for descriptive purposes rather than to test any proposed theory, Principle Component Analysis, (PCA), was chosen (Fabrigar et al., 1999), using a varimax rotation accepting all factors with Eigenvalues greater the one. Indication of validity of Mini-SeRvE was assessed using Pearson's correlation with MHRM. Gender differences were assessed using a t test and age differences using analysis of variances. Spearman's rather than Pearson's correlations were calculated between Mini-SeRvE and its subscales, due to non-normality of subscales.

Psychometric analysis of the staff dataset was then carried out. Due to non-normality of data, possible gender differences were analysed using Mann Whitney U test, and effects of age using Kruskal Wallis Test.

In the joint dataset, comparisons of scores were made between the 2 samples using Mann-Whitney U tests. Receiver Operating Characteristic, (ROC), curves were constructed to examine the power of scores on Mini-SeRvE for discriminating between the two samples.

Results

Samples

Our service user sample was a mixed population of 100 service users in secondary care. 18 of these omitted all four religious questions.
Our comparison group was 107 staff members, 17 omitting all four religious questions. For demographic details see table 1.

Mini-SeRvE for service users

All 100 service user participants had completed all finalized items in part 1 of Mini-SeRvE. Qualitative feedback indicated that 90% found these items easy to understand and relevant. Those who struggled found the scale "too long", (5%), "hard to understand", (4%), and "strange" (1%).

Scores of Mini-SeRvE and MHRM were both normally distributed: Shapiro Wilk test not significant, ($p=0.178$, and $p=0.396$ respectively). The Importance of religion rating, (ImpR), was significantly skewed, $p=0.03$, (Shapiro Wilk test significant $p<0.001$).

Mini-SeRvE scores had a central mean in this sample, (3.15, SD .85), with a wide range, (maximium 5.00, and minimum 1.27). A few people scored very highly, 17 scoring > 4.0,

of whom 8 scored > 4.5. Although women scored lower than men, this was not significant, (p=0.07). There were no differences according to age (p=0.434). Cronbach's alpha was 0.852, showing good reliability. Correlation of Mini-SeRvE with the MHRM was high, (.819), suggesting its validity as a self-report measure of mental health recovery.

This dataset was appropriate for PCA, (Bartlett's test of sphericity significant p<0.001, Kaiser-Meyer-Olkin score .814.) Results, (table 2), showed 3 clear factors, these contributing 57% of the variance. The largest, existential well-being, (EWB), concerned meaning, purpose and hope in life, corresponding to the largest factor in the main SeRvE. The second factor, mental ill-being, (MIB), concerned common mental problems of service users, representing a combination of the ill-being factors in the main SeRvE. The three positive religious items formed the third factor, religious well-being, (RWB), representing the religious well-being factor in the main SeRvE. Each factor was shown to be a reliable subscale of finalized Mini-SeRvE: for Cronbach's alphas and item loadings see table 2. No subscale was normally distributed, Shapiro-Wilk tests being significant at p=0.003, 0.001 and 0.001 respectively. Spearman's correlations between each subscale and total Mini-SeRvE were high, while correlations between subscales were moderate, (Table 3). Spearman's correlation of ImpR with RWB was .646.

Mini-SeRvE for staff members

Mini-SeRvE scores in this dataset were significantly skewed, (p=0.006), Shapiro-Wilk test significant (p=0.001). Mini-SeRvE mean was 3.9, SD 0.68, (minimum 2.13, maximum 5.00). Men scored lower than women, but this was not significant, (p=0.200). There were no significant differences according to age, (p=0.572). Reliability was high

(Cronbach's alpha 0.828). This dataset was suitable for PCA, (Bartlett's test of sphericity significant p<0.001, Kaiser-Meyer-Olkin score.784). Results showed EWB and MIB items combined into one factor, the RWB factor remaining separate.

