Interventions and Nurse–Patient Relationships in Acute Mental Health Inpatient Wards

A thesis submitted to the University of Manchester for the Degree of Clinical Psychology Doctorate in the Faculty of Biology, Medicine and Health

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Thesis Abstract

Interventions and Nurse–Patient Relationships in Acute Mental Health Inpatient Wards

Laura Danielle Wainwright: A thesis submitted to the University of Manchester for the Degree of Clinical Psychology Doctorate in the Faculty of Biology, Medicine and Health, 2017.

This thesis aimed to explore interventions and nurse-patient relationships in acute mental health inpatient settings. Three separate papers are presented in this thesis: a systematic literature review, an empirical paper and a critical evaluation of the first two papers.

Paper 1- This systematic review aimed to investigate clinically trialled psychosocial interventions for patients admitted to inpatient settings; and to identify which were effective at improving quality of life, symptoms or patient functioning. Eighteen were identified, fifteen studies showed a statistically significant positive impact on at least one outcome. Seven intervention categories (animal assisted therapy, music therapy, progressive muscle relaxation, education-based interventions, talking therapies, training-based interventions and cognitive remediation) and at least one study in each category was found to be effective. Methodological quality was generally low, and the small number of available RCTs makes it difficult to draw definitive conclusions. Further research is required of psychosocial interventions for acute mental health inpatient wards which use more rigorous methods of testing and reporting trials.

*Paper 2-*To explore patient social functioning and nurse distress in relation to nurse-patient alliance, emotional regulation and attachment style in acute mental health inpatient wards. Patient anxious attachment style was significantly associated with difficulties in regulating emotions. Patient social behaviour was predicted by emotion regulation, attachment and alliance, but was not predicted by nurse emotion regulation, nurse attachment style or nurse-rated alliance. Nurse distress was associated with nurse emotion regulation, nurse anxious attachment and nurse-rated alliance, these factors also predicted nurse distress.

*Paper 3-*The aim of the critical evaluation is to provide a critical appraisal of the design, implementation and interpretation of the findings for Papers 1 and 2. Strengths and challenges for both papers are discussed, and personal reflections about the thesis process are included.

Declaration

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Paper One

A Systematic Review of Randomised Controlled Trials of Psychosocial Interventions for

Acute Mental Health Inpatients.

This paper has been prepared in accordance with the author guidelines of Clinical

Psychology Review (Appendix 1)

A Systematic Review of Randomised Controlled Trials of Psychosocial Interventions for Acute Mental Health Inpatients.

Abstract

Acute mental health inpatient wards provide an opportunity to intervene with a combination of medical, psychological and social care to contain distress and prevent future relapse. However, inpatient settings have been criticised for an over-reliance on medical treatment, coercive risk management and limited psychosocial interventions. This systematic review aimed to investigate clinically trialled psychosocial interventions for patients admitted to inpatient settings; and to identify which psychosocial interventions are effective at improving quality of life, symptoms or patient functioning, in order to further the evidence base for the development of future psychosocial interventions for individuals admitted to inpatient wards. Eighteen were identified which evaluated a psychosocial intervention for acute mental health inpatient wards against a control group, and in which outcomes for symptoms, quality of life or functioning were reported. Fifteen studies showed a statistically significant positive impact of the intervention on at least one outcome. Seven intervention categories (Animal assisted therapy, music therapy, progressive muscle relaxation, education-based interventions, talking therapies, training-based interventions, cognitive remediation) were identified from the 18 studies, at least one study in each category was found to be effective at improving symptoms, quality of life or functioning for patients. The studies include a range of interventions, the majority were effective (15 out of 18). Given methodological quality was generally low (6 studies rated as good), and the small number of available RCTs make it difficult to draw definitive conclusions about the most effective at improving symptoms, quality of life or functioning for patients. Recommendations include, more and repeated trials of interventions for acute mental health inpatient wards which use more rigorous methods of testing and reporting trials.

1. Introduction

Each year, approximately 1 in 27 people in the UK are involved with specialist mental health services. About 7% of people in contact with mental health services spend time in inpatient mental health wards which incur significant financial costs (Health and Social Care Information Centre, 2013). Acute mental health inpatient units provide an opportunity to provide a combination of medical, psychological and social care to contain high levels of distress but, also to prevent future relapse. Acute inpatient settings provide an optimal time to intervene as up to 75% of patients do not follow through consistently with outpatient treatment following their discharge from the inpatient ward (Boyer, McAlpine, Pottick, & Olfson, 2000; Nelson, Maruish, & Axler, 2000). In many countries, mental health inpatient wards remain the main type of mental health care facility (WHO, 2014).

However, inpatient care has been labelled 'anti-therapeutic'. More specifically these environments are not deemed person-centred with an over-reliance on medical treatment and coercive risk management and limited access to psychosocial interventions (The Schizophrenia Commission, 2012; Department of Health, 2013).

For example, the 'Listening to Experience' report by Mind (2011) advocates that people in acute inpatient mental health care need care, safety, someone to listen and something to do, and that these do not require a medically dominant approach. Psychosocial interventions, defined as, any intervention that emphasises psychological or social factors rather than biological factors (Ruddy and House, 2005), could potentially encourage people to develop coping skills, social networks, problem-solving skills and self-care in order to manage and recover from their distress.

It is important that not only do inpatients receive access to psychosocial interventions but that these interventions are evidence-based. Randomised controlled trials (RCT) are thought to be the most scientifically rigorous method of hypothesis testing (Last, 2001) and

are regarded as the gold standard for evaluating the effectiveness of interventions (McGovern, 2001) as the processes used during the conduct of an RCT minimise the risk of confounding factors influencing the results (Evan, 2003). A systematic review of RCTs (with or without meta-analysis) provides the most powerful form of evidence of the effectiveness of interventions or treatments (Craig and Smyth, 2002).

The majority of RCTs examining the efficacy of psychosocial interventions to date for people experiencing psychological distress have been measured in outpatient samples (for example, Jones et al., 2017; Crawford et al., 2012; Kuipers et al., 1997). Thus, there are currently no systematic reviews exploring psychosocial interventions for acute mental health inpatients.

Therefore, the current systematic review aims to; investigate clinically trialled psychosocial interventions for patients admitted to inpatient settings; and to identify which psychosocial interventions are effective at improving quality of life, symptoms or patient functioning, in order to further the evidence base for the development of future psychosocial interventions for individuals admitted to inpatient wards.

2. Method

2.1 Literature Search

An electronic search of six databases (AMED (Allied and Complementary Medicine Database), CINAHL (Cumulative Index to Nursing and Allied Health Literature), Embase, Medline, PsycINFO, and Web of Science) was conducted of papers published from 1806 up until February 2017. The reference lists of the papers returned by the search were then explored for relevant papers. A large list of search terms including various MeSH (Medical Subject Headings) terms was used to capture all variations within each of five categories: a) Inpatient OR ward, b) Psychiat* OR Mental*, c) Psychological OR psychosocial OR PSI OR ward intervention OR psychoeducation OR group d) RCT OR randomised controlled trial OR Trial. The search returned only papers that contained at least one term from each category.

2.2 Inclusion/exclusion criteria

Studies were included in the review if they: a) evaluated a psychosocial intervention (defined by Ruddy and House (2005) above) trialled exclusively within an acute mental health inpatient unit; b) included post intervention measures of quality of life, patient functioning or symptoms; c) had a control or comparison group. Papers were excluded from the review if: a) the paper was a review, case study or discussion article; b) only medicinal or staff outcomes were reported; c) the paper was not available in English.

2.3 Data Screening

Titles and abstracts were reviewed manually by two of the authors. All papers that appeared to meet the inclusion criteria were reviewed independently by 1st and 3rd authors for inclusion and data extraction, with 100% agreement.

2.4 Quality Assessment of Studies

The quality of each paper was assessed using the Clinical Trial Assessment Measure (CTAM; Tarrier & Wykes, 2004). The CTAM was based on the CONSORT (CONsolidated Standards of Reporting Trials) guidelines which were developed to improve the reporting of randomised

controlled trials (Moher, Schulz, & Altman, 2003). The CTAM score is based on ratings of six areas: sample size and recruitment method; allocation to treatment; assessment of outcome; control groups; description of treatment; and analysis. The total CTAM score is used to give an indication of the overall methodological quality of studies using a scale of 0–100. The CTAM has been used to assess a number of non-CTIMP (Clinical Trial of an Investigational Medicinal Product) studies (for example, Tarrier and Wykes, 2004; Wykes et al., 2008). The CTAM quality assessment is reported as reliable and has evidence of both internal and external validity (Wykes et al, 2008).

2.5 Analysis of Papers

A data extraction tool was used to record data collection. Data is presented descriptively for: the characteristics of the studies; methodological quality of the trials; summary content of the interventions; and outcome measures. CTAM scores for the methodological quality reported by each paper are also presented in Table 1, as well as a mean CTAM score for each category of intervention.

3. Results
3.1 Selection of studies

The literature search identified 2,243 independent papers after rejecting duplicate articles, each of which was reviewed manually by the first author. Titles and abstracts were examined initially; 58 papers appeared to meet criteria. Of the 58 papers, full text was reviewed and 18 met criteria and 40 were excluded. Reasons for exclusion were: not meeting the criteria of a randomised controlled trial; not reporting outcome measures for patients assessing quality of life, symptoms or functioning; not available in English; interventions not delivered exclusively in an acute mental health inpatient ward (for

example, studies which invited patients to continue the intervention after discharge, or interventions delivered in day centres); interventions which emphasised physical factors (e.g., smoking cessation or exercise interventions); interventions which emphasised staff training or ward milieu; pilot trials. An additional article was identified through searching reference lists. Therefore, a total of 18 independent studies are included (see *Figure 1.* PRISMA diagram).
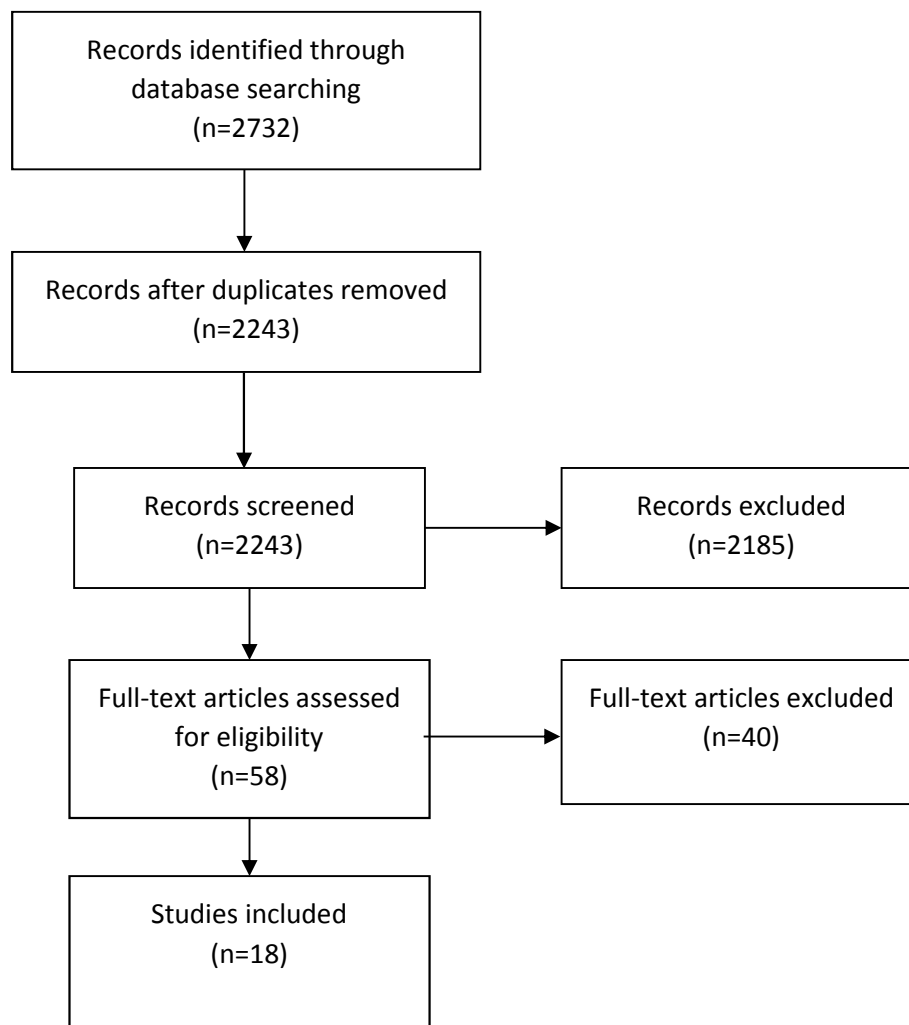
Figure 1. PRISMA diagram of inclusion and exclusion, for the systematic review:
Psychosocial Interventions for Acute Mental Health Inpatients.

3.2. Demographics

The papers included in this review are described in Table 1. They included a total of 1,828 participants, ranging from 18 to 432 participants (mean = 101.6, SD = 103.2, median = 83). Three of the papers included a sample size greater than 100 participants. The studies were conducted in 11 different countries, the largest contributors of studies being Taiwan (22.2%); Germany (16.7%); USA (11.1%); and Spain (11.1%). Of the 18 different studies, 7 included only a 'Treatment As Usual' (TAU) control group, 9 included only 'Active Control' conditions and 2 studies included 2 comparison groups (1 active control plus 1 TAU or Waiting List Control).

3.3 Quality Assessment

Independent assessment by the first and third authors on the 18 papers demonstrated good inter-rater agreement of 94%. The CTAM total scores ranged from 26 up to 84 (mean = 58.6, SD = 15.0, median = 57.5). Six of the papers (33.6%) had CTAM total scores of equal to or greater than the score of 65 indicated by Wykes et al. (2008) classed as a 'good' quality trial paper, see Table 1 for scores.

Although there are too few papers to reliably explore statistical significance in methodological quality across studies in relation to reporting of different types of interventions, there appeared to be better methodological rigour as indicated by higher scores on the CTAM for the papers reporting Talking Therapies and Cognitive Remediation (see Table 1).

Table 1 A Systematic Review of Randomised Controlled Trials of Psychosocial Interventions for Acute Mental Health Inpatients.

Author	Year	Country	Intervention Details (Group/Individual/Unclear)	Control Group	Number of Participants at Baseline	No of Sessions	Psychometric Outcome Measures (Effect Size)	Effective for Patient Outcome	CTAM Score
Animal Assisted Therapy Interventions									**CTAM M = 33.0, SD = 9.9**
Calvo et al	2011	Spain	Animal Assisted Therapy (Group)	TAU	N = 22 Intervention N = 14 Control N = 8	40	Symptoms - PANSS, QoL - Euro-QoL-5	Yes	40
Chu et al	2009	Taiwan	Animal Assisted Therapy (Group)	TAU	N = 30 Intervention N = 15 Control N = 15	8	Symptoms and QoL - Non-validated measure	Yes (but not for negative symptoms)	26
Music Therapy Interventions									**CTAM M = 51.0, SD = 9.9**
Silverman	2016	USA	Music Therapy - Educational Lyric Analysis Condition (Group)	Educational Song Writing Condition and Waiting List Control	N = 95 Intervention N = 30 Active Control N = 34 Control N = 31	8	Symptoms - POMS	No	44
Ulrich et al	2007	Germany	Music Therapy (Group)	TAU	N = 37 Intervention N = 21 Control N = 16	7.5	Symptoms – SANS QoL - SPG	Yes for symptoms, No for QoL	58
Progressive Muscle Relaxation Interventions									**CTAM M = 51.5, SD = 3.5**
Chen et al	2009	Taiwan	Progressive Muscle Relaxation (Unclear)	Sitting in therapy chair	N = 18 Intervention N = 44 Control N = 37	11	Symptoms - BAI, SAPS	Yes	49
Vancampfort et al	2011	Belgium	Progressive Muscle Relaxation (Unclear)	Resting Control	N = 64 Intervention N = 32 Control N = 32	1	Symptoms – SAI (-1.25), PECC	Yes	54
Education Based Interventions									**CTAM M = 61.8, SD = 17.5**
Chan et al	2007	Hong Kong	Psychoeducation (Group)	Ward Occupational Therapy	N = 81 Intervention N = 44 Control N = 37	10	QoL - SF-36	Yes	45
Lin et al	2015	Taiwan	Illness Management (Group)	TAU	N = 97 Intervention N = 48 Control N = 49	6	Symptoms - BPRS	Yes on 1 out of 3 of the subscales	76

Author	Year	Country	Intervention Details (Group/Individual/Unclear)	Control Group	Number of Participants at Baseline	No of Sessions	Psychometric Outcome Measures (Effect Size)	Effective for Patient Outcome	CTAM Score
Pitkanen et al	2012	Finland	Computerised Education (Individual)	Conventional Education and TAU	N = 305 Intervention N = 100 Active Control N = 106 Control N = 105	5	Symptoms – PANSS QoL - Q-LES-Q-SF (0.20-0.48), Functioning – SDS (0.34 - 0.54)	Yes - but no significant difference between groups	51
Rabovsky et al	2012	Basal/Switzerland	Psychoeducation (Group)	TAU	N = 82 Intervention N = 40 Control N = 42	10	Symptoms - CGI, Functioning - GAS, QoL - WHO-QOL-BREF	No	67
Talking Therapies									**CTAM M = 59.7, SD = 4.6**
Bechdolf et al	2010	Germany	CBT (Group)	Group Psychoeducation	N = 88 Intervention N = 40 Control N = 48	16	Symptoms – PANSS* QoL - MSQoL, (0.25)	Yes, within groups but not between groups.	57
Berking et al	2013	Germany	CBT enriched with an intense emotion regulation skills training (CBT-ERT). (Individual and Group)	CBT (combination of individual and group)	N = 432 Intervention N = 195 Control N = 237	12	Symptoms - BDI, HEALTH-49, PANAS Functioning - ERSQ	Yes	57
Drury et al	1996	UK	Cognitive Therapy (Individual and Group)	TAU	N = 40 Intervention N = 20 Control N = 20	4	Symptoms - PAS, PQ	Yes	65
Social Skills Interventions									**CTAM M = 62.5, SD = 2.1**
Lee et al	2013	Taiwan	Assertiveness training (Group)	TAU	N = 74 Intervention N = 37 Control N = 37	12	Symptoms - BPRS, Functioning – AS, SIAS	Yes	61
Park et al	2011	Republic of Korea	Virtual Reality Social Skills Training (Group)	Traditional Role-play Social Skills Training	N = 90 Intervention N = 46 Control N = 45	10	Symptoms - PANSS, Functioning - AS, RCS, SPSI-R	No for symptoms, Yes for AS	64
Cognitive Remediation Interventions									**CTAM M = 77.3, SD = 0.6**
Lindenmayer et al	2008	USA	Cognitive Remediation (Group)	Computerised Control Group	N = 85 Intervention N = 45 Control N = 40	32	Symptoms - PANSS	No	78
Sanchez et al	2014	Spain	Cognitive Remediation (Group)	TAU + Group Activities	N = 84 Intervention N = 38 Control N = 54	32.5	Symptoms – PANSS (0.50), CGI (0.36) Functioning – GAF (0.61), DAS-WHO (0.57),	Yes	77

