Greater Manchester West

# Protocol - Investigating the Psychometric Properties of the Service-User Defined Subjective Experiences of Psychotic Symptoms Scale (SEPSS).

This study aims to examine the psychometric properties of the newly developed service-user defined measure of symptom recovery, the Subjective Experiences of Psychotic Symptoms Scale (SEPSS, in prep). This newly developed measure aims to measure the experiences most relevant to the service-user in regard to assessing aspects important to symptom recovery in psychosis.

The scale was developed to address the current void in literature regarding symptom recovery and service user input. Currently, there are many measures available to assess symptom change in psychosis such as the Psychotic Symptoms Rating Scale (PSYRATS, Haddock et al, 1999), Positive and Negative Syndrome Scale (PANSS, Kay et al, 1989) and the Brief Psychiatric Rating Scale (BPRS, Overall and Gorham, 1962), all of which are designed by psychiatrists and psychologists and aim to assess symptom change. The issue is that many psychiatrists and psychologists deem symptom alleviation to be the main indicator of recovery whereas service users do not (Pitt et al, 2007). This research wanted to bridge the gap between these different views of symptom recovery by designing a measure that has service-user input in both the design and development stages. Therefore, it is hoped that the developed measure should cover aspects of symptom change that are important to the service-user.

The SEPSS was generated by conducting qualitative interviews with service-users about their experiences of symptom recovery in psychosis. Literature and measures defining recovery were also explored using Q-methodology to generate items for the scale. Items were extracted from measures such as the Psychotic Symptoms Rating Scale (PSYRATS, Haddock et al, 1999), Positive and Negative Syndrome Scale (PANSS, Kay et al, 1989) and the Brief Psychiatric Rating Scale (BPRS, Overall and Gorham, 1962) as well as from research within the field of symptom recovery in psychosis (Buchanan et al 1993, Oulis et al, 1995, Haddock et al, 1999). Items were also extracted from more service user orientated studies (Pitt et al, 2007, Neil et al, in press). All items/statements extracted from these means were scrutinised by service-users in regard to relevance to recovery. From this, the SEPSS (in prep) was generated.

This study aims to examine the psychometric properties of the SEPSS, scrutinising its reliability and validity. To measure this, the study will be divided into 3 sub-studies in order to measure; content/face validity, concurrent validity, predictive validity, inter-rater reliability, test-retest reliability and internal consistency.

## 1. Content and Face validity

Content validity can be defined as a systematic examination of the test content to determine whether it covers a representative sample of the domain to be measured. Face validity is ensuring that the scale appears valid, i.e. that it looks like a valid tool to those who use it (Anastasi and Urbina, 1996). Both can be determined by examining the measures structure, content and appearance.

**Method** - To examine this, a reference group of service-users including service-user researchers will meet to discuss the content of the scale to ensure its full validity in this area. The items on the scale, readability, instructions and appearance are examples of factors that will be scrutinised. This meeting or inspection of the scale is often considered suffice to ensure content and face validity (Anastasi and Urbina, 1996) and is used in many like-minded studies (Beck et al, 1961).

**Hypothesis** - Due to the nature of how this measure was developed (a service-user defined measure), the content and face validity of this tool is predicted to be high.

**Participants** - A reference group of between 5 –8 service-users will comprise the group. It will comprise 2 service-user researchers and 3 – 5 independent service-users. The reference group will comprise, adults (18 – 65) experiencing or who have experienced psychotic symptoms for at least a year.

**Procedure** -

1. Approach the service user reference group (SURG) representative and arrange a meeting with the reference/steering group to assess content and face validity.
2. The reference group will have a one off meeting to discuss content and face validity with service-user researchers facilitating the meeting
3. Make any necessary amendments to measure
4. Participants to be provided with the opportunity for feedback of results.