Comparisons of service users and staff in joint dataset

Mini-SeRvE scores in this dataset were not normally distributed, (skewness, p=0.01 and Shapiro-Wilk test significant p=0.001). Cronbach's alpha was 0.865. The dataset was suitable for PCA, (Bartlett's test of sphericity significant p<0.001, Kaiser-Meyer-Olkin score 0.845), which confirmed exactly that found in the service user dataset. Comparisons were then made between service user and staff scores, (table 4). Total Mini-SeRvE scores and those of EWB and MIB subscales were significantly higher for the staff sample. However the RWB subscale behaved differently, scores being significantly higher for service users. The "importance of religion/spiritual belief" rating, (Imp R), was also significantly higher for service users, (p=0.009). There were some missing values for ImpR, (9% service users, 7.5% staff). However, the difference between service users and staff was maintained when participants in both samples omitting all 4 religious items were excluded from the analysis, (p=0.006). For valid percentages of ImpR scores in the 2 samples see figure 2. The proportion of people omitting all 4 religious items was not significantly different in the two samples, (p=0.85)

Possible use of absolute scores on Mini-SeRvE to identify service users struggling with personal recovery was investigated using an ROC curve. Since the RWB scores were actually higher in service users, this subscale was omitted and the mean of all items in the EWB and MIB subscales, (EWBMIB), was used for this purpose. The area under the ROC curve was .800, showing good discrimination between the 2 samples. An EWBMIB

score of below 3.5 is 80% specific and 78% sensitive for predicting that someone is in the service user sample. A score of below 3.0 is 90% specific. EWBMIB itself was normally distributed, Shapiro Wilk test not significant, (p=0.092), Cronbach's alpha: 0.836, 2 factors: EWB and MIB, and Pearson's correlation with MHRM:.726.

Discussion

The Mini-SeRvE scale

Mini-SeRvE has been validated as a reliable patient-reported outcome measure of personal mental recovery in a UK city population of service users in secondary care. It is brief, self-reported and user-designed. It has 3 meaningful and reliable subscales: existential well-being, mental ill-being and religious well-being. Issues covered are not limited to existential well-being, Mini-SeRvE also includes common mental problems of service users and issues concerning religious/spiritual belief. The higher values of EWB and MIB in the staff sample support the hypothesis that EWB and MIB both measure higher mental well-being in the staff sample. We hypothesize that the RWB scores are higher in the service user sample because the heightened ImpR leads in many service users to a higher sense of religious well-being. The significant correlation between ImpR and RWB in service users is consistent with this hypothesis.

Mini-SeRvE could be considered for routine clinical use, showing the individual service user's perception of their progress towards recovery. Mean values should be calculated for each subscale and compared. These could simply facilitate discussion about personal and spiritual matters, and individual priorities for recovery, which most service users would welcome, (Harris et al., 2015), and evidence suggests seldom

happens, (Borras et al., 2010). Changes in scores over time would help evaluate changes in treatment, especially useful when continuity of care cannot be maintained. Reduction in scores over time indicates a need for re-assessment. Since the RWB behaves differently from the rest of the scale, changes in scores on this factor are hard to interpret. However, if RWB scores are lower than the other factor scores, particularly if failing to improve, or even decreasing over time, it would be helpful to ask about the importance of religion/spiritual belief to the individual concerned and, if this is relevant, offer referral for spiritual care. Preliminary work with the ROC analysis suggests that a mean EWBMIB score below 3.0 could be used to identify individuals who are having problems with their recovery, even if clinical assessment suggests otherwise.

However, care must be taken in interpretation of Mini-SeRvE. Negative items must be reverse scored and mean values used. Use of any absolute values is limited by the individual nature of the recovery journey. Values could be misleading due to the possibility of an increased self-perception of well-being associated with some mental illnesses, eg. mania, (Altamura et al. 2011). This could explain the unexpectedly large minority of service users, (8), scoring very highly on Mini-SeRvE. Values of Mini-SeRvE must therefore be interpreted in conjunction with clinical assessment.

The importance of religion and spiritual care for service users.

Since the RWB scores are actually higher in service users than in staff members, it could be argued that Mini-SeRvE should only include the combination of EWB and MIB and that the RWB should be discarded. This is a feasible option since EWBMIB behaves psychometrically like the total Mini-SeRvE. The major argument against this is

the relevance of religious/spiritual belief to many service users shown in this and other studies.