Author	Year	Country	Intervention Details (Group/Individual/Unclear)	Control Group	Number of Participants at Baseline	No of Sessions	Psychometric Outcome Measures (Effect Size)	Effective for Patient Outcome	CTAM Score
Tan et al	2016	China	Cognitive Remediation (Group)	Active Control (Music and Dance Therapy Groups)	N = 104 Intervention N = 52 Control N = 52	40	Symptoms – PANSS (ns), Functioning – NOSIE (0.47)	Yes	77

TAU: Treatment As Usual, QoL: Quality of Life

AS: Assertiveness Schedule (Rathus, 1973), BAI: Beck Anxiety Inventory (Beck et al, 1988), BDI: Beck Depression Inventory (Beck, Ward and Mendelson, 1961; Hautzinger et al, 1995), BPRS: Brief Psychiatric Rating Scale (Overall and Gorham, 1988; Zhang, 1984), CGI: Clinical Global Impression Scale for Psychosis (Guy, 1976), DAS-WHO: Disability Assessment Schedule from World Health Organization (WHO, 1988), ERSQ: Emotion Regulation Skills Questionnaire (Berking et al, 2008), Euro-QoL-5D: European Quality of Life 5 Dimensions Measure (Bobes et al., 2005), GAF: Global Assessment of Functioning Scale (Hall, 1995), GAS: Global Assessment Scale (Endicott et al., 1976), HEALTH-49, Hamburg Modules for the Assessment of Psychosocial Health in Clinical Practice (Rabung et al., 2007), MSQoL: Modular System for Quality of Life (Pukrop, Möller and Steinmeyer, 2000), NOSIE: Nurse's Observation Scale for Inpatient Evaluation (Honigfeld, Gillis, and Klett, 1966), PANAS: Positive and Negative Affect Schedule (Krohne et al., 1996), PANSS: Positive and Negative Syndrome Scale (Kay, Opler and Lindenmayer, 1989), PAS: Psychiatric Assessment Scale (Krawiecka et al, 1977), PECC: Psychosis Evaluation Tool for Common Use by Caregivers (De Hart et al, 1998), POMS: The Profile of Mood States (McNair, Lorr, & Droppleman, 1971), PQ: Personal Questionnaire (Brett-Jones et al, 1987), Q-LES-Q-SF: Quality of Life Enjoyment and Satisfaction Questionnaire Short Form (Endicott et al., 1993), RCS: Relationship Change Scale (Schlein and Guerney, 1977), SAI: State Anxiety Inventory (Spielberger, 1983), SAPS: Scale for the Assessment of Positive Symptoms (Andreason, 1984), SANS: Assessment of Negative Symptoms (Xia, 1990), SF-36: Short Form-36 (Ware and Sherborne, 1992; Lam et al., 1998), SIAS: Social Interaction Anxiety Scale (Jones, Briggs and Smith, 1986), SDS: Sheehan Disability Scale (Leon et al, 1992), SPG: Scales for Mental Health (Tonnies, Plohn and Krippendorf, 1996), SPSI-R: Social Problem Solving Inventory-Revised (D'Zurilla et al., 2002), WHO-QOL-BREF: Quality of Life (WHO, 1998; Angermeyer, Kilian, and Matschinger, 2000)

*Reported in Bechdolf et al. (2004)

3.4 Psychosocial Interventions

A range of psychosocial interventions were reported in the 18 included papers which were categorised in to 7 different types of interventions: Animal assisted therapy, music therapy interventions, progressive muscle relaxation interventions, education-based interventions, talking therapies, social skills interventions and cognitive remediation interventions, shown in Table 1.

3.4.1 Animal Assisted Therapy Interventions

Two of the papers reported animal assisted therapy interventions (Calvo et al., 2016; Chu et al., 2009).

Both interventions described in this review used dogs as part of their interventions. Calvo et al. (2016) described their intervention as 6 months of twice weekly hour-long group sessions. In pairs, patients spent time with one dog as they rotated between a programme of three types of sessions; emotional bonding, dog walking and dog training with play. Chu et al. (2009) describe weekly group 50-minute sessions over a 2-month period, giving a total of 8 sessions. The programme included an introduction to the dogs, walking the dogs, play sessions and group discussion and sharing of feelings.

3.4.2 Music Therapy Interventions

Music therapy is a psychosocial intervention which has been found to reduce difficult mental health symptoms and increase global functioning (Mossler et al., 2012) and this approach was evaluated in two studies.

Silverman (2016) offered eight 45-minute sessions guided by Cather et al., (2005) functional cognitive behavioural therapy manual of educational lyric analysis or educational song writing in comparison to a waiting list control condition. The educational lyric analysis condition began with the clinician playing a 12-bar blues progression where participants were asked to state their names and something about themselves. During the lyric analysis

sessions, the clinician played and sang a pertinent song and then focused questions and dialog on illness management knowledge including coping skills, the importance of psychosocial interventions, avoiding drugs and alcohol, supports in the community, and medication management. The educational song writing condition began in the same way as the lyric analysis condition, then the clinician facilitated a group song writing session. During the song writing sessions, again the clinician focused questions, dialog, and lyrics on illness management knowledge including coping skills, the importance of psychosocial interventions, avoiding drugs and alcohol, supports in the community, and medication management.

Ulrich et al. (2007) offered 45-minute sessions over an 8-month period. On average, patients attended 7.5 sessions of music therapy (SD 3.5). The main activity of the patients was playing together on rhythm instruments. Playing and singing famous songs were also used frequently, and group discussions were used for reflection. In sessions, an important issue was stimulating the social interactions and learning to deal with problems in the social interactions. The main focus of the music therapy was learning how to work together with others in a social setting.

3.4.3 Education Based Interventions

Psychoeducation is a therapeutic intervention which provides illness and treatment related information, support and management techniques/coping strategies. The education interventions included in this review are: traditional psychoeducation (Chan et al., 2007; Rabovsky et al., 2012); computerised psychoeducation (Pitkanen et al, 2012); and Illness Management (Lin et al., 2015). Psychoeducation was evaluated in four studies.

Rabovsky et al. (2012) offered 10 group sessions lasting 45-60 minutes, which were divided up in to 3 categories; Information (Mental functioning and disorders and the stress-vulnerability model; the brain and neurobiological disease-model; treatment options and

medication; social aspects of mental diseases; preparation of discharge and relapse prevention), training (Coping with symptoms; handling of medication and coping with side-effects; Communication skills; detecting early symptoms and crisis strategy) and discussion sessions (Coping with stigmatisation). 5 sessions were also offered to relatives on a biweekly basis.

An individual computer-based education programme (Mieli.net) was trialled by Pitakanen et al (2012). There were two parts to this intervention, 5 information sessions with a related discussion session (with a nurse) – totalling 10 sessions. These covered 5 areas: illness, treatment, wellbeing, support and patient's rights.

Lin et al (2013) delivered an abbreviated version of the Illness Management and Recovery programme (IMR; Gingerich and Mueser, 2010) in two 90-minute sessions, twice weekly for three weeks, which covered; Practical factors about schizophrenia, using medication effectively and coping with problems and persistent symptoms.

Chan et al (2007) described a ward-based programme called 'Transforming Relapse and Instilling Prosperity (TRIP)' which consisted of 10 sessions lasting around 50 minutes each. The sessions were categorised under two themes: illness orientation and health orientation, covering 10 topics; mental health, emotion management, introduction to schizophrenia, rehabilitation resources – residential and family services, rehabilitation resources – vocational and social services, medication management and compliance, relapse prevention plan development, symptom management, healthy diet and lifestyle, and stress management.

3.4.4 Progressive Muscle Relaxation Interventions

Progressive Muscle Relaxation Training (PMRT) was developed By Edmund Jacobson in the early 1920's as a stress management technique, helping to increase relaxation and awareness of stress and was evaluated in two studies.

Chen et al. (2009) offered a 25-minute session of PMRT each morning for 11 consecutive days. Ensuring temperature, noise and light levels were consistent; PMRT was delivered via audiotape as per Jacobson protocol (Jacobson, 1938; Snyder, 1992). Vancampfort et al (2011) evaluated one session of progressive muscle relaxation. This was delivered by a trained physiotherapist and lasted approximately 25 minutes.

3.4.5 Talking Therapies

The talking therapies involved a level of discussion with either a therapist or group (or both) around the distress they were experiencing alongside introducing psychological strategies to help cope with or manage their symptoms. These interventions consisted of; Cognitive Therapy (Drury et al, 1996) and Cognitive Behaviour Therapy (Bechdolf, et al., 2010; Berking et al., 2013).

Cognitive therapy reported by Drury et al (1996) consisted of a combination of four individual and group formats (Birchwood and Drury, 1995; Chadwick et al., 1996) These were: (i) Individual cognitive therapy (challenging and testing of key beliefs); (ii) Group cognitive therapy; (iii) Family engagement included up to two sessions of guidance on interacting with the patient and how to support managing symptoms; (iv) A structured activity programme in a relaxed atmosphere away from the ward. This included activities aimed at improving interpersonal and self-care skills (e.g. cookery classes, creative therapies, discussion groups). (i) and (ii) were administered for an average of 3 hours per week with daily input; (iii) and (iv) required an average 5 hours per week.

A group CBT intervention based on Tarrier et al. (1990; 1993) was reported by Bechdolf et al. (2010). The intervention included 16 sessions in 8 weeks. Sessions followed a semi-structured format and lasted between 60 and 90 minutes consisting of the following elements: (i) assessment and engagement (sharing information about voices and delusions,

models of psychosis); (ii) improving self-esteem; (iii) formulation of key problems; (iv) interventions directed at reducing the severity and the occurrence of key problems; and (v) relapse prevention/keeping well. The following specific CBT strategies were used: formulation, guided recovery, symptom monitoring, exposure/focusing strategies for managing voices, hypothesis/reality testing, re-framing attributions, rational responding, coping strategy enhancement, distraction techniques, role play, anxiety management, depression and self-esteem work, medication compliance/motivational interviewing, schema work, relapse prevention and keeping well strategies.

In a setting which offers routine individual and group CBT for depression (behavioural analyses, behavioural activation, cognitive restructuring and problem solving), Berking et al (2013) offered CBT with integrated Emotion Regulation Training (CBT-ERT). For ERT, an abbreviated version of the Affect Regulation Training (ART; Berking et al., 2008; Berking, 2010) was used; this was shortened to four 90-minute sessions and two 45-min sessions. The training began with the biological and psychological origins of emotion regulation, functions, mechanisms, and possible risks and benefits of emotional reactions. The concept of being in 'vicious cycles' was introduced and techniques designed to interrupt these cycles were taught: muscle relaxation, breathing relaxation, non-judgmental perception of emotions, acceptance and tolerance of emotions, compassionate self-support, identification for triggers of emotional response and active modification of emotions.

3.4.6 Social skills Interventions

The social skills interventions were categorised together as these aimed to teach the patients new skills or train them to improve a social skill that they already possess. These interventions included; Assertiveness Training (Lee et al., 2013), and Social Skills Training (Park et al., 2011).

Lee et al (2013) delivered group assertiveness training three times per week for a total of 12 sessions lasting 80 minutes each, adapted from a manual written by the authors (Lin et al. 2008). The intervention addressed: understanding assertive behaviour, classifying assertive behaviours, listening and asking questions, identifying an individual's rights, refusing unreasonable demands, making requests, responding to requests, expressing criticism, appraising, expressing approval and affection and using verbal or nonverbal assertiveness skills such as eye contact, body language, facial expressions, tone of voice and the length of replies. The first 10 minutes of each session included instruction on relaxation and breathing techniques and homework practice. Then, the next 60 minutes consisted of demonstrating scenarios, coaching, role playing and overt modelling, practising and providing emotional and behavioural feedback. The last 10 minutes was spent sharing emotions and their behavioural expression, discussing homework.

The Park et al. (2011) paper presents social skills training (SST) using virtual reality in comparison to traditional social skills training, based on the Bellack et al. (2004) manual. Ten bi-weekly sessions were offered for five weeks, which were modified for inpatient settings. The sessions consisted of; five sessions of conversation skills training ("Introduce yourself", "Find a common concern and listen to the other person", "Start a conversation", "Maintain a conversation", and "End a conversation"); three sessions of assertiveness skills training ("Make a demand", "Reject a demand of another person", and "Make a compromise"); and two sessions of emotional expression skills training ("Express positive emotions" and "Express negative emotions"). Homework from the previous session was reviewed at the beginning of the next session. Every session included a therapist modelling followed by the participant's role-playing, and then positive and corrective feedback from the therapists. After identifying 'deficient' skills, the participant was engaged again in another role-play of the same scene, and also was provided with feedback. The difference

between the two SST types was in the method of role-play. The virtual environments as simulators of the scenes and avatars as the actors were used in VR role-plays, whereas verbal, writing, picture, and video supplies as simulators of the scenes and SST therapists as the actors were used in traditional role-plays. In the virtual reality intervention, the patient wore a Head Mounted Display (HMD) and the position tracker, which provided "immersive" virtual environments, and the rest of the group members observed the same scenes on the big screen.

3.4.7 Cognitive Remediation Interventions

Cognitive Remediation is aimed at improving cognitive processes such as attention, working memory and executive functioning, by teaching 'thinking' skills (Wykes et al. 2011). Three of the papers presented here report Cognitive Remediation Interventions for acute mental health inpatient samples (Lindenmeyer et al., 2008; Sanchez et al., 2014; Tan et al., 2016).

Firstly, Lindenmeyer et al (2008) reported an intervention whereby patients were engaged in approximately 24 hours of computer-based cognitive exercises (COGPACK version 6.0) in areas of attention and concentration, psychomotor speed, learning and memory, and executive functions from a standardized curriculum. Each session was 45 minutes long and participants received two hours of computer practice and a one-hour discussion group per week for a total of 12 weeks. The weekly group discussions focused on the importance of cognitive skills, on performing activities of daily living and work, and on the development of compensatory strategies for managing persistent cognitive problems. Cognitive remediation was delivered in cohorts of six to eight patients and supervised by three hospital staff members, including two psychologists and a psychology or occupational therapy intern.

The cognitive remediation programme reported in the Sanchez et al. (2014) paper was developed by Ojeda and Peña (2007) as the first Spanish cognitive remediation program designed for patients with psychosis and schizophrenia. REHACOP is a 90 minutes structured program, 3 times per week, based on paper-pencil tasks and uses the principles of restoration, compensation, and optimization. Training procedures gradually increase the level of cognitive effort and demand in the following areas; attention, memory, processing speed, language, and executive functioning. The program includes 3 additional units: social skills training, activities of daily living, and psychoeducation. Patients' relatives also took part in psychoeducation groups covering, understanding of the illness, ways to cope with symptoms, the ability to identify early signs of relapse, and information about available clinical and social resources.

Tan et al (2016) reported a Chinese version of the Cognitive Remediation (CRT) manual, originally derived from an English version of Frontal/Executive Function Program (Delahunty and Morice, 1996; Wykes et al., 2007). This therapy consists of three modules: the "Cognitive Shift Module," addressing flexibility in thinking and information-set maintenance; the "Working Memory Module", addressing working memory capacity, which has participants work with two to five information sets at a time; and the "Planning Module," which provides training for self-ordered, goal-oriented, set/schema formation, manipulation, and planning (Penades et al., 2006; Wykes and van der Gaag, 2001). Forty hourly sessions were offered at an average rate of 4 per week. Four therapists, after standard CRT therapy training, helped the participants finish the CRT tasks, which were mainly done with pencil and paper.

3.5 Effective Interventions for Improving Quality of Life, Symptoms or Patient Functioning

The second aim of this review was to identify which psychosocial interventions were effective at improving quality of life, symptoms or patient functioning.

The 18 papers included 32 outcomes measuring, quality of life, symptoms or functioning for inpatients (including 2 non-validated measures). Fifteen of the studies (83.3%) found a significant positive impact on at least one of these outcome measures. Most commonly, the studies measured patient symptoms, with a total of 16 separate measures (including 1 non-validated measure). Ten measures were used to assess functioning and seven measured quality of life (including 1 non-validated measure (See Tables 1 and Table 2)).

Table 2 Psychometric Outcome Measures

Symptoms	Quality of Life	Functioning
Psychotic Symptoms	MSQoL (Bechdolf et al, 2010)	ERSQ (Berking et al., 2013)
PANSS (Calvo et al., 2011; Pitkanen et al., 2012; Bechdolf et al, 2010; Park et al, 2011; Lindenmayer et al., 2008; Sanchez et al., 2014; Tan et al., 2016)	**Euro-QoL-5** (Calvo et al., 2011);	**GAF** (Sanchez et al., 2014)
PECC (Vancampfort et al., 2011)	**SF-36** (Chan et al., 2007)	**GAS** (Rabovsky et al., 2012)
SAPS (Chen et al, 2009)	**WHO-QOL-BREF** (Rabovsky et al., 2012)	**AS** (Lee et al., 2013; Park et al, 2011)
PAS (Drury et al 1996)	**SPG** (Ulrich et al., 2007)	**RCS** (Park et al, 2011)
PQ (Drury et al 1996)	**Q-LES-Q-SF** (Pitkanen et al., 2012)	**NOSIE** (Tan et al., 2016)
CGI (Rabovsky et al., 2012; Sanchez et al., 2014)	Non-validated measure (Chu et al., 2009)	**DAS-WHO** (Sanchez et al., 2014)
SANS (Ulrich et al., 2007)		**SDS** (Pitkanen et al., 2012)
BPRS (Lin et al., 2015; Lee et al., 2013)		**SPSI-R** (Park et al, 2011)
Non-validated measure (Chu et al., 2009)		
Affect States and Depression		
BDI (Berking et al., 2013)		
HEALTH-49 (Berking et al., 2013)		
PANAS (Berking et al., 2013)		
POMS (Silverman, 2016)		
Anxiety		
BAI (Chen et al, 2009)		
SIAS (Lee et al., 2013)		
SAI (Vancampfort et al., 2011)		

Indicates study not effective

AS: Assertiveness Schedule (Rathus, 1973), BAI: Beck Anxiety Inventory (Beck et al, 1988), BDI: Beck Depression Inventory (Beck, Ward and Mendelson, 1961; Hautzinger et al, 1995), BPRS: Brief Psychiatric Rating Scale (Overall and Gorham, 1988; Zhang, 1984), CGI: Clinical Global Impression Scale for Psychosis (Guy, 1976), DAS-WHO: Disability Assessment Schedule from World Health Organization (WHO, 1988), ERSQ: Emotion Regulation Skills Questionnaire (Berking et al, 2008), Euro-QoL-5D: European Quality of Life 5 Dimensions Measure (Bobes et al., 2005), GAF: Global Assessment of Functioning Scale (Hall, 1995), GAS: Global Assessment Scale (Endicott et al., 1976), HEALTH-49, Hamburg Modules for the Assessment of Psychosocial Health in Clinical Practice (Rabung et al., 2007), MSQoL: Modular System for Quality of Life (Pukrop, Möller and Steinmeyer, 2000), NOSIE: Nurse's Observation Scale for Inpatient Evaluation (Honigfeld, Gillis, and Klett, 1966), PANAS: Positive and Negative Affect Schedule (Krohne et al., 1996), PANSS: Positive and Negative Syndrome Scale (Kay, Opler and Lindenmayer, 1989), PAS: Psychiatric Assessment Scale (Krawiecka et al, 1977), PECC: Psychosis Evaluation Tool for Common Use by Caregivers (De Hart et al, 1998), POMS: The Profile of Mood States (McNair, Lorr, & Droppleman, 1971), PQ: Personal Questionnaire (Brett-Jones et al, 1987), Q-LES-Q-SF: Quality of Life Enjoyment and Satisfaction Questionnaire Short Form (Endicott et al., 1993), RCS: Relationship Change Scale (Schlein and Guerney, 1977), SAI: State Anxiety Inventory (Spielberger, 1983), SAPS: Scale for the Assessment of Positive Symptoms (Andreason, 1984), SANS: Assessment of Negative Symptoms (Xia, 1990), SF-36: Short Form-36 (Ware and Sherborne, 1992; Lam et al., 1998), SIAS: Social Interaction Anxiety Scale (Jones, Briggs and Smith, 1986), SDS: Sheehan Disability Scale (Leon et al, 1992), SPG: Scales for Mental Health (Tonnies, Plohn and Krippendorf, 1996), SPSI-R: Social Problem Solving Inventory-Revised (D'Zurilla et al., 2002), WHO-QOL-BREF: Quality of Life (WHO, 1998; Angermeyer, Kilian, and Matschinger, 2000)

3.5.1 Symptoms

Seventeen of the studies measured patient symptoms using 16 different measures (see Table 2 for individual measures) These evaluated, psychotic symptoms, affect states, depression and anxiety, and are presented separately below.