2. Concurrent validity, Predictive validity, Internal consistency and Test-retest reliability

These four measures of reliability and validity defined as; Concurrent validity is the degree to which different measuring systems produce correlating results. This is scrutinised by comparing the test score to another criterion measure at approximately the same time that will act as a validation tool (Anastasi and Urbina, 1996). Predictive validity is the ability for a tool to predict outcomes over a set time interval (Anastasi and Urbina, 1996). Test Retest Reliability is the extent to which scores on a test can be generalised over different occasions; the higher the reliability, the less susceptible the scores are to random changes (Anastasi and Urbina, 1996). Internal Consistency is a measure of the consistency between the items within a scale (Field, 2006). For the scale to be consistent, the inter-correlations between the related items on each scale of the measure need to be high.

**Method** - These four measures of reliability and validity will be measured together, which involves three stages:

**Stage 1:** The participants will be invited to complete a demographics sheet, the SEPSS and a number of measures used in measuring the symptomatology of psychosis, the Positive and Negative Syndrome Scale (PANSS, Kay et al, 1989), the Psychotic Symptom Rating Scale (PSYRATS, Haddock, et al, 1999), the Beck Hopelessness Scale (BHS, Beck & Steer, 1988), the Global Assessment of Functioning Scale (GAF, DSM-IV; American Psychological Association, 1994), the Lecomte Self-Esteem Scale (Lecomte, Corbiere & Laisne, 2006), the Beck Anxiety Inventory (BAI, Beck et al, 1988), Calgary Depression Scale (Addington, Addington & Maticka-Tyndale, 1993) and the Process of Recovery Questionnaire (QPR, Neil, in press). The PANSS and the PSYRATS were selected due to their frequent use in the assessment of psychotic symptoms. The QPR was selected due to its assessment of recovery within psychosis and its development by service-users. The BHS, GAF, BAI and Calgary Depression Scale and Lecomte Self Esteem Scale were

chosen due to their frequent use in assessing emotional functioning. It is important to assess such aspects as they play an important part in recovery.

Participants will be required to fill out each of these questionnaires in order to compare their scores for each measure. By doing so, internal consistency and concurrent validity will be measured. Internal consistency will be measured by scrutinising participants' scores on the SEPSS through an exploratory factor analysis. Concurrent validity will be measured by obtaining participants' scores for each measure, the SEPSS, PSYRATS, PANSS, BHS, GAF, BAI, Calgary Depression Scale, Lecomte self esteem scale and QPR. These scores will then be correlated and compared in order to act as a validation tool for the SEPSS.

**Stage 2 (1-2 weeks after stage 1):** The participants will be invited back to re-complete the SEPSS. Test re-test reliability will be measured for by comparing the scores from the SEPSS at this stage with the scores from the SEPSS at stage 1. The scores will be compared using a correlational analysis.

**Stage 3 (10 – 12 weeks after completing stage 1):** The participants will be invited back to re-complete the SEPSS, PANSS, PSYRATS, GAF, BHS, BAI, Calgary Depression Scale and Lecomte Self-Esteem Scale and QPR. Predictive validity will be measured by comparing the scores from all measures at stage 3 to all scores from all measures at stage 1. All scores will be compared using a correlational analysis.

## Hypotheses

Concurrent Validity - It is predicted that the service-users score on the SEPSS will be positively correlated (>0.8) with their scores on the PSYRATS, positively correlated (>0.8) to their scores on the Lecomte self-esteem scale, positively correlated (>0.8) on the positive subscale on the PANSS, positively correlated (>0.8) to their scores on the BAI, positively correlated (>0.8) with their scores on the Calgary Depression Scale, positively associated (>0.8) to their scores on the BHS,

negatively correlated (>-0.8) with their scores on the QPR and negatively correlated (>-0.8) to their scores on the GAF,

Predictive Validity – It is predicted that the service-users score on the SEPSS will be positively associated (>0.8) with their scores on the PSYRATS, positively associated (>0.8) to their scores on the Lecomte self-esteem scale, positively associated (>0.8) on the positive subscale on the PANSS, positively associated (>0.8) to their scores on the BAI, positively associated (>0.8) with their scores on the Calgary Depression Scale, positively associated (>0.8) to their scores on the BHS, negatively associated (>-0.8) with their scores on the QPR, and negatively associated (>-0.8) to their scores on the GAF.