In this study, religion/spiritual belief is confirmed as of great importance to many mental health service users. Nominal religious affiliation in our service users was high at 80%, matching the general population figure in Birmingham (Office of National Statistics Census 2011). In addition, 55% of our service user sample, (inclusive of missing values), rating ImpR as "quite a lot" or "very much so". Although these figures for religiosity are higher than those found in a national survey, (King et al., 2013), our study was limited to one question combining religious and spiritual belief and our sample was more ethnically diverse. In addition, these figures were for our service user sample. Indeed, our religiosity figures are similar to those for service users found elsewhere in Europe, (Borras et al., 2007, Borras et al., 2010), and confirmed previous findings, (Kirov et al., 1998), that suggest religion/spiritual belief is more important for service users than for the general population. Although in our service users we find increasing ImpR to be associated with increased RWB, this correlation is by no means complete, (R^2=.417). This helps to confirm the findings of others that although for most service users religion/spiritual belief is helpful, for a considerable minority, religion/spiritual experiences are difficult, and at times unhelpful, (Fallot, 2001, Pargament, 2000, Pargament, 2002).

Thus religion/spiritual belief is not only important to many service users, but varies in its impact on mental well-being and recovery. Spiritual care, suitable for those of all faiths and none, is now available to help service users overcome religious/spiritual problems while nurturing the helpful aspects of their religion/spirituality, (Barber &

Wilson, 2014, Galanter et al., 2011). The aim is to maximise the positive influence of religion/spirituality on recovery. It can involve discussing meaning and purpose in life, facilitating visits to a place of worship, or prayer from a chosen faith leader. Sometimes exploration of distressing religious/spiritual experiences involving discernment from a skilled mental health chaplain is required. Spiritual care is welcomed and prioritised by many for their recovery, (Reker & Menke, 2013). It is therefore important that Mini-SeRvE includes items about religious/spiritual experience so that appropriate spiritual care can be offered to service users who struggle with this, as well as to those who find it a source of strength.

Limitations and Future Work

Our sample sizes were small. Mini-SeRvE needs to be tested in larger populations of service users in its finalised form and the diagnoses collected. Further correlations with other established tools are needed to confirm its content validity. Although our ROC analysis was encouraging, matched comparisons with people without formal mental illness using much bigger samples are essential before absolute values of EWBMIB could be used clinically. Our staff sample may not exactly represent the general population in their own mental health, since mental health workers may be vulnerable to work-related stress and associated mental health problems, (Roessler, 2012).

Our study was cross-sectional. A longtitudinal design is necessary to establish sensitivity to change and test re-test reliability for Mini-SeRvE. Changes in Mini-SeRvE scores of people with different diagnoses could then be explored throughout the recovery process and compared with clinical assessments, eg. HoNOS ratings.

Our rating of the importance of religion/spiritual belief was limited to one question and deserves much further investigation. Studying the differences between the service user and clinician's perspective for recovery is crucial as we work towards better outcomes for service users.

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Mini-SeRvE scale

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Table 1

Demographics of service user and staff samples

Table 1

GENDER	SERVICE USER SAMPLE	STAFF SAMPLE	AGE	SERVICE USER SAMPLE	STAFF SAMPLE
Male	49%	29%	18-29	10%	16%
Female	51%	71%	30-44	28%	37%
			45-59	45%	42%
			60-74	17%	5%

RELIGIOUS AFFILIATION	SERVICE USER SAMPLE	ETHNICITY	SERVICE USER SAMPLE
Church of England	50%	British	60%
Roman Catholic	12%	Afro-Caribbean	15%
Muslim	12%	Asian	9%
Jehovah's witness	2%	Mixed Race	6%
Hindu	1%	Other	10%
Buddhist	1%		
Pagan	1%		
Spiritualist	1%		
None	16%		
Don't know	4%		

Table 2

Factor analysis of Mini-SeRvE in service user dataset

Table 2.