3.5.1.1 Psychotic Symptoms

Psychotic symptoms were measured by seven measures across 14 of the studies. A measure of psychotic symptoms was used to evaluate the intervention, and a statistically significant improvement was made in at least one study in each of the seven categories of interventions.

3.5.1.1.1 – Animal Assisted Therapy

Both of the studies in the animal assisted therapy category examined the effect of their interventions on psychotic symptoms in comparison to a Treatment as Usual (TAU) control group. Calvo et al (2011) found that group animal assisted therapy was effective at reducing psychotic symptoms, whilst Chu et al (2009) found only an effect for 'positive' symptoms.

3.5.1.1.2 – Music Therapy Interventions

Ulrich et al., (2007) found a significant effect for the reduction of negative symptoms by offering music therapy sessions in comparison to TAU.

3.5.1.1.3 – Progressive Muscle Relaxation Interventions

Both progressive muscle relaxation interventions were effective at improving symptoms of psychosis. Chen et al. (2009) found post intervention effects in reducing 'positive' symptoms of psychosis when compared with active control patients who sat in a therapy

chair for the same duration, under the same environmental conditions. Whilst, Vancampfort et al. (2011) found an overall reduction in psychotic symptomatology in comparison to a resting control group.

3.5.1.1.4 – Education-based Interventions

There was mixed evidence for the effectiveness of education-based interventions in the reduction of psychotic symptoms. In comparison to treatment as usual, Lin et al (2015) found an effect of the illness management intervention, whilst Rabovsky et al (2012) found no effect of a psychoeducation intervention on psychotic symptoms.

Pitkanen et al (2012) found a within group effect of computerised group education on improving symptoms of psychosis, but there was no significant difference when compared with the active control group of conventional education group plus TAU.

3.5.1.1.5 – Talking Therapies

Two of the talking therapy interventions significantly reduced symptoms of psychosis post-intervention. One study found significant effects of cognitive therapy (Drury et al., 1996) compared to TAU, whilst Bechdolf et al. (2010) found a within-groups effect of group cognitive behaviour therapy but there was no significant effect when compared to group psychoeducation.

3.5.1.1.6 – Social Skills Intervention

The evidence for social skills training for inpatients to improve symptoms of psychosis is mixed. Lee et al., (2013) found significant effects for an assertiveness intervention when compared to TAU. However, Park et al., (2011) evaluated virtual reality social skills training in comparison to traditional role play social skills training and found no improvement in symptoms.

3.5.1.1.7 – Cognitive Remediation Interventions

All three of the cognitive remediation intervention studies assessed symptoms of psychosis and used an active control group, with mixed results. Sanchez et al., 2014 found a significant improvement in symptoms compared with Group Activities plus TAU. Similarly, Tan et al (2016) found group cognitive remediation was effective in comparison with dance and music groups.

However, Lindenmeyer et al., (2008) found no improvement in symptoms when comparing cognitive remediation to a computerised active control group.

3.5.1.1.6 CTAM scores and Symptoms of Psychosis

At least one study in each of the seven intervention groups found a positive effect on symptoms of psychosis. In terms of studies which demonstrated good levels of methodological rigour as measured by the CTAM, the interventions which were effective at improving symptoms of psychosis were Illness Management (Lin et al, 2015), Cognitive Therapy (Drury et al, 1996) and Cognitive Remediation (Sanchez et al., 2014; Tan et al., 2016). However, psychoeducation (Rabovsky et al., 2012) and another cognitive remediation intervention (Lindenmayer et al., 2008) were not found to be effective at reducing symptoms of psychosis in acute inpatient settings.

3.5.1.2 Affect States and depression

Two of the studies from this review evaluated interventions and the effect on mood states, using four different measures (see table 2).

3.5.1.2.1 Talking Therapies

Berking et al., (2013) found an effect on affect as well as depression, for CBT with enriched emotional regulation training for acute mental health inpatients, compared to CBT without emotional regulation training.

3.5.1.2.2 Music Therapy Interventions

Silverman (2016) found no improvement in affect after an educational lyric analysis music therapy intervention in comparison to both an educational song writing condition and a waiting list control.

3.5.1.2.3 CTAM scores and Affect states and Depression

Both of the interventions which assess affect states and depression fell under the threshold of 65 to be classified as reaching 'good' methodological rigour (Wykes et al., 2008).

3.5.1.3 Anxiety

Three of the studies measured the effect of an intervention on symptoms of anxiety. These studies used three different measures of anxiety (see table 2).

3.5.1.3.1 Progressive Muscle Relaxation Interventions

Two studies (Chen et al, 2009; Vancampfort et al., 2011) investigated progressive muscle relaxation interventions in relation to anxiety in comparison to resting control groups and found an effect.

3.5.1.3.2 Social Skills Interventions

Lee et al., (2013) found a significant impact of an assertiveness training intervention on anxiety, compared to TAU.

3.5.1.3.3 CTAM scores and Anxiety

All three of these studies found a significant effect of their intervention on symptoms of anxiety though none meet the criteria set out by Wykes et al. (2008) to be classified as good methodological rigour.

3.5.2 Quality of Life

Seven of the studies used 7 different measures (see table 2) to assess the impact of an intervention of quality of life in acute mental health inpatients.

3.5.2.1 – Animal Assisted Therapy

Both of the studies in the animal assisted therapy category found significant effects of their interventions on quality of life for inpatients, in comparison to TAU.

3.5.2.2 – Music Therapy Interventions

Ulrich et al (2007) found that music therapy was not effective at improving quality of life for inpatients compared to TAU.

3.5.2.3 – Education-based Interventions

Three of the studies evaluated psychoeducation interventions in relation to the impact on quality of life. Two of these found significant results; Pitakanen et al., (2012) compared computerised education group to a conventional education group plus TAU; and Chan et al. (2007) compared psychoeducation to ward occupational therapy programme.

However, Rabovsky et al (2012) found that psychoeducation was not effective at improving quality of life for inpatients.

3.5.2.4 – Talking Therapies

Bechdolf et al. (2010) found a within-groups effect of group cognitive behaviour therapy but there was no significant effect on quality of life when compared to group psychoeducation.

3.5.2.5 CTAM scores and Quality of Life

The psychoeducation intervention reported by Rabovsky et al. (2012) was the only study which rated quality of life and was found to be rated highly for methodological rigour

(Wykes et al. 2008). Rabovsky et al., reported no effect of psychoeducation on quality of life, compared with TAU.

3.5.3 Functioning

Seven of the reported studies used validated measures of functioning using nine different measures in total (see Table 2 for individual measures). Six were found to be effective at improving patient functioning.

3.5.3.1 – Education-based Interventions

Two education-based interventions measured patient functioning. A psychoeducation intervention (Rabovosky et al., 2012) was found not to be effective at improving functioning in comparison to TAU. Pitakanen et al., (2012) however, found that a computerised education group was effective for improving functioning compared to conventional education groups plus TAU.

3.5.3.2 – Talking Therapies

Berking et al., (2013) found that CBT with enriched emotional regulation training for acute mental health inpatients was significant at improving functioning when compared with CBT without emotional regulation training.

3.5.3.3 – Social Skills Intervention

Both of the social skills interventions (Lee et al., 2013; Park et al., 2011) assessed functioning. Lee et al. compared assertiveness training with TAU and Park et al. compared Virtual reality social skills training with traditional role-play social skills. Both of these interventions were found to demonstrate an effective outcome for functioning.

3.5.3.4 – Cognitive Remediation Interventions

Two of the cognitive remediation studies (Sanchez et al., 2014; Tan et al, 2016) were also deemed effective for improving functioning in an inpatient sample. Sanchez et al., 2014 evaluated cognitive remediation compared with group activities plus TAU. Whilst, Tan et al (2016) investigated group cognitive remediation compared with dance and music groups.

3.5.3.5 CTAM scores and Patient Functioning

Out of the seven studies which assessed patient functioning, three were found to have CTAM scores classified as 'good' (Wykes et al., 2008); both of the cognitive remediation studies (Sanchez et al., 2014; Tan et al, 2016) found an effect on patient functioning; Rabovsky et al (2012) found no effect of psychoeducation on functioning.

4. Discussion

This systematic review aimed to assess the effectiveness of psychosocial interventions for patients admitted to acute mental health inpatient settings and to identify which types of psychosocial interventions are effective to further the evidence base for the development of future psychosocial interventions for individuals admitted to inpatient wards. This review also aimed to identify methodological quality of papers to aid with the interpretation of the effectiveness of the interventions reported.

This review identified 18 individual research papers which evaluated a psychosocial intervention for acute mental health inpatients and assessed symptoms, quality of life or functioning outcomes for inpatients in comparison to a control group. Of these papers, 15 found an effect for at least one of the three outcomes. Only 6 were classed as having good methodological rigour.

4.1 Animal Assisted Therapies

There were two animal assisted therapy interventions identified by this review. They both used dogs as the chosen assistance animal, however, there was a considerable difference in the number of sessions the therapy was delivered over (8 and 40 sessions). It was found that animal assisted therapy was effective for improving symptoms of psychosis (though one study found no effect for 'negative' symptoms) and quality of life. Though the methodological quality of both of the papers was fairly low, evaluating the effects of animals in therapy is a fairly recent development, particularly in terms of RCTs.

Previous research in this area has found that when patients interact with animals it can have positive effects on physiological, psychological and social aspects of wellbeing (Fine, 2010) including, improving self-care (Barba, 1995), promoting feelings of safety, confidence, identity, self-esteem (Kongable et al., 1989) and improving social functioning

(Brodie and Biley, 1999). These effects have been demonstrated in people experiencing mental health difficulties (Barak et al., 2001; Pedersen et al., 2011).

4.2 Music Therapy Interventions

Across the two music therapy studies (Silverman, 2016; Ulrich et al., 2007), a significant reduction in negative symptoms of psychosis was found (no other symptoms of psychosis were measured). However, music therapy was found to have no effect on depression, affect or quality of life for acute mental health inpatients. Both studies in this category were deemed to be low in methodological quality. It may be that music therapy is required over a longer period of time to see effects on quality of life, as Hayashi et al. (2002) found effects of music therapy for long stay mental health wards.

However, music therapy for mental health appears to be in its infancy particularly for acute mental health inpatient wards and a review of music interventions found no conclusive evidence for an effective model (Carr et al., 2013).

4.3 Progressive Muscle Relaxation Interventions

Both of the studies in this category (Chen et al., 2009; Vancampfort et al., 2011) investigated and found significant effects of progressive muscle relaxation on symptoms of psychosis and anxiety, consistent with previous progressive muscle relaxation studies investigating anxiety reductions in schizophrenia (Hawkins et al., 1980). However, both of these studies failed to meet the threshold to be deemed as a having 'good' methodological rigour.

4.4 Education-based interventions

Patient education-based interventions have previously been found to have a positive impact on quality of life (Atkinson et al., 1996), well-being (Pekkala at al., 2002) and

symptoms (Rotondi et al., 2005). Two of the studies which evaluated education-based intervention produced mixed evidence for reduction of psychotic symptoms. Both were deemed to have good levels of methodological rigor (Lin et al., 2015; Rabovsky et al., 2012) but had opposing results. Rabovsky et al. (2012) also found no effect of psychoeducation on quality of life or patient functioning.

Another study in this category (Pitkanen et al., 2012) found that computerised psychoeducation was not more effective than conventional psychoeducation, however, both were effective at improving symptoms of psychosis, quality of life and patient functioning. Chan et al (2007) found that psychoeducation was effective at improving patient quality of life. Both of these studies were deemed to be of low methodological quality.

4.5 Talking Therapies

Cognitive therapy (Drury et al., 1996) and group CBT (Bechdolf et al., 2010) were effective at reducing psychotic symptoms (however, CBT was not more effective than group psychoeducation). Drury et al. (1996) was classified as having a good level of methodological rigour whilst Bechdolf et al. (2010) was below threshold to be classed as a good rigorous study.

CBT with emotional regulation training (Berking et al., 2013) was more effective than CBT alone for reducing affect, improving symptoms of depression and improving patient functioning. CBT (Bechdolf et al., 2010) was also found to be effective at improving quality of life (though not more effective than group psychoeducation). In terms of methodological quality, only the cognitive therapy study (Drury et al., 1996) was 'good'.

This is consistent with the findings of a review by Tarrier and Wykes (2004) who concluded that overall there is good evidence for the efficacy and effectiveness of CBT for psychosis. Though, this review was mainly based on community samples.

4.6 Social Skills interventions

Assertiveness skills training was found to improve symptoms of psychosis, anxiety and functioning (Lee et al., 2013). Whilst virtual-reality social skills training (Park et al., 2011) had no effect on symptoms of psychosis, but this innovative intervention was deemed more effective than traditional social skills training at improving patient functioning. Consistent with other research suggesting that virtual reality had a promising basis for mental health interventions (Gregg and Tarrier, 2007). Both of these studies fell just slightly under the threshold to be classified as good for methodological quality.

4.7 Cognitive Remediation Interventions

Most studies of cognitive remediation have found significant functional outcome improvements accompanying changes in the level of cognitive functioning (Fett et al., 2011) All three cognitive remediation interventions were methodologically sound and all compared the interventions with an active control group. In terms of symptoms of psychosis two of the studies (Sanchez et al., 2014; Tan et al., 2016) reported an effect whist the other did not (Lindenmayer et al., 2008). The two studies (Sanchez et al., 2014; Tan et al., 2016) which investigated patient functioning, found that cognitive remediation therapy was effective.

4.8 Methodological Quality Assessment

Overall offering psychosocial interventions for inpatients is generally effective at decreasing distressing symptoms, improving quality of life and functioning, given that 15 out of 18 studies found significant effects. Though caution should be taken as the majority of the studies failed to the meet the criteria set out by Wykes et al., (2008) to be classified as

'good'. Whilst not enough to carry out significance testing, there is a trend in mean CTAM score showing that the quality of papers for cognitive remediation based interventions is somewhat better than that of the other interventions, in particular the animal assisted therapies.

4.9 Summary of 'Quality' Papers

In terms of methodological quality, the six papers which were deemed 'good' were two psychoeducation interventions (Lin et al., 2015; Rabovsky et al., 2012), a cognitive therapy intervention (Drury et al., 1996) and three cognitive remediation interventions (Lindenmayer et al., 2008; Sanchez et al., 2014; Tan et al., 2016).

For psychoeducation, one study (Lin et al., 2015) found an effect on the reduction of negative symptoms. Rabovsky et al. (2012) found no effects.

Cognitive therapy was found to be effective at reducing psychotic symptoms for inpatients in an acute mental health inpatient setting.

The cognitive remediation studies were mixed in their results. Two of the studies reported reductions in symptoms of psychosis (Sanchez et al., 2014; Tan et al., 2016) whist the other did not (Lindenmayer et al., 2008). The two studies (Sanchez et al., 2014; Tan et al., 2016) investigating patient functioning, found an effect.

4.10 Summary of Effective Studies

Ten of the studies which were found to have an effective outcome for patients in an acute mental health inpatient setting were delivered in a group format, two were delivered in both an individual and group format, one study was delivered in an individual format (see Table 1). It was unclear how two further studies delivered their interventions. The sessions ranged from 1 – 40 sessions (mean = 14.33, standard deviation = 12.64; median = 10; mode

= 10). Thirteen of the studies with effective outcomes described following programmes or utilising manualised (or adapted) interventions.

Caution should be exercised in drawing firm conclusions from these results due to the limited number of papers which demonstrate a good level of methodological rigour (see section 4.9). However, according to the results of this review, the key components which should be considered for setting up a psychosocial intervention for acute mental health inpatients are; group interventions, utilising a clear manual or programme for intervention and delivered in approximately 10 sessions.

4.11 Future Research

Further research is required to draw accurate and definitive conclusions about which interventions are effective for improving symptoms, quality of life or functioning for inpatients on acute mental health wards. One recommendation is to retest the psychosocial interventions, measuring these outcomes, using more rigorous methods and reporting of the trial during the write up phase.

Another recommendation for future research is to adapt further psychosocial interventions which target symptoms, quality of life or functioning for short stay acute mental health inpatient wards and test these using RCTs (for example, self-help interventions, group exercise interventions, art therapy interventions).

4.12 Clinical Implications

This is a growing body of literature and at this stage in the development of research in this area; potentially the most reliable evidence should be based on that with the best methodological rigour. Therefore, implementing psychoeducation interventions, cognitive therapy or cognitive remediation interventions would be beneficial for inpatients on acute mental health inpatient wards.

However, overall, the results of this study suggest that offering a psychosocial intervention is more effective for inpatients than not offering one, given that effects were found in all of the seven categories.

4.13 Limitations

The CTAM quality assessment tool has a number of limitations, for example, selective reporting in randomised controlled trials. Other limitations include, excluding studies which were trialled targeting both inpatients and outpatients concurrently, excluding unpublished studies and those published in foreign language journals is likely to bias the review towards trials.