Internal Consistency - It is predicted that all the items on the scale within their given factor will have a high internal consistency.

Test Re-test reliability - It is predicted that the SEPSS will have good test re-test reliability, therefore correlations between participants' scores at stage 1 and 2 will be high (>0.8, Field 2005).

**Participants -** A sample size of 75 participants (n=75) will be recruited for analysis. 75 participants will be asked to complete stage 1 and 3 of the analysis. Out of these 75 participants, 30 will be asked to complete stage 2 of the study. Participants will also meet the criteria outlined in 1. Content and face validity except they will have current experiences of psychosis and not previous experience.

**Materials** – A Demographics Sheet, the Subjective Experiences of Psychotic Symptoms Scale (SEPSS, in prep), the Positive and Negative Syndrome Scale (PANSS, Kay et al 1989), the Psychotic Symptom Rating Scale (PSYRATS, Haddock et al 1999), the Beck Hopelessness Scale (BHS, Beck & Steer, 1988), the Global Assessment of Functioning Scale (GAF, DSM-IV; American Psychological Association, 1994), ), the Beck Anxiety Inventory (BAI, Beck et al, 1988), Calgary Depression Scale (Addington, Addington & Maticka-Tyndale, 1993), the Lecomte

Self-Esteem Scale (Lecomte, Corbiere & Laisne, 2006) and the Process of Recovery Questionnaire (QPR, in press).

## Procedure

1. Approach local NHS providers of Mental Health Services and user groups within the North West promoting the study.

2. Ensure all participants meet the criteria for the study.

3. Gain participant consent regarding all stages. They can consent to all three but still pull out at any point.

4. Distribute and administer the Demographics Sheet, SEPSS, PANSS, PSYRATS, BHS, GAF, BAI, Calgary Depression Scale, Lecomte Self Esteem Scale and QPR to all participants for stage 1.

5. Distribute and administer the SEPSS for stage 2.

6. Distribute and administer the SEPSS, PANSS, PSYRATS, BHS, GAF, BAI, Calgary Depression Scale, Lecomte Self Esteem Scale and QPR to all participants for stage 3.

5. Conduct statistical analysis on data using appropriate correlation analysis.

6. Interpret statistical data

7. Participants to be provided with the opportunity for feedback results as appropriate.

**3. Inter-Rater reliability**

Inter-rater reliability is a measure that shows that a test is consistent when comparing different raters. It is imperative for a measure to have high inter-rater reliability otherwise it cannot be used dynamically (Anastasi and Urbina, 1996). To measure this, there will be ten interviewers assessing ten interviewees using the SEPSS. These ten interviewees will be administered the SEPSS and videotaped. The interviewer will have to rate each video using the SEPSS and all scores for each video will be inter-correlated to calculate the reliability of the scores.

**Participants**

Interviewees - A sample size of 10 participants (n=10) will be recruited for analysis. Interviewee's will be as described in section 2 (Concurrent validity, Predictive validity, Internal consistency and Test-retest reliability).

Interviewers- There will be a total of 5 - 10 interviewers (n= 5 -10) for the test of inter-rater reliability. They will have specialist knowledge of psychosis and its symptomatology. The interviewer's will be between the ages of 18 – 65, mental health staff or service-user researchers and have experience with working with people with psychosis and its symptomatology. They will be employees of a North West NHS Trust.

**Materials –** The Subjective Experiences of Psychotic Symptoms Scale (SEPSS, in prep). The taped interviews; all interviewee's will be recorded and these tapes will be used for the interviewers assessment.

**Procedure-** Procedure is the same as in section 1.2(Concurrent validity, Predictive validity, internal consistency and test-retest reliability) with the exception of points 4, 5, and 6. Instead participants will be required to rate 10 tapes of interviewees completing the SEPSS within a 4-week period. These 10 tapes will be picked at random out of all recorded SEPSS assessments.