Number of factor + (Cronbach's alpha)	Eigen-value	% variance	Cumulative variance	Items loading on each factor	Values of factor loading for each item – varimax rotation
1 EWB (0.848)	5.03	33.52	33.52	Hope for future Confident can cope Sense meaning and purpose Find/create something beautiful in life Accept self Believe can overcome problems	.759 .634 .717 .710 .774 .717
2 MIB (0.761)	1.97	13.13	46.65	Upset by stigma Feel agitated Feel people are against Lost motivation Feel isolated or cut off Faith gives difficult thoughts	.557 .622 .709 .662 .724 .520
3 RWB (0.756)	1.46	9.74	56.39	Faith helpful Religious services/rituals helpful Helpful to pray	.745 .764 .742

Breakdown of factor analysis for Mini-SeRvE service user dataset. A varimax rotation was used accepting all factors with Eigenvalues greater than 1. Shown here is the contribution to the overall variance of the 3 factors: existential well-being, (EWB), mental ill-being, (MIB), and religious well-being, (RWB), with Cronbach's alpha values and items loading on each factor. The cutoff value for loading on each factor was set at .500, judged suitable by this sample size, (Stevens, 2002), and all loading values above this are displayed.

Table 3

Correlations between Mini-SeRvE and their factors in service user dataset.

Table 3

Correlations between Total Mini-SeRvE and its factors, existential well-being, (EWB), religious well-being, (RWB), and mental ill-being, (MIB) in service user dataset, Spearman's 2 tailed test with p values of significance (Sig.), n=sample size.

	RWB	MIB	EWB	Mini-SeRvE (total)
RWB	1	.257	.443	.642
Sig.		0.021	0.000	0.000
n	82	82	82	82
MIB	.257	1	.393	.727
Sig.	0.021		0.000	0.000
n	82	100	100	100
EWB	.443	.393	1	.836
Sig.	0.000	0.000		0.000
n	82	100	100	100
Mini-SeRvE (total)	.642	.727	.836	1
Sig	0.000	0.000	0.000	
n	82	100	100	100

Table 4

Comparison of means of Mini-SeRvE and its subscales in service users and staff members

Table 4

Variables	Service user median	Staff median	Significance
Miniserve total	3.16	3.93	P<0.000
EWB	3.50	4.33	P<0.000
MIB	2.60	4.00	P<0.000
RWB	4.00	3.00	P=0.008
ImpR	4.00	3.00.	P=0.009

Comparison of scores for Mini-SeRvE and its subscales in service user and staff samples using Independent Samples Mann-Whitney U test in joint dataset.

Figure 1

MINI-SeRvE SCALE

Birmingham and Solihull NHS
Mental Health NHS Foundation Trust

Mini-SeRvE scale

Please read the following statements and circle the appropriate number depending on how you have felt **in this last week.** There are no right or wrong answers**.**

1 Disagree Strongly, 2 Disagree Somewhat, 3 Don't Know, 4 Agree Somewhat, 5 Agree Strongly

Q1.	**I have hope for the future**	*1*	*2*	*3*	*4*	*5*
Q2.	**I am upset by the stigma or shame of my problems**	*1*	*2*	*3*	*4*	*5*
Q3.	**I am confident I can cope with most things in life**	*1*	*2*	*3*	*4*	*5*
Q4.	**I feel agitated**	*1*	*2*	*3*	*4*	*5*
Q5.	**I feel a sense of meaning and purpose in life**	*1*	*2*	*3*	*4*	*5*
Q6.	**I can find or create something beautiful in life**	*1*	*2*	*3*	*4*	*5*
Q7.	**I feel other people are against me**	*1*	*2*	*3*	*4*	*5*
Q8.	**I can accept myself**	*1*	*2*	*3*	*4*	*5*
Q9.	**I have lost inner motivation**	*1*	*2*	*3*	*4*	*5*
Q10.	**I believe in my ability to overcome my problems**	*1*	*2*	*3*	*4*	*5*
Q11.	**I feel isolated or cut off from others**	*1*	*2*	*3*	*4*	*5*

If you have any belief, **at all,** however small, in a higher power or force for good, (for example God), then please also complete the following statements.
If not, then please just leave them blank.