There is a risk that this review was limited by publication bias as non-significant results are published less often than significant results (Dwan et al., 2013), in addition to the exclusion of foreign language, thesis and conference proceedings and other unpublished research

4.14 Conclusions

Eighteen papers were identified which evaluated a psychosocial intervention for acute mental health inpatient wards against a control group, and in which outcomes for symptoms, quality of life or functioning were reported. Fifteen studies showed a statistically significant positive impact of the intervention on at least one outcome. Seven intervention categories were identified from the 18 studies, and at least one study in each category was found to be effective for symptoms, quality of life or functioning for patients. The studies include a wide range of different interventions, the majority of which were effective (15 out of 18). Given that methodological quality of studies was generally low (6 studies rated as good), and the small quantity of available RCTs in this area it is difficult to draw definitive conclusions about which interventions are the most effective at improving symptoms, quality of life or functioning for patients. Recommendations include more and

repeated trials of interventions for acute mental health inpatient wards which use more rigorous methods of testing and reporting trials.

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Paper Two

Patient social functioning in acute mental health inpatient wards: the role of emotional

regulation, attachment styles and nurse-patient relationships

This paper has been prepared in accordance with the author guidelines of the British

Journal of Clinical Psychology (Appendix 2)

Patient social functioning in acute mental health inpatient wards: the role of emotional regulation, attachment styles and nurse-patient relationships

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Patient social functioning in acute mental health inpatient wards: the role of emotional regulation, attachment styles and nurse-patient relationships

Abstract

Background: Patient social functioning and nurse distress on acute mental health wards is problematic. There is some indication that poor social functioning and distress is related to difficulties in emotional regulation. Emotional regulation develops in the context of attachment relationships. Nurse and patient alliance have been likened to attachment relationships, and have been found to affect social behaviour and distress.

Objectives: To explore patient social functioning and nurse distress in relation to nurse-patient alliance, emotional regulation and attachment style.

Design: Questionnaire-based, cross-sectional study with correlational and regression analyses.

Settings: Acute mental health inpatient wards across four NHS trusts in the North-West of England.

Participants: Fifty nurse-patient dyads.

Methods: Patients and nurses completed questionnaires regarding demographic information, emotional regulation, attachment style and alliance. Nurses also rated patient social functioning and their own distress.

Results: Patient anxious attachment style was associated with difficulties in regulating emotions. Patient emotion regulation, patient insecure attachment and the patient-rated alliance predicted nurse-rated patient social functioning. Nurse emotion regulation, nurse insecure attachment style and nurse-rated alliance did not significantly predict nurse-rated patient social functioning and correlations were non-significant. Nurse distress was associated with nurse emotion regulation, nurse anxious attachment and nurse-rated alliance, these factors significantly predicted nurse distress.

Conclusions: Patients social functioning is predicted by emotion regulation, attachment and alliance. Similarly, nurse distress is predicted by nurse emotion regulation, attachment

style and alliance. Interventions targeting emotion regulation or attachment informed wards would be beneficial.

1. Introduction

Serious incidents or poor social functioning on acute mental health inpatient wards include a variety of behaviours ranging from suicide attempts and self-harm, to verbal outbursts. Even minor incidents of this nature can cause injuries to staff and other patients, both physical (Hunter & Carmel, 1992) and psychological (Needham et al., 2005).

1.1 Social Functioning and Emotional Regulation

Evidence suggests that poor social functioning may result from difficulties in emotional regulation (Weiss et al., 2015). It is thought that those who suppress emotions (over control), fail to respond appropriately to others and appear unable to fully engage in social interaction (John and Gross, 2004) and supressing emotions has been associated with fearfulness, avoidant behaviour, social withdrawal, and lack of assertiveness (Gersten, 1989; Kagan, 1998). In contrast, individuals who are emotionally dysregulated (under control) are likely to express emotion inappropriately. For example, they may appear 'out of control' and prone to be reactive, and therefore elicit negative responses from others (Eisenberg et al., 2000).

1.2 Emotional Regulation and Working Alliance

One factor which may be used to understand emotional regulation in patients on an acute mental health inpatient ward is the quality of the working alliance with staff. Working alliance, or therapeutic alliance, is defined by three factors: tasks, goals, and bond (Bordin, 1979); the tasks are required for the dyad to work towards the treatment goals, which is dependent upon the bond or quality of the relationship. Research has found that a strong working alliance between patients experiencing psychosis and their community mental health worker is associated with fewer difficulties in regulating emotions (Owens, Haddock & Berry, 2013). This suggests, patients may be less likely to demonstrate intense

expressions of distress. It has been suggested that mental health workers may be able to influence their patient's emotional regulation, which in turn may increase their ability to manage difficult emotions, for example, an attuned mental health worker may use evidence from the patient's posture, gaze and tone of voice, and use this to inform their therapeutic style (Meares, 2005). The client then begins to acknowledge their own emotions and is able to manage them more effectively.

1.3 Working Alliance and Attachment Style

The way in which we are able to relate to others and build quality interpersonal relationships, such as therapeutic or working alliance, is associated with our attachment styles (Bucci, Seymour-Hyde, Harris and Berry, 2015; Dozier, 1990; Kobak & Sceery, 1988). Bowlby (1988) even likened the therapeutic relationship to an attachment relationship. Ainsworth, Blehar, Waters and Wall (1978) suggested that there are three main types of attachment style; secure, insecure avoidant and insecure anxious-ambivalent. These develop during childhood from interactions initially with primary caregivers. Attachments styles determine how the child views the world around them and interact with others, thus, providing them with an internal working model and strategies to regulate emotions. For example, those with an anxious attachment style may have learned to maintain or exaggerate emotional distress in order to elicit a response, whilst those with an avoidant attachment style may inhibit or suppress their emotions in response to caregivers who are consistently unavailable or critical. There is evidence of a moderate degree of stability in patterns of attachment from infancy through to adulthood (Fraley, 2002; Hamilton, 2000).

In people with psychosis, evidence suggests that there is an association between attachment style and therapeutic alliance (Berry, Barrowclough and Wearden, 2008), although this has only specifically been explored in community settings.

1.4 The Role of Nurse Related Factors

Acute mental health inpatient wards can be a stressful environment for mental health nurses and other psychiatric staff members. Regular exposure to poor social functioning, insufficient staffing training and supervision, and high task demands can lead to staff distress (Totman, Lewando Hundt, Wear, Paul & Johnson, 2011). A lack of time and high levels of nurse distress can impact on the development of a good working relationship with a patient.

Other factors that have also been linked to problematic working relationships between staff and patients are, staff perceptions of poor social behaviours (Berry, Gregg, Vasconcelos e Sa, Haddock, & Barrowclough, 2012) and staff attachment styles (Dozier, Cue and Barnett, 1994). As above, given the association between attachment style, emotional regulation and working alliance, it is likely that insecure attachment styles in staff members, is likely to lead to difficulties in the regulating their own emotions, and developing a good working alliance.

1.5 The Present Study

To date, research exploring attachment, emotional regulation and nurse-patient alliance has not been investigated within inpatient settings where the nurse-patient relationship may be the main source of support and contact for individual patients. This study aimed to explore these associations in nurse-patient relationships in adult acute mental health inpatient wards and investigate how this might relate to the patient's social functioning and nurse distress.

The following hypotheses were proposed:

1) Poorer patient social functioning would be associated with poorer patient emotional regulation, more insecure patient attachment and poorer patient-rated alliance.

2) Poorer patient social functioning will be associated with poor nurse emotional regulation, more insecure nurse attachment and poorer nurse-rated alliance.

3) Nurse emotional distress will be associated with poorer nurse emotional regulation, more insecure nurse attachment and poorer nurse-rated alliance.

2. Methods
2.1 Participants

Participants were 50 dyads of named nurses and patients recruited from North West UK NHS acute inpatient mental health services. Nurses were invited to take part in the study with only one of the patients from their case load; this was to avoid the effects of clustering and the introduction of non-independent data into the analysis.

Participants were included if they: were 18 or over; were a patient currently residing on an acute mental health inpatient ward and their assigned named-nurse (Registered Mental Health Nurse) was willing to take part in the study. Patients and nurses were required to have known each other for at least 7 days before taking part.

Participants were excluded if they: were not sufficiently fluent in English to complete the questionnaires; had a co-morbid severe learning disability; or were deemed to not possess the capacity (under the Mental Capacity Act, Department of Health, 2005) to consent to take part in the study. The consent procedure followed that set out by the Code of Human Research Ethics (British Psychological Society, 2014).

2.2 Power Calculation

Although there are no previous studies on these specific questions on which to formally estimate power, a similar study reported effect sizes in the region of 0.4 (Owens et al., 2013) for testing hypotheses associating attachment styles, with emotional regulation and alliance. It was expected that with a minimum of 50 nurse-patient dyads, a correlation of 0.39 would be detected at the 5% significance level with 80% power

2.3 Measures

2.3.1 Patient Questionnaires

1. *Demographics*

   Demographics Questionnaire

   Data on age, gender, ethnicity, length of time experiencing mental health problems, number of admissions to hospital and case note diagnosis. Self-reported ethnicity was later categorised into UK ethnicity groups by the author (Office for National Statistics, 2012).

2. *Attachment*

   Psychosis Attachment Measure (PAM; Berry, Wearden, Barrowclough & Liversidge, 2006)

   The PAM is a 16-item self-report measure which assesses an individual's adult attachment style. The PAM consists of two subscales measuring avoidant attachment and anxious attachment. Items are rated on a four-point Likert scale (not at all, a little, quite a bit, very much). The PAM is commonly used to measure attachment in severe mental health populations (Berry et al., 2008) and has been

demonstrated to have strong psychometric properties within a psychosis sample (Berry et al., 2008). The alpha for the current study was 0.86.

3. *Alliance*

Working Alliance Inventory (WAI; Hatcher & Gillaspy, 2006)

The WAI is a 12-item self-report questionnaire which is widely used and the most established measure of alliance within a therapeutic relationship. Participants (using the client version) are asked to rate their relationship using 5-point Likert scales. The WAI provides a total-alliance score along with three subscales: goal-related, task-related and bond-related alliance (Bordin, 1994). The patient version includes twelve questions: four related to each subscale. The WAI is shown to have good psychometric properties for inpatients (Hatcher & Gillapsy, 2006) and the alpha for the current study was 0.95.

4. *Emotional Regulation*

Difficulties in Emotion Regulation Scale (DERS: Gratz & Roemer, 2004)

The DERS is one of the most widely used self-report measures of emotion regulation deficits. Its 36-items measure assessing six areas of emotion regulation: acceptance of emotional responses; difficulties engaging in goal-directed behaviour when upset; impulse control difficulties; lack of emotional awareness; limited access to effective emotion regulation strategies; and emotional understanding. The overall scale score has high internal consistency, construct validity and test–retest reliability in both clinical and non-clinical samples (Gratz & Roemer, 2004; Linehan, 2003). The alpha value for the current study was 0.96.

5. *Patient Functioning*

Social Behaviour Scale (SBS; Wykes & Sturt, 1986)

The Social behaviour scale was deemed applicable for use in this study as it measures behaviours that are not based on the patient functioning within the community but are more typically observed in the ward setting. Social behaviour was measured by the named nurse with the 21-item SBS. All items are rated on a 5-point Likert scale (0 to 4), with a higher score indicating lower levels of functioning. The SBS (Wykes & Sturt, 1986) assesses social functioning and includes four subscales relating to antisocial behaviour, depressed behaviour, social withdrawal and thought disturbance and is shown to have good construct validity and reliability in community settings with patient diagnosed with schizophrenia (Cella et al., 2014). The alpha for the current study was 0.66.

2.3.2 Nurse questionnaires

1. *Demographics*

Demographics Questionnaire

Self-report questionnaire designed to obtain demographic information such as; age, gender, ethnicity, length of time nursing/health care professional, length of time working on ward.

2. *Attachment*

Psychosis Attachment Measure (PAM; Berry, Wearden, Barrowclough & Liversidge, 2006, see above for full description). The PAM has been previously used with psychiatric staff and is reported to have good psychometric properties in non-clinical samples (Berry et al., 2006) and the alpha for the current study was 0.74.

3. *Alliance*

   Working Alliance Inventory (WAI; Hatcher & Gillaspy, 2006). The nurse version includes ten questions: four related to bond, three related to goal and three relating to task. The WAI (nurse version) has been reported to have good psychometric properties (Hatcher & Gillapsy, 2006) and the alpha for the current study was 0.83.

4. *Emotional Regulation*

   Difficulties in Emotion Regulation Scale (DERS: Gratz & Roemer, 2004)

   See above for full description. The alpha for the current study was 0.91.

5. *Distress/Burnout*

   General Health Questionnaire (GHQ-28; Goldberg & Hillier, 1979).

   The GHQ is a measure of current mental health status (i.e. indicating levels of distress or burnout) has been extensively used in different. Using the 28-item self-report participants indicate whether their current state (over the past two weeks) differs from their usual state, thereby assessing recent changes in distress as opposed to long-term traits or illnesses. The measure was scored using the Likert scale method as opposed to the caseness scores method. The alpha for the current study was 0.86.

2.4 Procedure

This study was reviewed and approved by the UK NHS Ethics Committee process (REC ref: 16/NW/0079, North West - Haydock Research Ethics Committee).

The researchers attended both nurse and patient meetings to introduce the study. Participant information sheets were distributed to the wards via staff and posters were displayed on ward notice boards. Nurses who were willing to take part identified themselves and a named-patient based upon the inclusion and exclusion criteria. Patients could also express their interest in the study by or informing a staff member or named nurse or approaching the researcher whilst on the ward.

Once the patient and nurse had been fully informed about the study, the limits of confidentiality were explained and written consent was sought. The patient measures were administered in a single battery, taking no longer than 40 minutes to complete.

The measures were administered to the nurses concurrently (but separately from the patient) or at the first possible convenience. Both nurse and patients as a complete dyad were required to consent to taking part in the study for their data to be used.

A debrief was delivered and the patient was given a token of appreciation for their participation of biscuits or chocolate.

2.5 Analysis

Prior to carrying out analyses, distributions of all variables were examined using histograms and calculation of skewness z-scores, calculated by skew/standard error of skew (Tabachnick & Fidell, 2012). Four of the 10 variables were skewed (Patient PAM – Avoidant subscale, SBS, Nurse GHQ, Nurse DERS), so variables were transformed using log transformation, resulting in normally distributed data. An analysis of standard residuals was carried out on the data to identify any outliers. One of the variables (SBS) showed that there were 2 outliers which indicated that patients 33 and 54 needed to be removed. Clinically, these outliers were scores of 0, which appear to be a data error (i.e. it is unlikely that an inpatient would receive a score of 0, therefore, error may have been introduced

through demand characteristics, misunderstanding or rushing to complete the measure). Pearson's correlations were used to test bivariate associations between continuous measures. T-tests were performed for analyses involving both categorical variables and continuous variables. Multiple linear regressions were used to explain the role of multiple independent variables on social functioning and staff distress.

First, demographic variables were explored in relation to the main outcome measures. Hypothesis-testing then proceeded in the following steps: first, the relationship between patient social functioning, patient emotional regulation, patient attachment style and patient-rated alliance was explored. Then, patient social functioning was examined in relation to nurse emotional regulation, nurse attachment style and nurse-rated alliance. Finally, nurse emotional distress was explored in relation to nurse emotional regulation, nurse attachment styles and nurse-rated alliance.

3. Results

3.1 Patient Demographics
The demographic information for the 50 patients are presented in Table 1. The patients ranged in age from 18 to 81 (M = 37.3, SD = 14.8).

Table 1. Patient Demographics

	N	*%*
Gender		
Male	29	58%
Female	20	40%
Other	1	2%
Ethnicity		
White	43	86%
Other	3	6%
Mixed/multiple	2	4%
Black/Black British/African	2	4%
Diagnosis / conditions*		
Schizophrenia / psychosis	13	22
Personality Disorder (all subgroups)	9	16
Depression	8	14
Schizoaffective Disorder	6	10
Bipolar Disorder	5	9
None / currently under assessment	5	9
Anxiety disorders (all subgroups)	4	7
Autism Spectrum Disorders	2	3
Bipolar Affective Disorder	2	3
Post-traumatic stress disorder	2	3
Acquired Brain Injury	1	2
Mild Learning Disability	1	2

	Mean (SD)	*Range*
Contact with services (months)	151.3 (144)	1-564
Number of admissions	5.8 (5.2)	1-20
Current stay on ward (months)	3.2 (3.0)	0.1-11.5
Time (months) known nurse	*Median=3.0 (IQR=5.3)*	.25-72

*Multiple diagnoses reported

3.2 Nurse Demographics

The demographic information for the 50 nurses are presented in Table 2. The nurses ranged in age from 21 to 60 (M = 35.24, SD = 12.21). Twelve of the male nurses were in a dyad with male patients, one male nurse was a named nurse to a female patient. Seventeen of the female nurses were in a dyad with a male patient, nineteen with a female patient and one female nurse with a transgender patient.

Table 2. Nurse Demographics

	N	%
Gender		
Female	37	74
Male	13	26
Ethnicity		
White	46	92
Mixed/multiple	2	4
Asian	1	2
Black/Black British/African	1	2
	Median(IQR)	Range
Number of years working in mental health	5 (5)	1-35
Time (months) on this ward	16 (27)	1-372
Time (months) known patient	3 (6)	.25-72

3.3 Bivariate Associations

Missing data was omitted from the analysis as 2 nurses did not complete the full battery of questionnaires; there was no missing data for individual items on the completed questionnaires.

3.4 Demographic Analysis

Analyses were performed to explore associations between demographic variables and the main study variables (see Table 3).

Nurse-rated working alliance was weak to moderately negatively correlated with the length of time they have spent working in mental health services (r = -.362, p = .011). Whilst, patient rated working alliance was also weak to moderately correlated with the patients' current length of stay on the ward (r = .364, p = .010)

In terms of gender, a t-test indicated that nurse perceived working alliance was significantly different between the nurse's gender (t(46) = -3.924 p = .001) with female nurses (M = 1.603, SD = .058) reporting better alliance than male nurses (M = 1.528, SD = .050).

No demographic variables were significantly associated with patient functioning (SBS score) or nurse distress (GHQ score).

Table 3. Correlation Matrix with Demographic Variables Reporting Pearson's Correlation Coefficient (r)

	Patient Age	Patient time in contact with MH Services (months)	Number of times patient admitted to MH hospital	Patient current length of stay in hospital (months)	Length of time patient has known nurse (months)	Nurse age	Length of time nurse worked in Mental Health Services	Length of time nurse worked on current ward	Length of time nurse has known patient (months
Patient Working Alliance	.081	-.089	.061	.364*	.031	.132	-.063	-.228	-.044
Patient Attachment (Anxious)	-.175	.168	-.069	-.038	-.268	-.039	.044	-.203	-.227
Patient Attachment (Avoidant)	-.058	-.145	-.242	.017	-.511**	-.043	-.055	-.026	-.485**
Patient Emotional Regulation	-.213	.263	.101	-.185	-.029	.077	.180	-.039	-.027
Nurse Working Alliance	.189	.151	-.095	.064	-.211	.117	-.362*	-.170	-.276
Nurse Attachment (Anxious)	-.007	-.013	-.260	-.007	.004	-.124	-.049	-.038	.043
Nurse Attachment (Avoidant)	.104	.035	.025	-.150	.250	.343*	.204	.171	.310*
Patient Functioning	-.252	-.002	-.053	.239	-.233	-.175	-.049	-.170	-.185
Nurse Emotional Regulation	.221	.038	-.208	-.093	.028	.117	.128	.202	.562
Nurse Distress	-.038	-.167	-.122	.247	-.157	-.071	-.049	-.029	-.107

*Correlation is significant at the 0.05 level
**Correlation is significant at the 0.01 level

3.5 Hypothesis Testing

3.5.1 Hypothesis 1. Patient social functioning: emotional regulation, patient attachment and patient-rated alliance.

It was hypothesised that poorer patient social functioning would be associated with poorer patient emotional regulation, more insecure patient attachment and poorer patient-rated alliance. It was found that patient functioning was correlated with patient avoidant attachment styles (r = .333, p = .022). However, a Pearson's Correlation found no significant correlations were found between patient social functioning as rated by the nurse; and patient emotional regulation and (r = .069, p = .646, ns); anxious patient attachment style (= r = .267, p = .073, ns;); or patient rated alliance (r = .257, p = .082, ns).

Table 4. Correlation Matrix of Hypotheses 1 Variables Reporting Pearson's Correlation Coefficient (r).

		1	2	3	4	5
1.	Patient Functioning	-	.069	.267	.333*	-.257
2.	Patient Emotional Regulation		-	.754**	.227	-.038
3.	Patient Attachment (Anxious)			-	.307*	-.008
4.	Patient Attachment (Avoidant)				-	.034
5.	Patient-rated Working Alliance					-

*Correlation is significant at the 0.05 level
**Correlation is significant at the 0.01 level

3.5.1.1 Hypothesis 1 – Patient predictors of patient social behaviour

A multiple linear regression was carried out to investigate independent associations between patient social behaviour, emotion regulation, attachment style and the therapeutic alliance. Patient social behaviour score was entered as the dependent variable,

and the independent variables; patient emotion regulation, patient avoidant and anxious attachment style scores and the patient-rated working alliance score were added in one block.

The predictors of patient functioning (SBS score) from emotion regulation, attachment style and the therapeutic alliance are shown in Table 5.

Table 5. Predictors of Patient Functioning

Dependent Variable: Patient Functioning		
Model	β (95% CI)	*p*
Patient Emotional Regulation	-.329 (-1.029, .118)	.117
Patient Anxious Attachment Style	.429 (.003, .490)	.047
Patient Avoidant Attachment Style	.287 (.002, .515)	.048
Patient-rated Working Alliance	-.275 (-.668, -.004)	.047
Overall model:	R^2 = .258 *p* = .014	
	F = 3.569 df = (4,41)	

Patient emotion regulation, patient avoidant and anxious attachment style scores and the patient-rated working alliance significantly predicted nurse-rated patient social functioning. Patient insecure attachment style (anxious and avoidant) and the patient-rated working alliance each made a significant independent prediction. However, patient emotion regulation failed to make an independent prediction within the model of patient social behaviour.

3.5.2 Hypothesis 2. Patient social functioning: nurse emotional regulation, nurse attachment style and nurse-rated working alliance.

It was hypothesised that poorer patient social functioning would be associated with poor nurse emotional regulation, more insecure nurse attachment and poorer nurse-rated working alliance. Pearson's Correlation found that nurse-rated patient functioning was not significantly correlated with nurse emotional regulation, (r = .020, p = .895, ns), insecure nurse attachment style (anxious: r = -.026, p = .862, ns; avoidant: r = .016, p = .917), nor nurse-rated alliance (r = -.234, p = .117, ns).

Table 6. Correlation Matrix of Hypotheses 2 Variables Reporting Pearson's Correlation Coefficient (r).

		1	2	3	4	5
1.	Patient Functioning	-	.020	..026	.016	-.234
2.	Nurse Emotional Regulation		-	.550**	.396**	-.122
3.	Nurse Attachment (Anxious)			-	.064	-.043
4.	Nurse Attachment (Avoidant)				-	-.060
5.	Nurse-rated Working Alliance					-

**Correlation is significant at the 0.01 level

3.5.2.1 Hypothesis 2 – Nurse predictors of patient social behaviour

A multiple linear regression was carried out to investigate independent associations between patient social behaviour, nurse emotion regulation, nurse attachment style and nurse-rated therapeutic alliance. Patient social behaviour score was entered as the dependent variable, and the independent variables; nurse emotion regulation, nurse avoidant and anxious attachment style scores and the nurse-rated working alliance score were added in one block.

The predictors of patient functioning (SBS score) from emotion regulation, attachment style and the therapeutic alliance are shown in Table 7.

Table 7. Nurse Predictors of Patient Functioning

Dependent Variable: Patient Functioning		
Model	β (95% CI)	*p*
Nurse Emotional Regulation	-.008 (-.955, .917)	.968
Nurse Anxious Attachment Style	-.052 (-.311, .235)	.781
Nurse Avoidant Attachment Style	.017 (-.455, .501)	.918
Nurse-rated Working Alliance	-.238 (-1.885, .239)	.125
Overall model:	R^2 = .058 *p* = .642	
	F = .633 df = (4,41)	

Nurse emotion regulation, nurse insecure attachment style (avoidant and anxious) scores and nurse-rated working alliance did not significantly predict nurse-rated patient social functioning.

3.5.3 Hypothesis 3. Nurse emotional distress: nurse emotional regulation, nurse attachment style and nurse-rated working alliance.

It was hypothesised that nurse emotional distress would be associated with poorer nurse emotional regulation, more insecure nurse attachment and poorer nurse-rated working alliance. Using Pearson's Correlation, Nurse distress was found to be significantly associated with nurse emotion regulation (r = .496, p < .001); nurse anxious attachment

style (r = 4.12, p = .003) and nurse-rated working alliance (r = -.310, p = .032). Though no significant relationship was found between nurse distress and nurse avoidant attachment style (r = .183, p = .203).

Table 8. Correlation Matrix of Hypotheses 3 Variables Reporting Pearson's Correlation Coefficient (r).

		1	2	3	4	5
1.	Nurse Distress	-	.496**	.412**	.183	-.310*
2.	Nurse Emotional Regulation		-	.550**	.396**	-.122
3.	Nurse Attachment (Anxious)			-	.064	-.043
4.	Nurse Attachment (Avoidant)				-	-.060
5.	Nurse-rated Working Alliance					-

*Correlation is significant at the 0.05 level
**Correlation is significant at the 0.01 level

3.5.3.1 Hypothesis 3 – Predictors of nurse distress

A multiple linear regression was carried out to investigate independent associations between nurse distress, emotion regulation, attachment style and the therapeutic alliance. Nurse distress score was entered as the dependent variable, and the independent variables of nurse emotion regulation, nurse avoidant and anxious attachment style scores and the nurse-rated working alliance score were added in one block.

The predictors of nurse distress (GHQ score) from emotion regulation, attachment style and the working alliance are shown in Table 9.

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Table 9. Predictors of Nurse Distress

Dependent Variable: Nurse Distress

Model	β	(95% CI)	*p*
Nurse Emotional Regulation	-.318	(-.025, 1.127)	.060
Nurse Anxious Attachment Style	.214	(-.048, .275)	.164
Nurse Avoidant Attachment Style	.045	(-.252, .347)	.750
Nurse-rated Working Alliance	-.259	(-1.317, -.013)	.046
Overall model:	R^2 = .328 *p* = .002		
	F = 5.236 df = (4,43)		

Nurse emotion regulation, nurse avoidant and anxious attachment style scores and the nurse-rated working alliance significantly predicted nurse distress. However, only nurse-rated working alliance score made a significant independent prediction.

4. Discussion

This study set out to investigate social functioning, emotional regulation, working alliance and attachment style within acute mental health inpatient settings. It was hypothesised that poorer patient social functioning would be associated with poorer patient emotional regulation, more insecure patient attachment and poorer patient-rated alliance. It was also hypothesised that poorer patient social functioning would be associated with poor nurse emotional regulation, more insecure nurse attachment and poorer nurse-rated alliance. Finally it was hypothesised that nurse emotional distress would be associated with poorer nurse emotional regulation, more insecure nurse attachment and poorer nurse-rated alliance.

4.1 Patient social functioning, patient emotional regulation, insecure patient attachment and patient-rated alliance.

Patient social functioning, as rated by the nurse, was associated with patient avoidant attachment style. No significant relationships were found between the patients social functioning on the ward and patient emotional regulation, anxious attachment style and patient rated alliance.

The relationship between avoidant attachment and patient functioning may be explained by the over control of emotions in those who are avoidantly attached thus, leading to failure in responding appropriately to others and appearing unable to fully engage in social interaction (John and Gross, 2004).

The four factors (patient emotional regulation, patient anxious attachment, patient avoidant attachment and patient-rated working alliance) considered together in a regression model were found to predict poorer patient social functioning.

This finding may be explained by the presumption that these factors are not contributory enough on their own to cause disruptions in patient functioning, but a culmination of attachment style, dysregulated emotions and a poor-working alliance become too difficult for a patient to manage thus is expressed in their social functioning on the ward, as perceived by nurses.

These findings are in contrast with previous explorations of the association between expressions of emotion and the impact on others (Weiss et al., 2015). It may have been the case that for this inpatient sample, the patients were not reporting or aware of difficulties in regulating their emotions. In addition, the SBS was rated by the patient's named nurse; it is not necessarily the case that they are the professional on the ward who knows the patient the best. The nurses may potentially have missed more subtle difficulties in social behaviour that the patient was experiencing.

This study supports the idea that staff patient relationships are not straight forward (Bucci, Seymour-Hyde, Harris and Berry, 2016).

4.2 Patient social functioning, nurse emotional regulation, nurse attachment style and nurse-rated alliance.

No significant relationships were found between nurse-rated patient social functioning and nurse emotional regulation, nurse attachment style and nurse-rated alliance. Despite previous literature suggesting that the nurse's perception of patient behaviour may be influenced by the working alliance (Berry, Gregg, Vasconcelos e Sa, Haddock, & Barrowclough, 2012).

These factors (nurse emotional regulation, nurse insecure attachment style and nurse-rated alliance) were also found not to be a predictive model of patient social functioning on the ward. This implies that nurse factors, such as their own attachment style, ability to

regulate their own emotions and their perception of their alliance with a patient, do not predict the way in which they perceive a patients social functioning.

These findings are contrary to past research which has suggested that these factors should be related to each other (Berry et al., 2012; Dozier et al., 1994). Potentially, the difference may be explained by the length of time the dyads had known each other, or perhaps other factors such as the impact of the inpatient setting which were not taken in to account in this research.

4.3 Nurse distress, nurse emotional regulation, nurse attachment style and nurse-rated alliance.

In testing hypothesis three, it was found that nurse emotional distress was associated with poorer nurse emotional regulation, anxious nurse attachment and poorer nurse-rated working alliance, but not with anxious nurse attachment. As a model, difficulties the nurse had in regulating their emotions, insecure nurse attachment style and poor nurse-rated working alliance significantly predicted increased nurse distress. Poor nurse-rated working alliance on its own also was found to be a predictor of nurse distress.

It can be understood that these factors are not enough on their own to cause nurse distress, but a culmination of attachment style, dysregulated emotions and a poor-working alliance contribute toward nurse distress. It is perhaps the case that these are additional factors to that suggested by Totman et al. (2011). In particular, all of these factors may lead to the lack of development of a good working relationship with a patient, which a nurse may feel responsible for, but unable to rectify due to other ward demands.

Other factors that have also been linked to problematic working relationships between staff and patients are, staff perceptions of poor social behaviours (Berry, Gregg,

Vasconcelos e Sa, Haddock, & Barrowclough, 2012) and staff attachment styles (Dozier, Cue and Barnett, 1994). As above, given the association between attachment style, emotional regulation and working alliance, it is likely that insecure attachment styles in staff members, is likely to lead to difficulties in the regulating their own emotions, and developing a good working alliance.

4.5 Demographic Associations

None of the demographic variables were associated with patient functioning or with nurse distress. In this sample, nurse gender was associated with alliance; female nurses tended to report better alliance with patients. Only one male nurse in the sample was a named nurse to a female patient, however, female nurses were named nurses to a similar amount of male and female patients. As the male nurses predominantly only worked with male patients it may be the case that milieu of the male wards, or the presentation of male patients may explain this difference, though patient perception of ward atmosphere has not been previously linked to gender (Middelboe et al, 2008).

An interesting finding was that the longer the nurse had worked in MH service the worse their reported alliance with patients. This perhaps implies that over time nurses become apathetic or desensitised to patient experience, or perhaps this is demonstrative of the changes in NHS funding over time, and the reduction in resources.

It was found that patient-rated alliance was associated with the length of time the patient had currently spent on the ward. This may be why alliance and attachment style were associated in a community sample (Owens et al., 2013) and not in an inpatient sample. In the community, it is likely that nurse and patients have known each other for a longer period of time and perhaps have more regularity to the contact they have with each other.

Although, the intensive contact between nurses and patients may be a factor contributing towards this non-significant finding. It may be the case that variables such as demographic information may be more important for building an initial working alliance, which may later develop taking in to account other factors such as attachment style.

4.7 Limitations

One limitation of this study was that only named nurses were asked to take part in the study with one of their named patients. The reality in acute mental health inpatient wards, is that patients build relationships with a number of different members of staff, from a number of different professions, across a number of different changing shifts. The patients in this study were not asked if their named nurse was the person they had the best working alliance with, thus potentially skewing the result. Had patients or staff members been able to report subjectively about who had the strongest working relationships, then this study may have had different results regarding alliance and attachment style, and alliance and emotional regulation.

The cross-sectional design of this study and the inclusivity of all patients residing on the ward is both a strength and limitation of this study, as previous alliance research has focused exclusively on a single presenting problem such as psychosis (e.g. Owens et al., 2013; Berry, Barrowclough and Wearden, 2008).

Another limitation was that male and female wards were studied as a whole on the assumption that there would not be significant difference between them, other than gender. Potentially both the gender of nurses and gender of the patients are influential on the development of attachment styles, working alliance, emotional regulation and functioning.

The ward environment may have had an impact on the way in which the participants responded on the questionnaires. The measure of working alliance may have been affected

by concerns about standard of their care, if dissatisfaction was disclosed or the opposite receiving better care if they exaggerated a positive relationship. Nurses may have found it difficult to disclose alliance difficulties due their professionalism and desire to appear empathic. They may also have had concerns around confidentiality and wanted to avoid disputes with patients. Similarly, the measure of attachment may have been influenced by the intense nature of the ward environment.

This study required nurses and patients to have known each other for a minimum of one week. This arguably would not be long enough to build an alliance. However, it was found that length of the relationship and strength of the working alliance were significantly related, and the relationship tended to have been much longer than the minimum criteria.

4.8 Clinical Implications

The study suggests a number of clinical implications. Firstly, this study implies that patient anxious attachment style is linked to emotional difficulties for a patient. This may impact on their experiences on the ward and in the development of a working alliance with their named nurse.

In terms of the models of both patient social behaviour and staff distress, a number of factors together predicted these suggests that both of these constructs are complex, as some factors were not independently predictive. Patient social functioning is affected by a number of patient factors; this suggests that understanding these factors is important. Emotional regulation interventions, for example Dialectical Behavioural Therapy Skills (Linehan, 1993), are aimed at teaching patients to notice and acknowledge their feelings, and act upon these (i.e. regulate them) in a helpful way. The introduction of more emotion regulation skills training interventions on inpatient wards may be beneficial.

Another strategy may be to implement an attachment-informed service provision (Bucci, Roberts, Danquah and Berry, 2015) or provide resources to employ psychological therapy as this has previously been found to enhance attachment security (Taylor, Rietzschel, Danquah and Berry, 2015).

In terms of nurse distress, a number of factors contribute to the development of distress, and this is likely to have an impact on their ability to function as effectively on the ward. Similarly, to inpatients, interventions should be recommended for nurses, for instance, emotional regulation skills training. Other factors should also be considered, which were not tested in this research but have been implicated in other research, including the impact of under resourced wards and staffing levels (Totman, Lewando Hundt, Wear, Paul & Johnson, 2011).

4.9 Future Directions

Longitudinal research investigating social functioning, emotional regulation, attachment style, and working alliance is a future direction for this research, in addition to other data collection methodologies, for example, Experienced Sampling Methods (ESM: Larson & Csikszentmihalyi, 1983), a method of investigating in the moment self-report thoughts, feelings and behaviours, at random occasions over the course of a week, given that they have previously been used to study emotion regulation in similar outpatient groups (for example, Myin-Germeys et al., 2001). Future research may consider the effect of identifying patients with anxious attachment styles, delivering specific emotion regulation interventions, and evaluating the effect of this for inpatients.

4.10 Conclusion

This is the first study which has explored nurse-patient relationships, social functioning, nurse distress, emotional regulation and attachment style within acute mental health

inpatient settings. Although no significant correlation was found between patient social functioning and patient emotional regulation, patient-rated working alliance (the nurse-patient relationship) and patient anxious attachment style; patient avoidant attachment styles was found to be significantly correlated with patient social functioning. Patient social functioning was found to be predicted by patient emotion regulation, patient attachment style and patient-rated working alliance. Both anxious and avoidant attachment styles along with patient rated alliance were independent predictors of patient social functioning.

Patient social functioning was not found to be significantly correlated with nurse factors (i.e. nurse emotion regulation, nurse attachment style or nurse-rated alliance).

Nurse distress was significantly correlated with nurse emotion regulation, nurse anxious attachment style and nurse-rated alliance. Nurse distress was found to be predicted by a combination of nurse emotion regulation, nurse attachment style and nurse-rated working alliance. Nurse-rated poor working alliance also independently predicted nurse distress.

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Paper Three

Critical Evaluation

<div align="center">**Critical Evaluation**</div>

The papers presented in this thesis investigated psychosocial interventions and the nurse-patient alliance of and for acute mental health inpatients. The first paper explored the effectiveness of psychosocial interventions for inpatients quality of life, symptom reduction and improving functioning by systematically reviewing existing published literature. The second paper empirically tested the relationship between nurses and patients on inpatient wards, specially investigating patient social functioning and nurse distress and the association with alliance, attachment style and emotion regulation. The primary aim of the current paper is to reflect on and critically appraise the research process. In addition, this paper aims to consider the findings of the research within the context of clinical practice.