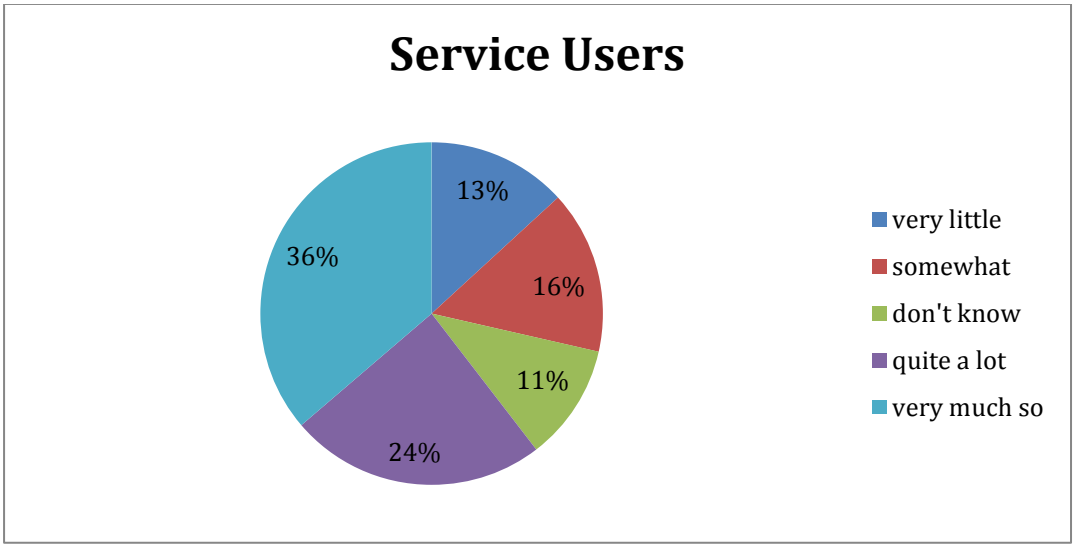
Q12.	**My faith/spiritual belief is helpful to me**	*1*	*2*	*3*	*4*	*5*
Q13.	**My faith/spiritual belief gives me difficult thoughts**	*1*	*2*	*3*	*4*	*5*
Q14.	**I find it helpful to attend religious services or do religious rituals**	*1*	*2*	*3*	*4*	*5*
Q15.	**I find it helpful to pray**	*1*	*2*	*3*	*4*	*5*

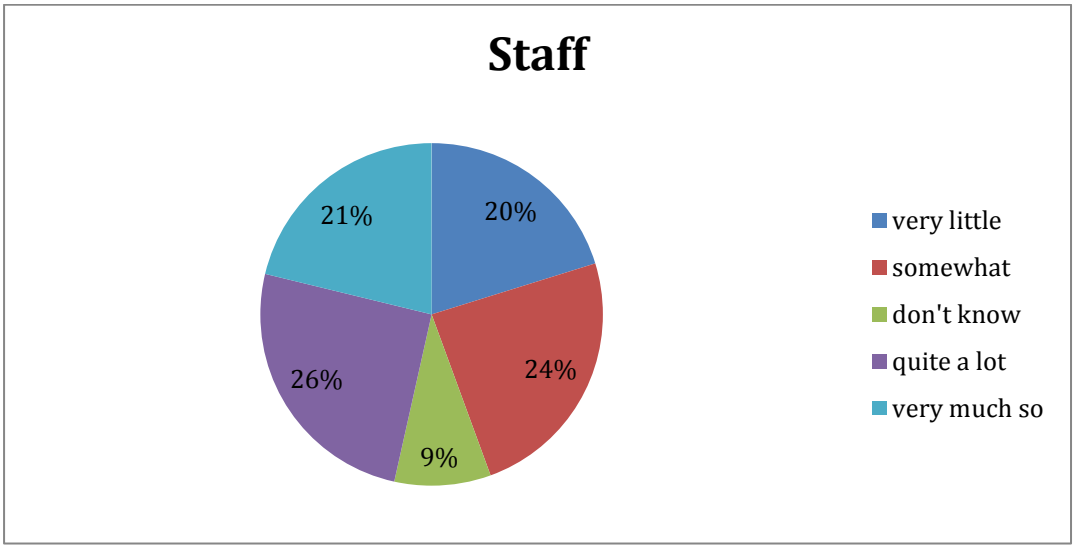
Thank you for completing this questionnaire

Figure 2

Self reported importance of religion/spiritual belief in service users and staff members, breakdown of scores

Importance of religion/spiritual belief for service users and staff





Self-ratings of importance of religion/spiritual belief with valid percentages of service users and staff in each rating category, (excluding missing values).