Paper 1 – Systematic Literature Review

The aim of the systematic literature review was to evaluate randomised controlled trials of psychosocial interventions specifically aimed at improving quality of life, symptoms or functioning for patients on acute mental health inpatient wards. Previous and other known on-going reviews in this area aimed to explore psychological interventions for specific diagnostic groups rather than explore the client group as a whole. Other reviews explored more specific psychosocial interventions, for example, music therapy, but had not assessed randomised controlled trials of these interventions, perhaps due to the limited number of publications available. Therefore, a systematic review of the literature was justified, to investigate the evidence based interventions which are effective in supporting those admitted to acute mental health inpatient services.

Summary of Findings

Eighteen papers were identified which evaluated a psychosocial intervention for acute mental health inpatient wards against a control group, and in which outcomes for quality of

life or functioning were reported. Fifteen studies showed a statistically significant positive impact of the intervention on at least one outcome. Seven intervention categories were identified from the 18 studies, and at least one study in each category was found to be effective on symptoms, quality of life or functioning for patients.

The studies include a wide range of different interventions, the majority of which were effective (15 out of 18). Given that methodological quality of studies was generally low (6 studies rated as good), and the small quantity of available RCTs in this area it is difficult to draw definitive conclusions about which interventions are the most effective at improving symptoms, quality of life or functioning for patients. Though, the six papers which were deemed of 'good' quality were two psychoeducation interventions (Lin et al., 2015; Rabovsky et al., 2012), a cognitive therapy intervention (Drury et al., 1996) and three cognitive remediation interventions (Lindenmayer et al., 2008; Sanchez et al., 2014; Tan et al., 2016). Recommendations include more and repeated trials of interventions for acute mental health inpatient wards which use more rigorous methods of testing and reporting trials.

Systematic Review Topic

Developing the systematic review topic was an evolving process to ensure that there was enough literature to produce a meaningful review, though not so big that it would become unmanageable. It was important for this thesis, and the trainee that the review topic addressed a gap in the review literature and was a useful addition to the field and for clinical practice.

Awareness of a similar literature review being undertaken by another doctoral student at another university was a moral and ethical issue. The trainee and supervisors felt that it was important to ensure the two reviews would both be helpful to the field and

significantly different to each other. Therefore, the trainee adapted her research question to ensure that it was distinct and would provide a contribution to the knowledge base.

A preliminary search of the literature in order to evaluate psychosocial interventions more widely for inpatients produced in excess of 10,000 papers. On inspection, it was deemed that many of these would be relevant. The trainee felt that this was unmanageable and would not provide a robust review which could be replicated if required. Therefore, at this point the research aims were adapted and further criteria was added to only review randomised controlled trials.

Definition of Psychosocial Intervention

In establishing the review topic, the definition of psychosocial intervention became pertinent. The trainee reviewed potential definitions to establish which was the most relevant and applicable for this review. The following four definitions were discussed at length in supervision.

1. Psychosocial interventions were defined as any intervention that emphasises psychological or social factors rather than biological factors (Ruddy and House, 2005).

2. A psychosocial intervention aims to reduce complaints and improve functioning related to mental disorders and/or social problems (e.g., problems with personal relationships, work, or school) by addressing the different psychological and social factors influencing the individual (Cummings and Kropf, 2013)

3. Psychosocial interventions were defined broadly as any non-pharmacological or physical intervention (Bouras, Holt and Dagnan, 2007)

4. NICE (2012) described formal psychosocial interventions in terms of three aspects:

   • they need specific competencies to deliver them

- they are supported by the relevant training and supervision

- they are an enhanced level of intervention (above and beyond the standard key working platform).

It was decided that the first definition was the most appropriate for this review as the definition is clear in that it allows for the inclusion of education programmes, psychological interventions, social interventions and physiological interventions which have a psychosocial focus, i.e. exercise interventions could be included if the focus was to improve psychosocial functioning for inpatients.

Systematic Review vs. Meta-Analysis

Both the pros and cons of systematic reviews and meta-analysis were considered prior to commencing this research. Meta-analysis is often regarded as less prone to bias than classical narrative methods (Teagarden, 1989) and is perhaps most useful when the procedural and interventions reported by papers included in the review are highly comparable and the methodological quality is consistently high. It was deemed that given the broad nature of the definition of psychosocial interventions (provided by Ruddy and House, 2005) would suggest that there would be a lack of homogeneity between the interventions reported in the studies.

This level of heterogeneity between types of interventions and outcomes measured prevented a meta-analysis (Mays *et al.* 2001) and given that using meta-analysis when these assumptions are violated can lead to poor or even harmful conclusions (Bailar, 1995) it was decided that a systematic review was the appropriate method for reviewing the literature for psychosocial interventions for inpatients on acute mental health inpatient wards.

Choice of Search Terms

The development of the search terms for this review was an iterative process (Boland, Cherry, & Dickson, 2013). Alternative labels for 'psychosocial' and 'intervention' were identified from similar systematic reviews and from using key terms from published studies. Terms were reviewed by the trainee and supervisors and the appropriateness of terms, running test exploratory searches and revising terms depending on the outcome. The search was then conducted, resulting in a manageable number of papers. EndNote was used to remove duplicates and manage references.

Reaching consensus on the elected search terms was a lengthy process; however, this significantly improved the reliability of the review and the manageability of the papers.

Publication Bias

The exclusion of foreign language and grey literature (Auger, 1989) including thesis and conference proceedings and other unpublished research may have contributed to the risk of publication bias. Despite the potential benefits of including such research (Dwan et al., 2013), resources prevented the translation of non-English papers and issues concerning the quality non-peer reviewed research prevented its inclusion. Thus, studies were only included if they were published in peer-reviewed journals.

Quality Assessment

It is good practice to assess studies included in a systematic review for methodological rigour (Jadad et al., 2000). This enables comparisons to be drawn between the value of the reported results on (Littell et al., 2008).

After spending time becoming familiar with a number of quality appraisal tools, three of the tools were considered to be the most appropriate; Checklist for Measuring Quality

(Downs and Black, 1998), the Effective Public Health Practice Project tool (EPHPP; Thomas, Ciliska, Dobbins and Micucci, 2004) and the Clinical Trials Assessment Measure (CTAM; Tarrier and Wykes, 2004).

Given past experience and familiarity with the tool, and its specificity for assessing randomised controlled trials the CTAM was selected to assess the methodological quality of the papers included in the systematic review. The trainee attempted to ensure that a measure of methodological quality was fundamental part of the systematic review that was integral to the interpretation of the result.

In Paper 1 the quality assessment tool elicited some interesting thoughts about the disciplines from which the papers were authored. Whilst not enough to carry out significance testing, there is a trend in mean CTAM score showing that the quality of papers for cognitive remediation based interventions is somewhat better than that of the other interventions, in particular the animal assisted therapies. It potentially could be argued that this finding is due to the discipline that conducted and authored the publications. For example, all of the cognitive remediation studies were authored by Clinical Psychologists who are highly trained in research methods. Though determining the roles and training of each author would have been a time-consuming task, nor was it an aim of this review.

Paper 2 – Empirical Paper
The aim of the empirical paper was to explore patient social functioning and nurse distress in acute mental health inpatient wards and the role of emotional regulation, attachment styles and nurse-patient relationships. A cross-sectional analysis was utilised using predominantly self-report questionnaires. The study addressed this using 3 hypotheses; poorer patient social functioning would be associated with poorer patient emotional regulation, more insecure patient attachment and poorer patient-rated alliance; poorer

patient social functioning would be associated with poor nurse emotional regulation, more insecure nurse attachment and poorer nurse-rated alliance; and nurse emotional distress would be associated with poorer nurse emotional regulation, more insecure nurse attachment and poorer nurse-rated alliance.

Summary of Findings

It was found that patient social functioning, as rated by the nurse, was significantly associated with patient avoidant attachment style. No significant relationships were found between the patients' social functioning on the ward, and patient emotional regulation, anxious attachment style and patient rated alliance. Patient functioning was found to be associated with patient avoidant attachment style. Four factors (patient emotional regulation, patient anxious attachment, patient avoidant attachment and patient-rated working alliance) considered together in a regression model were found to predict poorer patient social functioning.

No significant relationships were found between nurse-rated patient social functioning and nurse emotional regulation, nurse attachment style and nurse-rated alliance. Despite previous literature suggesting that the nurse's perception of patient behaviour may be influenced by the working alliance (Berry, Gregg, Vasconcelos e Sa, Haddock, & Barrowclough, 2012). These factors (nurse emotional regulation, nurse insecure attachment style and nurse-rated alliance) were also found not to be a predictive model of patient social functioning on the ward.

Finally, it was found that nurse emotional distress was associated with poorer nurse emotional regulation, more insecure (anxious) nurse attachment and poorer nurse-rated working alliance, but not with avoidant nurse attachment. As a model, difficulties the nurse had in regulating their emotions, insecure nurse attachment style and poor nurse-rated

working alliance significantly predicted increased nurse distress. Poor nurse-rated working alliance on its own was also found to be a predictor of nurse distress.

Empirical Paper Topic

Developing the topic for the empirical paper was driven by a keen clinical area of interest primarily for the trainee, and was well supported by the supervisors. The author aspires to work clinically in acute mental health inpatient wards, promoting psychology and contributing toward a psychologically informed and evidence-based environment. In addition, the trainee had previous experience of writing a qualitative thesis, so sought to broaden research experience and learning by conducting a quantitative study.

The trainee gained experience of working in inpatient settings during a first-year adult placement and experienced some of the effects of government funding cuts and the reduction of 'qualified' staff employed to work on the wards. This incited discussion in supervision of how to develop the research topic and questions which could be of benefit to both staff and patients. A brief scoping exercise determined that social behaviour and nurse distress were problematic on the inpatient wards, and that emerging research in community patient samples appeared to be beneficial in understanding unregulated behaviour, i.e. therapeutic alliance, attachment styles and emotional regulation.

Therefore, the topic was developed in the hope that it would contribute towards the evidence base and further understanding of how an intervention may be developed to support the resources on the wards.

Joint working

In the process of designing the study it was decided that recruitment would be combined with another trainee who was recruiting the same sample, using a different research question and different measures. By combining the measures and dividing the recruitment locations between the two trainees, it was anticipated that this would maximise the

potential for recruiting participants. This meant that wards could become more familiar with one researcher who would have more time to engage with fewer wards, thus enhancing relationships and ultimately referrals for participation. In addition, the burden placed upon the acute inpatient wards and the participants would be minimised with one session of administrating measures, rather than two. This was also agreed by the University of Manchester's service-user Community Liaison Group (CLG).

The tasks were divided up equally throughout the research process, this also allowed for additional learning from drawing upon each other's strengths. The questionnaires from each study were combined to create one battery administered to nurses and patients. The questionnaires were carefully considered particularly in terms of time taken to complete, so not to over burden participants, as participants can become fatigued over time, reducing the validity of the quality of the data (Lavrakas, 2008). Both trainees used a minority of the same measures (the demographics questionnaires, the Working Alliance Inventory and the Social Behaviour Scale), all other measures were project specific.

Joint working meant that regular communication was essential, as was ensuring all tasks were performed to a high standard and in a timely fashion. Coordination was required to ensure that each trainee had up to date knowledge of recruitment figures, allocated participant numbers, data entry and any difficulties arising.

Study Design

Cross-sectional methods

The data from self-report questionnaires is based on the assumption that responses are made accurately and honestly, and that participants are able to clearly understand

questions and recall experiences and feelings they are asked about. To aid understanding and accuracy of completing the questionnaires the author or another researcher sat with the staff member and patient separately whilst the questionnaires were completed, offering breaks throughout.

Whilst the limits of confidentiality was ensured both in writing and verbally, patients and staff may have been concerned that responses may have been shared, this may have elicited demand characteristics. Patients may have feared for the standard of their care, if they disclosed their dissatisfaction with their named nurse, or may have felt that they would receive better care if they exaggerated a positive relationship. The researchers reiterated confidentiality of responses (with limits on risk information), to attempt to increase the chances of more honest and reliable data.

A potential for inaccurate nursing responses were also considered. Nursing staff may have found it difficult to disclose patient functioning or alliance difficulties due to wanting to appear skilled at managing difficult situations and being more caring or empathic. They may also have had similar concerns around confidentiality and wanted to avoid disputes with patients. Again attempts were made to minimise this effect by reiterating confidentiality and by completing all measures independently of each other.

Recruitment of Participants

The trainee drew on previous experience of working on Acute Mental Health Inpatient wards for understanding the process of recruiting both staff and patients to take part in the research. In addition, the trainee also made use of previous working relationships with NHS psychologists to facilitate the recruitment to the research.

The trainee had a good understanding of the practical challenges of recruiting within busy ward environments and attempted to minimise these in the empirical study. In order to

maximise the number of staff-patient dyads recruited to take part, all of the local mental health NHS trusts across the Greater Manchester region were approached to help support recruitment (Manchester Mental Health & Social Care Trust; Greater Manchester West Mental Health NHS Foundation Trust (now both combined to make Greater Manchester Mental Health NHS Foundation Trust); 5 Boroughs Partnership NHS Foundation Trust; Pennine Care NHS Foundation Trust; Lancashire Care NHS Foundation Trust).

Despite this, the author encountered some difficulties gaining approval from one of the trusts and gaining access to some services, despite receiving all relevant approvals. The trust which did not participate declared a 'staffing crisis' just prior to the NHS Trust Research and Development approvals process. Several wards in one of the NHS Trusts for which approval was gained demonstrated verbal support for the study and were enthusiastic in their support for such research. However, this did not translate in to practical support for the recruitment of participants to the research. The author wondered whether both of these experiences were indicative of the austerity measures and significant pressures placed on mental health services. It is known that austerity may inadvertently affect patient (and staff) opportunities to take part in activities such as research, which has the potential to offer personal, financial and clinical benefits (Taylor et al., 2010). Overall, recruitment was successful and completed in a timely fashion, however, this was not without its challenges.

In recruiting dyads, a challenge to recruitment was guaranteeing that both parties were provided with the full information about the study, both willing to take part, both able to consent to take part and would see the completion of questionnaires through to the end. Difficulties arose in particular when a staff member was consented in to the study prior to a patient (but with patient expression of interest) and the patient withdrawing. This was

discussed early on in supervision and a decision was made consent would be taken from both parties and then patient data would be obtained first.

Five patient participants withdrew consent, after completing only the first few questionnaires (e.g. the consent forms and the initial demographics questionnaire). This data was omitted from the analysis. It was expected that patient symptoms or functioning may impact on their ability to take part, however, overall, patients appeared receptive and appeared to appreciate the proposal of taking part in research.

On the other hand, nurses and other staff members were visibly occupied by competing demands on the ward, which often meant making several appointments to gain data from staff, despite their willingness and desire to support the research. Two nurses were unable to complete all the questionnaires: one refused to continue due to feelings of "stress and the austerity measures causing him not to be able to do the job he felt he wanted to do – thus not providing the level of service he used to", the other had to leave the session due to ward-related issues and was unable to return due to the ward environment at that time, subsequently this staff member became unavailable to complete the study.

The trainee experienced waiting on wards for several hours at a time for willing participants to become available. Discussions in supervision facilitated attempts to overcome barriers such as, planning visit to wards at 'quieter' or more convenient times, offering breaks which would enable staff to complete competing demands and by waiting on the wards until such tasks were completed.

The recruitment of participants overall was successful, it was completed to date and to the target number.

Inclusion of All Ward Patients

Rather than a using diagnostic criteria for the inclusion of participants, an approach which is more consistent with the attitudes of clinical psychology, calling for a shift away from a 'disease model' (Division of Clinical Psychology (DCP), 2013) was utilised. This approach was beneficial in terms of recruitment as it meant fewer restrictions were placed on patients who could take part.

Given a range of patients and staff could take part, this reflected a more accurate picture of nurse-patient relationships. This research could be developed in order to produce more accessible and generalisable interventions for acute mental health inpatient wards.

Sampling Bias

Whilst all ward patients were eligible to take part (subject to them being able to understand the English Language and being able to consent to the study (i.e. not lacking capacity (Mental Capacity Act, 2005), a potential limitation may have been introduced by sampling bias. There is a potential that those who agreed to take part are significantly different to those who opted not to partake in the research. For example, those who did not take part may have had highly avoidant personality styles which have been associated with a reluctance to engage (Gumley, Taylor, Schwannauer and MacBeth, 2014).

Data Analysis

The whole dataset was inputted by each of the trainees for the participants they had recruited, rather than only inputting their own measures, as this was deemed a more efficient use of time. When recruitment ceased and all the data had been inputted and checked, the trainees independently analysed the data pertinent to their own research study.

Prior to carrying out the analyses, distributions of all variables were examined for normality (Field, 2009). This was done using histograms and calculation of skewness z-scores, calculated by skew/standard error of skew (Tabachnick & Fidell, 2012). It was found that four of the 10 variables were skewed (Patient PAM – Avoidant subscale, SBS, Nurse GHQ, Nurse DERS).

This distribution of data was discussed during supervision with particular reference to the use of non-parametric analyses (i.e. Spearman's correlation) or the transformation data in order to carry out parametric analysis. Transformation of the data was attempted using log transformation, resulting in normally distributed data.

In line with the assumptions of multiple regression, an analysis of standard residuals was carried out on the data to identify any outliers. One of the variables (SBS) showed that there were 2 outliers which indicated that patients 33 and 54 needed to be removed. The statistician was consulted about the benefit of presenting data with and without the outliers. It was decided that clinically, these outliers were scores of 0, which appear to be a data error, as it is unlikely that patients admitted to an acute mental health inpatient ward would/should score 0 for patient functioning.

Multicollinearity occurs when variables are very highly correlated, usually when r is more than .90, this can result in an unreliable regression model (Tabachnick & Fidell, 2012). This was checked using the following collinearity diagnostics; the variance inflation factor (VIF) and tolerance statistic (TS). These tests indicated that multicollinearity was not a concern (Patient Emotional Regulation, Tolerance = .430, VIF = 2.327; Patient Anxious Attachment Style, Tolerance = .412, VIF = 2.428, Patient Avoidant Attachment Style, Tolerance =

.907, VIF = 1.102, patient-rated working alliance, Tolerance = .996, VIF = 1.004). VIF values over 10 may indicate problems, whilst TS values below 0.20 suggest multicollinearity is present (Field, 2009). For each regression model, VIF values were below 2, and tolerance values above .60.

The data also met the assumption of independent errors (Durbin-Watson value = 2.034). Durbin-Watson values can be anywhere between 0 and 4, however a value as close to 2 is optimal in order to meet the assumption of independent errors. If the Durbin-Watson value is less than 1 or over 3 then it is usually counted as being significantly different from 2, and thus the assumption has not been met.

Implications for Clinical Practice

This study suggests that patient social behaviour and staff distress are complex processes and a number of factors contribute towards their development. Patient social functioning is affected by a number of patient factors; suggesting that understanding these factors is important. Emotional regulation interventions, for example Dialectical Behavioural Therapy Skills (Linehan, 1993) may support patients to notice and acknowledge their feelings, and act upon these (i.e. regulate them) in a helpful way. The introduction of more emotion regulation skills training interventions on inpatient wards may be beneficial. Another clinical implication for patients, may be to implement attachment-informed services (Bucci, Roberts, Danquah and Berry, 2015) or to provide attachment informed psychological therapy as this has previously been found to enhance attachment security (Taylor, Rietzschel, Danquah and Berry, 2015).

In terms of nurse distress, a number of factors contribute to the development of distress, and this is likely to have an impact on their ability to function as effectively on the ward.

Similarly, to inpatients, interventions should be recommended for nurses, for instance, emotional regulation skills training. Other factors should also be considered, which were not tested in this research but have been implicated in other research, including the impact of under resourced wards and staffing levels (Totman, Lewando Hundt, Wear, Paul & Johnson, 2011).

Personal Reflections

During the recruitment for paper 2, the trainee noticed a considerable difference in the staffing levels on the wards. It seemed that in the 18 months – 2 years since her placement that there had been a reduction in 'qualified' staff. It was concerning for the trainee to learn about the number of ward staff that were on sick leave and agency staff were covering their roles, with some 'unqualified' staff being the most familiar with ward processes and procedures.

A number of incidents occurred whilst the trainee was on visits to the wards leading to the trainee feeling unhelpful as a visiting member of staff. The under-resourcing of the ward was particularly apparent on one occasion when, a nurse was required to attend to a patient awaiting an ambulance to attend A & E due to the results of a physical examination, to a patient in seclusion and a further patient secreting a blade. Only 2 qualified nurses were on shift. This was a stark reminder for the trainee of the impact of budget cuts on NHS provision.

Incidents such as this and the general high levels of demand on staff time lead to a number of hours and days sat in the office on inpatient wards. Whilst the trainee was able to be flexible and meet the needs of the inpatient wards, and to support the on-going recruitment, this ultimately had an impact on the progression of writing paper 1. Days which were allocated to conducting the systematic review (during the initial study block)

became days which became prioritised for recruitment. The trainee felt that an additional pressure to prioritise the recruitment as this had an impact on the joint working relationship, and the trainee wished to minimise any impact on the other trainee.

Overall, this thesis has impacted on the trainee's clinical work. Paper 1, has allowed the trainee to consider a range of interventions which have been investigated using 'gold standard' randomised control trial methodology. The results of this study will be carried forward with the trainee should the trainee be successful in securing a career in this field. The research carried out in paper 2, has lead the trainee to consider her own alliance with current patients and to reflect on these within supervision. The trainee has used supervision and formulations to consider attachment histories, emotion regulation and social functioning.

Dissemination of Papers
Paper one will be submitted to the Clinical Psychology Review and paper two will be submitted to the Journal of Clinical Psychology for publication.

Results of paper 2 will be combined with the other trainee's empirical results. A short summary of the results will be disseminated to the participating wards and they will be notified if these papers are successful in publication.

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Appendix 1: Clinical Psychology Review Author Guidelines

CLINICAL PSYCHOLOGY REVIEW

TABLE OF CONTENTS

DESCRIPTION

Clinical Psychology Review publishes substantive reviews of topics germane to **clinical psychology**. Papers cover diverse issues including: psychopathology, psychotherapy, behavior therapy, cognition and cognitive therapies, behavioral medicine, community mental health, assessment, and child development. Papers should be cutting edge and advance the science and/or practice of clinical psychology.

Reviews on other topics, such as psychophysiology, learning therapy, experimental psychopathology, and social psychology often appear if they have a clear relationship to research or practice in **clinical psychology**. Integrative literature reviews and summary reports of innovative ongoing clinical research programs are also sometimes published. Reports on individual research studies and theoretical treatises or clinical guides without an empirical base are not appropriate.

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Appendix 2: British Journal of Clinical Psychology Author Guidelines

British Journal of Clinical Psychology

Author Guidelines

The British Journal of Clinical Psychology publishes original contributions to scientific knowledge in clinical psychology. This includes descriptive comparisons, as well as studies of the assessment, aetiology and treatment of people with a wide range of psychological problems in all age groups and settings. The level of analysis of studies ranges from biological influences on individual behaviour through to studies of psychological interventions and treatments on individuals, dyads, families and groups, to investigations of the relationships between explicitly social and psychological levels of analysis.

All papers published in The British Journal of Clinical Psychology are eligible for Panel A: Psychology, Psychiatry and Neuroscience in the Research Excellence Framework (REF).

The following types of paper are invited:

• Papers reporting original empirical investigations

• Theoretical papers, provided that these are sufficiently related to the empirical data

• Review articles which need not be exhaustive but which should give an interpretation of the state of the research in a given field and, where appropriate, identify its clinical implications

• Brief reports and comments

1. Circulation

The circulation of the Journal is worldwide. Papers are invited and encouraged from authors throughout the world.

2. Length

The word limit for papers submitted for consideration to BJCP is 5000 words and any papers that are over this word limit will be returned to the authors. The word limit does not include the abstract, reference list, figures, or tables. Appendices however are included in the word limit. The Editors retain discretion to publish papers beyond this length in cases

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where the clear and concise expression of the scientific content requires greater length. In such a case, the authors should contact the Editors before submission of the paper.

3. Submission and reviewing

All manuscripts must be submitted via Editorial Manager. The Journal operates a policy of anonymous (double blind) peer review. We also operate a triage process in which submissions that are out of scope or otherwise inappropriate will be rejected by the editors without external peer review to avoid unnecessary delays. Before submitting, please read the terms and conditions of submission and the declaration of competing interests. You may also like to use the Submission Checklist to help you prepare your paper.

4. Manuscript requirements

• Contributions must be typed in double spacing with wide margins. All sheets must be numbered.

• Manuscripts should be preceded by a title page which includes a full list of authors and their affiliations, as well as the corresponding author's contact details. You may like to use this template. When entering the author names into Editorial Manager, the corresponding author will be asked to provide a CRediT contributor role to classify the role that each author played in creating the manuscript. Please see the Project CRediT website for a list of roles.

• The main document must be anonymous. Please do not mention the authors' names or affiliations (including in the Method section) and refer to any previous work in the third person.

• Tables should be typed in double spacing, each on a separate page with a self-explanatory title. Tables should be comprehensible without reference to the text. They should be placed at the end of the manuscript but they must be mentioned in the text.

• Figures can be included at the end of the document or attached as separate files, carefully labelled in initial capital/lower case lettering with symbols in a form consistent with text use. Unnecessary background patterns, lines and shading should be avoided. Captions should be listed on a separate sheet. The resolution of digital images must be at least 300 dpi. All figures must be mentioned in the text.

• All papers must include a structured abstract of up to 250 words under the headings: Objectives, Methods, Results, Conclusions. Articles which report original scientific research should also include a heading 'Design' before 'Methods'. The 'Methods' section for systematic reviews and theoretical papers should include, as a minimum, a description of the methods the author(s) used to access the literature they drew upon. That is, the abstract should summarize the databases that were consulted and the search terms that were used.

• All Articles must include Practitioner Points – these are 2–4 bullet points to detail the positive clinical implications of the work, with a further 2–4 bullet points outlining cautions or limitations of the study. They should be placed below the abstract, with the heading 'Practitioner Points'.

• For reference citations, please use APA style. Particular care should be taken to ensure that references are accurate and complete. Give all journal titles in full and provide DOI numbers where possible for journal articles.

• SI units must be used for all measurements, rounded off to practical values if appropriate, with the imperial equivalent in parentheses.

• In normal circumstances, effect size should be incorporated.

• Authors are requested to avoid the use of sexist language.

• Authors are responsible for acquiring written permission to publish lengthy quotations, illustrations, etc. for which they do not own copyright. For guidelines on editorial style, please consult the APA Publication Manual published by the American Psychological Association.

If you need more information about submitting your manuscript for publication, please email Melanie Seddon, Managing Editor (bjc@wiley.com) or phone +44 (0) 1243 770 108.

5. Brief reports and comments

These allow publication of research studies and theoretical, critical or review comments with an essential contribution to make. They should be limited to 2000 words, including references. The abstract should not exceed 120 words and should be structured under these headings: Objective, Method, Results, Conclusions. There should be no more than one table or figure, which should only be included if it conveys information more efficiently than the text. Title, author name and address are not included in the word limit.

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11. The Later Stages

The corresponding author will receive an email alert containing a link to a web site. A working e-mail address must therefore be provided for the corresponding author. The proof can be downloaded as a PDF (portable document format) file from this site. Acrobat Reader will be required in order to read this file. This software can be downloaded (free of charge) from the following web site:http://www.adobe.com/products/acrobat/readstep2.html.

This will enable the file to be opened, read on screen and annotated direct in the PDF. Corrections can also be supplied by hard copy if preferred. Further instructions will be sent with the proof. Excessive changes made by the author in the proofs, excluding typesetting errors, will be charged separately.

12. Early View

British Journal of Clinical Psychology is covered by the Early View service on Wiley Online Library. Early View articles are complete full-text articles published online in advance of their publication in a printed issue. Articles are therefore available as soon as they are ready, rather than having to wait for the next scheduled print issue. Early View articles are complete and final. They have been fully reviewed, revised and edited for publication, and the authors' final corrections have been incorporated. Because they are in final form, no changes can be made after online publication. The nature of Early View articles means that they do not yet have volume, issue or page numbers, so they cannot be cited in the traditional way. They are cited using their Digital Object Identifier (DOI) with no volume and issue or pagination information. E.g., Jones, A.B. (2010). Human rights Issues. *Human Rights Journal*. Advance online publication. doi:10.1111/j.1467-9299.2010.00300.x
Further information about the process of peer review and production can be found in this document: What happens to my paper? Appeals are handled according to the procedure recommended by COPE.

Appendix 3: Ethical Approval

NHS

Health Research Authority

North West - Haydock Research Ethics Committee
3rd Floor - Barlow House
4 Minshull Street
Manchester
M1 3DZ

Telephone: 0207 104 8012

01 April 2016

Miss Laura Wainwright
Trainee Clinical Psychologist
Manchester Mental Health and Social Care NHS Trust
2nd Floor, Zirchonis Building
Oxford Road
Manchester
M13 9PL

Dear Miss Wainwright

Study title:	Staff-patient relationships in acute mental health wards
REC reference:	16/NW/0079
Protocol number:	1.0
IRAS project ID:	193467

Thank you for your submission of 10 March 2016. I can confirm the REC has received the documents listed below and that these comply with the approval conditions detailed in our letter dated 10 March 2016

Documents received

The documents received were as follows:

Document	Version	Date
Participant information sheet (PIS) [Participant Information Sheet]	1.2	10 March 2016

Approved documents

The final list of approved documentation for the study is therefore as follows:
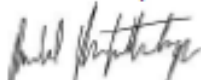
Document	Version	Date
Copies of advertisement materials for research participants [MISPA Poster]	2.0	22 February 2016
Evidence of Sponsor Insurance or Indemnity (non NHS Sponsors only) [Wainwright_15550_15.01.2016_IL]	1.0	15 January 2016
GP/consultant information sheets or letters [Psychiatrist Letter]	1.0	27 November 2015

Letter from sponsor [Wainwright_15550_15.01.2016_SL]	1.0	15 January 2016
Non-validated questionnaire [Demographics Questionnaire - Patient]	1.0	27 November 2015
Non-validated questionnaire [Demographics Questionnaire - Staff]	1.0	27 November 2015
Other [KB CV]		
Participant consent form [Consent Form]	V1.1	22 February 2016
Participant information sheet (PIS) [Participant Information Sheet]	1.2	10 March 2016
REC Application Form [REC_Form_18012016]		18 January 2016
Research protocol or project proposal [MISPA Protocol]	1.0	27 November 2015
Summary CV for Chief Investigator (CI) [LW CV]		
Summary CV for student [CD CV]		
Summary CV for supervisor (student research) [GH CV]		
Validated questionnaire [BSS]		
Validated questionnaire [Defeat Scale]	1.0	27 November 2015
Validated questionnaire [DERS]	1.0	27 November 2015
Validated questionnaire [PHQ-9]		
Validated questionnaire [Entrapment Scale]	1.0	27 November 2015
Validated questionnaire [GHQ-28]	1.0	27 November 2015
Validated questionnaire [PAMSR]	1.0	27 November 2015
Validated questionnaire [WAI-SR Client Version]	1.0	27 November 2015
Validated questionnaire [WAI-SR Nurse Version]	1.0	27 November 2015

You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor's responsibility to ensure that the documentation is made available to R&D offices at all participating sites.

16/NW/0079	Please quote this number on all correspondence

Yours sincerely

Rachel Katzenellenbogen
REC Manager

E-mail: nrescommittee.northwest-haydock@nhs.net

Copy to: Ms Lynne Macrae, University of Manchester
             Julia Foster, Manchester Mental Health and Social Care Trust

Appendix 4: Patient Demographic Questionnaire

<u>Demographics Questionnaire</u>

1. What is your age?

2. What is your gender?

3. What is your ethnicity?

4. How long have you experienced mental health difficulties? (in years/months/weeks)

5. How many times have you been admitted to hospital (for mental health reasons?)

6. How many times have you been admitted to this ward?

7. How long has your current stay in hospital been for?

8. Do you have a mental health diagnosis? If so, please state…

9. Who is your named nurse on the ward?

10. How long have you known your named nurse for? (in years/months/weeks)

Appendix 5: Psychosis Attachment Measure (PAM)

SELF-REPORT MEASURE

We all differ in how we relate to other people. This questionnaire lists different thoughts, feelings and ways of behaving in relationships with others.

PART A

Thinking generally about how you relate to other key people in your life, please use a tick to show how much each statement is like you. Key people could include family members, friends, partner or mental health workers.

There are no right or wrong answers

	Not at all	A little	Quite a bit	Very much
1. I prefer not to let other people know my 'true' thoughts and feelings.	(..)	(..)	(..)	(..)
2. I find it easy to depend on other people for support with problems or difficult situations.	(..)	(..)	(..)	(..)
3. I tend to get upset, anxious or angry if other people are not there when I need them.	(..)	(..)	(..)	(..)
4. I usually discuss my problems and concerns with other people.	(..)	(..)	(..)	(..)

5. I worry that key people in my life won't be around in the future.	(..)	(..)	(..)	(..)
6. I ask other people to reassure me that they care about me.	(..)	(..)	(..)	(..)
7. If other people disapprove of something I do, I get very upset.	(..)	(..)	(..)	(..)
8. I find it difficult to accept help from other people when I have problems or difficulties.	(..)	(..)	(..)	(..)
9. It helps to turn to other people when I'm stressed.	(..)	(..)	(..)	(..)
10. I worry that if other people get to know me better, they won't like me.	(..)	(..)	(..)	(..)

	Not at all	A little	Quite a bit	Very much
11. When I'm feeling stressed, I prefer being on my own to being in the company of other people.	(..)	(..)	(..)	(..)
12. I worry a lot about my relationships with other people.	(..)	(..)	(..)	(..)
13. I try to cope with stressful situations on my own.	(..)	(..)	(..)	(..)
14. I worry that if I displease other people, they won't want to know me anymore.	(..)	(..)	(..)	(..)
15. I worry about having to cope with problems and difficult situations on my own.	(..)	(..)	(..)	(..)
16. I feel uncomfortable when other people want to get to know me better.	(..)	(..)	(..)	(..)

PART B

In answering the previous questions, what relationships were you thinking about?

_____

(E.g. relationship with mother, father, sister, brother, husband, wife, friend, romantic partner, mental health workers etc)

Appendix 6: Working Alliance Inventory – Patient Version

Working Alliance Inventory – Short Revised (WAI-SR)

Instructions: Below is a list of statements and questions about experiences people might have with their key worker/named nurse. Some items refer directly to your key worker/named nurse with an underlined space -- as you read the sentences, mentally insert the name of your key worker/named nurse in place of _____ in the text.

IMPORTANT!!! Please take your time to consider each question carefully.

1. As a result of these sessions I am clearer as to how I might be able to change.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

2. What I am doing in sessions, gives me new ways of looking at my problem.

⑤	④	③	②	①
Always	Very Often	Fairly Often	Sometimes	Seldom

3. I believe___likes me.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

4. ___and I collaborate on setting goals.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

5. ___and I respect each other.

⑤	④	③	②	①
Always	Very Often	Fairly Often	Sometimes	Seldom

6. ___and I are working towards mutually agreed upon goals.

⑤	④	③	②	①
Always	Very Often	Fairly Often	Sometimes	Seldom

7. I feel that___appreciates me.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

8. _____ and I agree on what is important for me to work on.

⑤	④	③	②	①
Always	Very Often	Fairly Often	Sometimes	Seldom

9. I feel _____ cares about me even when I do things that he/she does not approve of.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

10. I feel that the things I do in sessions will help me to accomplish the changes that I want.

⑤	④	③	②	①
Always	Very Often	Fairly Often	Sometimes	Seldom

11. _____ and I have established a good understanding of the kind of changes that would be good for me.

⑤	④	③	②	①
Always	Very Often	Fairly Often	Sometimes	Seldom

12. I believe the way we are working with my problem is correct.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

Appendix 7: Difficulties in Emotional Regulation Scale (DERS)

Please indicate how often the following 36 statements apply to you by writing the appropriate number from the scale above (1 – 5) in the box alongside each item.

1. I am clear about my feelings

2. I pay attention to how I feel

3. I experience my emotions as overwhelming and out of control

4. I have no idea how I am feeling

5. I have difficulty making sense out of my feelings

6. I am attentive to my feelings

7. I know exactly how I am feeling

8. I care about how I feel

9. I am confused about how I feel

10. When I'm upset, I acknowledge my emotions

11. When I'm upset I become angry with myself for feeling that way

12. When I'm upset I become embarrassed for feeling that way

13. When I'm upset, I have difficulty getting work done

14. When I'm upset, I become out of control

15. When I'm upset, I believe that I will remain that way for a long time

16. When I'm upset, I believe that I'll end up feeling very depressed

17. When I'm upset, I believe that my feeling are valid and important

18. When I'm upset, I have difficulty focusing on other things

19. When I'm upset, I feel out of control

20. When I'm upset, I can still get things done

21. When I'm upset, I feel ashamed with myself for feeling that way

22. When I'm upset, I know that I can find a way to eventually feel better

23. When I'm upset, I feel like I am weak

24. When I'm upset, I feel like I can remain in control of my behaviours

25. When I'm upset, I feel guilty for feeling that way

26. When I'm upset, I have difficulty concentrating

27. When I'm upset, *I* have difficulty controlling my behaviours

28. When I'm upset, I believe that there is nothing I can do to make myself feel better

29. When I'm upset, I become irritated with myself for feeling that way

30. When I'm upset, I start to feel very bad about myself

31. When I'm upset, I believe that wallowing in it is all I can do

32. When I'm upset, I lose control over my behaviours

33. When I'm upset, I have difficulty thinking about anything else

34. When I'm upset, I take time to figure out what I'm really feeling

35. When I'm upset, it takes me a long time to feel better

36. When I'm upset, my emotions feel overwhelming

Appendix 8: Staff Demographic Questionnaire

<u>**Demographics Questionnaire**</u>

1. What is your age?

2. What is your gender?

3. What is your ethnicity?

4. How long have you worked with people with mental health difficulties? (in years/months/weeks)

5. How long have you worked on this ward?

6. How long have you known your named patient for? (in years/months/weeks)

Appendix 9: Working Alliance Inventory – Nurse Version

Working Alliance Inventory – Short Revised – Therapist/Named nurse (WAI–SRT)

Instructions: Below is a list of statements about experiences people might have with their client. Some items refer directly to your client with an underlined space – – as you read the sentences, mentally insert the name of your client in place of ___ in the text.

IMPORTANT!!! Please take your time to consider each question carefully.

1. ___ and I agree about the steps to be taken to improve his/her situation.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

2. I am genuinely concerned for ___'s welfare.

⑤	④	③	②	①
Always	Very Often	Fairly Often	Sometimes	Seldom

3. We are working towards mutually agreed upon goals.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

4. ___ and I both feel confident about the usefulness of our current activity in named nurse sessions.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

5. I appreciate ___ as a person.

⑤	④	③	②	①
Always	Very Often	Fairly Often	Sometimes	Seldom

6. We have established a good understanding of the kind of changes that would be good for ___.

⑤	④	③	②	①
Always	Very Often	Fairly Often	Sometimes	Seldom

7. ___ and I respect each other.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

8. ___ and I have a common perception of his/her goals.

⑤	④	③	②	①
Always	Very Often	Fairly Often	Sometimes	Seldom

9. I respect ___ even when he/she does things that I do not approve of.

①	②	③	④	⑤
Seldom	Sometimes	Fairly Often	Very Often	Always

10. We agree on what is important for ___ to work on.

⑤	④	③	②	①
Always	Very Often	Fairly Often	Sometimes	Seldom

COMMUNITY SOCIAL BEHAVIOUR SCHEDULE (cSBS-17)

Cella et al., (2014)

Measuring community functioning in schizophrenia with the Social Behaviour Schedule.

Schizophrenia Research

FOR ADMINISTRATION TO

STAFF MEMBER

In all cases, rate for typical behaviour **over the past month.**

Please enter the appropriate rating in the box and write short descriptions of the behaviour rated where possible.

*Note: The degree (severity) of the behaviour **and** the frequency of occurrence should be taken into account in making the rating. When in doubt, frequency should always carry more weighting than degree.*

(1)   TAKING THE INITIATIVE

Does your client initiate conversations? Will they approach a member of staff either to ask a question or to start a conversation? If your client approaches will they carry on the conversation after the initial comments?

Level	Description
0	Good range of spontaneous contacts. Can initiate a conversation and keep it going by spontaneous contributions. If someone else initiates a conversation, client responds appropriately and quite often keeps the conversation going (ie. Active as well as passive response).
1	Can sometimes initiate or maintain a conversation but this is infrequent or the range of topics is very limited. If another person initiates contact client usually responds appropriately, but only for a short time and then ceases to respond.
2	Occasionally speaks spontaneously, but this is unusual, and limited to greetings, brief factual exchanges etc. Quite often ignores another person's attempt at contact, or turns away.
3	Usually responds negatively to attempts to initiate conversation (eg. turns away, walks out of the room). Only spontaneous contact initiated by client themselves is non-verbal (eg. smiling, taking hand, or aggressive contact).
4	Client says virtually nothing. They do not respond when greeted or spoken to. They initiate extremely few verbal or non-verbal contacts.
Score:	Comments:

(2)   **<u>CONVERSATION : INCOHERENCE</u>**

*This rating is **not** concerned with how articulate they are or how intelligently they can express themselves. The incoherence of speech rated here is **that associated with psychotic illness** - e.g. flight of ideas, word salad etc.*

How far is your client handicapped in engaging in conversation with others through incoherence of speech?

Please give an example of incoherent speech if possible.

Level	Description
0	No incoherence of speech.
1	Some occasional incoherence of speech (e.g. once or twice a month).
2	Incoherence of speech occurs more frequently (e.g. once a week). Most speech is coherent.
3	Frequent incoherence of speech (e.g. more than once a week).
4	Client's conversation is always or almost always characterized by incoherence of speech. Very difficult to understand anything they say.
Score:	Comments

3) **CONVERSATION : ODDITY / INAPPROPRIATENESS**

How far does you client's conversation show a preoccupation with bizarre or eccentric topics, which most people (not only specialists) would regard as extremely odd?

Please give examples.

Level	Description
0	Above behaviour does not occur.
1	Above behaviour occasionally present (e.g. once or twice a month).
2	Above behaviour occurs more frequently (e.g. once a week) but most speech contains no such examples.
3	Above behaviour occurs very frequently (e.g. daily).
4	Virtually all client's conversation are as described above.

Score:	Comments

The following three ratings are concerned with three different aspects of client's ability to mix with others. These ratings give some picture of the extent to which people have to make allowances for your client's social difficulties in order to interact with your client. Thus your client's ratings on these three questions indicate how far they are restricted by their difficulties to relating only to immediate family or to professional carers.

4) SOCIAL MIXING : ABILITY TO MAKE SOCIAL CONTACTS IN AN APPROPRIATE WAY

If client was standing at a bus stop and someone asked them when the next bus was expected, would client be able to respond appropriately? Would they appear odd in manner?

Level	Description
0	Client behaves appropriately in the way he makes special contact with others. Or client is not interested in making social contacts with others.
1	Client makes social contacts with others appropriately to a degree, but is rather impaired by lack of grasp of what is and is not socially acceptable (e.g. definitely behaved inappropriately on one or two occasions in the past month).
2	Client can approach others in a socially appropriate manner some of the time but quite often lapses into inappropriate behaviour (e.g. once a week).
3	Most of client's attempts to make contacts with others are inappropriate in nature [e.g. more than once a week but behaviour is not as extreme as (4).
4	Client is quite unable to behave appropriately and creates frequent embarrassment because of the inappropriateness of their attempts to approach others. They never or virtually never approach others in an appropriate fashion
Score:	Comments

5) SOCIAL MIXING : PROPORTION OF SOCIAL CONTACTS WHICH ARE HOSTILE IN NATURE

*This rating is concerned with the sorts of contacts your client makes with other people. **The emphasis in this rating is on verbal or physical hostility**. Only rating hostility if it is inappropriate or more extreme that the situation demands. Verbal hostility includes swearing etc. but this does not include apathy or failures to respond to a social approach. Only rate physical hostility if your client has had physical contact with another person which was of a hostile nature.*

Is your client verbally or physically hostile when making contacts with others?

Level	Description
0	Contacts are nearly all appropriately friendly.
1	Mostly friendly contacts. Occasionally contacts are inappropriately hostile (e.g. one or two incidents in past month or more than this but of a relatively minor nature).
2	More frequent incidents of inappropriately hostile contact or a serious incident involving threatening behaviour in past month, but most contacts have been friendly.
3	Most contacts are verbally hostile (e.g. swears, accuses etc. more than once a week).
Score:	Comments

6) SOCIAL MIXING : ATTENTION-SEEKING BEHAVIOUR

Does your client try to monopolise people's attention? Are they resentful
if staff members, relatives etc. give attention to others?

Level	Description
0	Client does not seek attention inappropriately.
1	Client sometimes seeks to monopolise attention but does not get upset if attention is paid to others (e.g. an incident when client sought to monopolise attention occurred once in past month).
2	Client sometimes seeks to monopolise attention of others, and also tends to get angry and resentful if attention is given to others.
3	Client constantly makes demands on others= attention (e.g. more than once a week).
4	Client is constantly making demands on attention of others (either specific others such as a particular relative, or staff in Day Care or Hostel setting, or other people in general). Client also frequently gets angry or resentful if any attention is given to others.
Score:	Comments

7) SUICIDAL AND SELF HARMING IDEAS AND BEHAVIOUR

*Ratings on this item should be made **conservatively**. A rating of 3 or more should be made if the informant was sure that injuries which were sustained were intended by your client to be of a suicidal nature.*

Does your client show any suicidal or self-harming ideas or behaviour?

Level	Description
0	Client has not spoken of suicide or made any attempt.
1	Client has alluded to suicide indirectly in part month.
2	Client has spoken of suicide directly in past month.
3	Client has made some kind of suicidal gesture in past month (e.g. scratching wrists). Or client has spoken of suicide several times in past month
4	Client has made a serious attempt at suicide or injured himself seriously in past month.
Score:	Comments

8) **PANIC ATTACKS AND PHOBIAS**

How much is your client troubled by anxiety, either attached to particular situations (e.g. being with people, traveling, leaving the house) or generalised feelings of anxiety and tension. Preoccupation with health worries included if there are no objective grounds.

Level	Description
0	Client is free enough from anxiety to be able to undertake any social or other activity he might choose.
1	Client is troubled by occasional anxiety. Or client's anxiety is not excessively disabling because confined to small areas. Or level of anxiety is low enough that client can contain and live with it.
2	Client is tense and anxious much of the time, and prevents him from functioning in certain key areas of life. Nevertheless client can cope with their anxiety in general.
3	Client suffers anxiety most of the time. Or client has very frequent (e.g. twice weekly) anxiety attacks. There are few areas where client can function without being handicapped by anxiety.
4	Client is extremely tense and anxious virtually all the time. Client's anxiety prevents them from doing almost anything at all and it troubles them constantly.
Score:	Comments

9) OVERACTIVITY AND RESTLESSNESS

Overactivity should be rated if one or more of the following are present: ***purposeless pacing up and down or rushing from room to room, frequent unnecessary movements, general restlessness, fidgeting****. If either purposeless frequent pacing is present or more than one of the other behaviours is present then rate as marked overactivity.*

Does your client show marked signs of overactivity or restlessness?

Level	Description
0	No marked overactivity or restlessness.
1	Occasional periods of restlessness or overactivity (e.g. once or twice in past month).
2	Overactivity occurs quite often (e.g. weekly).
3	Client shows marked overactivity frequently (e.g. daily or nightly).
4	Client shows marked overactivity for long periods on a regular basis (e.g. most nights spends several hours pacing up and down).
Score:	Comments

10) LAUGHING AND TALKING TO SELF

Only rate here if it is obvious to the informant that your client is not laughing socially i.e. evidence of laughing when alone or muttering so no-one else can catch what is said is enough evidence to consider making a rating.

Does your client laugh or talk to themselves?

Level	Description
0	No laughing or talking to self.
1	Occasional episodes of laughing or muttering to self (e.g. once or twice in past month). Can control behaviour if reminded.
2	More frequent episodes of laughing or muttering to self (e.g. three times in past month). Client has some difficulty in controlling behaviour if reminded.
3	Laughing or talking to self occurs often (e.g. weekly).
4	Very frequent laughing or talking to self (e.g. daily). Or less than daily but episodes last a long time.
Score:	Comments

11) DEPRESSION

This rating concerns periods spent where your client is sitting with their head in their hands looking miserable, remarks such as 'I wish I had never been born' or 'life is pointless' etc. Do not assume suicidal behaviour is an indication of depression, other signs need to be present to make a rating here.

Does your client show signs of depression?

Level	Description
0	No such behaviour.
1	Such behaviour occurs occasionally (eg. one or two brief incidents in past month).
2	Such behaviour occurs fairly often (eg. once a week) or for fairly long periods.
3	Such behaviour occurs frequently (eg. daily).

Score:	Comments

12)ERSONAL APPEARANCE AND HYGIENE

In making this rating, consider cleanliness, hair, changing underwear, incontinence. Also consider bizarre appearance. Take into account the amount of supervision your client receives. If, for example, your client lives in a hostel, consider how your client would care for themselves if not in a supervised situation. (Do not consider "fashionable" disorder in dress.)

Please rate your client's personal appearance and hygiene.

Level	Description
0	Able to look after appearance and cleanliness adequately.
1	Usually appearance is satisfactory but occasionally needs reminding. Or takes in interest in certain aspects of appearance but neglects others.
2	Quite often needs reminding about appearance (eg. three times in past month). Or attends to appearance in an inappropriate manner so that appearance is bizarre.
3	Considerable self neglect most of the time. Needs frequent reminding (eg. more than once a week) and some supervision.
4	Gross self neglect. No spontaneous care of clothes (eg. clean underwear) washing hair, hygiene. Needs supervision in all aspects. Would be odorous if unsupervised. Would be incontinent if not reminded.
Score:	Comments

13) SOCIALLY UNACCEPTABLE HABITS OR MANNERS

*This rating **concerns unacceptable habits** e.g. scratching genitals, passing loud flatus, picking nose etc. Ask particularly about problems at meal times such as poor table manners.*

Please rate the degree to which your client's behaviour is socially unacceptable.

Level	Description
0	Has good manners and behaviour is socially acceptable.
1	Behaviour is not markedly unacceptable but client has positive qualities in manner.
2	Occasionally unacceptable behaviour (e.g. markedly unattractive habit, surliness, uncouthness). However much of the time client is passively acceptable.
3	Frequent episodes of unacceptable behaviour as in (2) [e.g. once a week].
4	Behaviour is markedly unacceptable most of the time.
Score:	Comments

14)   SLOWNESS

This item is concerned with abnormal slowness (eg. S. sits abnormally still, walks abnormally slowly or is delayed when performing movements). Make allowances for age and physical condition.

Does your client have slowed movements?

Level	Description
0	No abnormal slowness.
1	Moderately slow on occasions, but most of the time is not slow.
2	Moderately slow most of the time, even when stimulated.
3	Moderately slow most of the time with periods of extreme slowness as in (4).
4	Extremely slow. Will sit or lie doing nothing if not stimulated, and even then very slow to move.
Score:	Comments

15)   UNDERACTIVITY

*This rating concerns underactivity only. Bear in mind that your client may be slow (item 18) and underactive or underactive only. **Underactivity here is defined as a lack of spontaneous activity. If your client is not stimulated, will they sit and do nothing?** (moderate underactivity). When it is not possible to stimulate your client into carrying out a task then rate as extreme underactivity.*

Is your client underactive?

Level	Description
0	No abnormal underactivity.
1	Moderately underactive on occasions, but most of the time keeps active.
2	Moderately underactive most of the time even when stimulated.
3	Moderately underactive most of the time, with periods of extreme underactivity as in (4).
4	Extremely underactive. Will sit or lie doing nothing if not stimulated, and even then very slow to move.
Score:	Comments

16) CONCENTRATION

Please try and take into account whether your client finds it difficult to concentrate on a task even when they really want to do so? On watching a TV programme? On reading a book? Is your client distractible? Can your client set their mind to something and do it, or do they find it impossible to concentrate long enough to do this?

Does your client have difficulties with concentration?

Level	Description
0	Client does not have problems with their ability to concentrate.
1	Client has periods when they are unable to concentrate.
2	Client can only concentrate for a few minutes at a time.
Score:	Comments

17) BEHAVIOURS, NOT OTHERWISE SPECIFIED* THAT IMPEDE PROGRESS

Specify any other behaviour or attitude not previously covered, that seems to be holding back you clients progress (e.g. Aggressive and destructive, sexually inappropriate, smoking, over-eating, anorexia, stealing, obsessions, sleep disturbances, odd, stylised movements or uncomfortable or inappropriate postures). Be conservative in rating.

*Do not rate behaviours here which should be rated elsewhere.

Does your client demonstrate behaviours, not otherwise specified, that is impeding their progress or ability to achieve their everyday living goals? How frequently do these occur?

Please state such behaviour.

Level	Description
0	No such behaviour present (other than those rated elsewhere).
1	Behaviours have not occurred in past month but informant worried that they might have done so.
2	Behaviours have occurred a few times during past month.
3	Behaviours have occurred quite frequently.
4	Behaviours have been very frequent.
Score:	Comments

Appendix 11: General Health Questionnaire (GHQ)

Please read this carefully: We should like to know if you have had any medical complaints, and how your health has been in general, over the past few weeks. Please answer ALL the questions on the following pages simply by underlining the answer which you think most nearly applies to you. Remember that we want to know about present and recent complaints, not those that you had in the past. It is important that you try to answer ALL the questions. Thank you very much for your cooperation.

Have you recently:

A1. Been feeling perfectly well and in good health?	Better than usual	Same as usual	Worse than usual	Much worse than usual
A2. Been feeling in need of a good tonic?	Not at all	No more than usual	Rather more than usual	Much more than usual
A3. Been feeling run down and out of sorts?	Not at all	No more than usual	Rather more than usual	Much more than usual
A4. Felt that you are ill?	Not at all	No more than usual	Rather more than usual	Much more than usual
A5. Been getting any pains in your head?	Not at all	No more than usual	Rather more than usual	Much more than usual
A6. Been getting a feeling of tightness or pressure in your head?	Not at all	No more than usual	Rather more than usual	Much more than usual
A7. Been having hot or cold spells?	Not at all	No more than usual	Rather more than usual	Much more than usual
B1. Lost much sleep over worry?	Not at all	No more than usual	Rather more than usual	Much more than usual

B2. Had difficulty in staying asleep once you are off?	Not at all	No more than usual	Rather more than usual	Much more than usual
B3. Felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual
B4. Been getting edgy and bad-tempered?	Not at all	No more than usual	Rather more than usual	Much more than usual
B5. Been getting scared or panicky for no good reason?	Not at all	No more than usual	Rather more than usual	Much more than usual
B6. Found everything getting on top of you?	Not at all	No more than usual	Rather more than usual	Much more than usual
B7. Been feeling nervous and strung-up all the time?	Not at all	No more than usual	Rather more than usual	Much more than usual
C1. Been managing to keep yourself busy and occupied?	Not at all	No more than usual	Rather more than usual	Much more than usual
C2. Been taking longer over the things you do?	Not at all	No more than usual	Rather more than usual	Much more than usual
C3. Felt on the whole you were doing things well?	Not at all	No more than usual	Rather more than usual	Much more than usual
C4. Been satisfied with the way you've carried out your task?	Not at all	No more than usual	Rather more than usual	Much more than usual
C5. Felt that you are playing a useful part in things?	Not at all	No more than usual	Rather more than usual	Much more than usual
C6. Felt capable of making decisions about things?	Not at all	No more than usual	Rather more than	Much more than

			usual	usual
C7. Been able to enjoy your normal day-to-day activities?	Not at all	No more than usual	Rather more than usual	Much more than usual
D1. Been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual
D2. Felt that life is hopeless?	Not at all	No more than usual	Rather more than usual	Much more than usual
D3. Felt that life isn't worth living?	Not at all	No more than usual	Rather more than usual	Much more than usual
D4. Though of the possibility that you might make away with yourself?	Not at all	No more than usual	Rather more than usual	Much more than usual
D5. Found at times you couldn't do anything because your nerves were too bad?	Not at all	No more than usual	Rather more than usual	Much more than usual
D6. Found yourself wishing you were dead and away from it all?	Not at all	No more than usual	Rather more than usual	Much more than usual
D7. Found that the idea of taking your own life kept coming into your mind?	Not at all	No more than usual	Rather more than usual	Much more than usual