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A Mixed Method Evaluation of a Medication Concordance Education Programme for Mental Health Nurses

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Abstract

Research Purpose:

To ascertain whether nurses' skill, self-efficacy and attitudes remain enhanced 8 months after a two-day Relapse Prevention (RP) and Medication Concordance (RPMC) training programme.

Relevance:

Patients relapse in high numbers due to poor concordance with medication regimes. An absence of evidence-based nurse training in medication concordance (MC) and RP contributes to these relapses, leading to high societal cost in relation to delayed discharge; early return to hospital or health centres; delays in return to work and increased resistance to drugs.

Methods:

A mixed method sequential design with some controls was employed. Participants were recruited from a large, mixed provision, NHS provider Trust. Some 21 nurses at Band 5/6 were recruited and divided into two groups to facilitate training. Each group was given two consecutive days of RPMC training supported by a comprehensive manual. The group was then assessed for changes in skill capability and self-efficacy at baseline (Point 1), 1 week post-RPMC training (Point 2) and at 8 months follow up (Point 3). Attitude changes were only measured at Point 1 and Point 3. Additionally, five participants were interviewed 10 weeks post-RPMC to gain insight into their actual MC and RP practice. Full ethics committee approval was obtained for this study.

Results:

A two-tailed Wilcoxon Rank test to measure within-group changes showed significant change in Skills Capability scores between Points 1 and 2 (p=0.002), but no significant difference between Points 2 and 3 (p=0.444). Self–efficacy scores showed equally significant changes between Points 1 and 2 (p=0.041); Point 2 (p=0.002) and Point 3 (p=0.05) Significant increase in self-efficacy was seen between Points 1 and Point 3 (p=0.026) as well as differences in attitude scores between Point 1 and Point 3 (p=0.007).

The qualitative results showed the participants gained new insight and also improvement in their confidence, skills capability and attitude towards developing better understanding and partnership working to provide better choices for patients to take their medication.

Conclusion:
The RPMC two-day course improved skills capability, self-efficacy and attitudes of mental health nurses (MHNs) at an 8 months follow up.

Implications:
A Randomised Control Trial should now be conducted to assess whether these results are replicated and sustained among nurses and to improve MC capability in patients in Mental Health Services.

Key words:
Medication, concordance, adherence, compliance, skills, beliefs, attitudes and relapse prevention.

Abbreviations

CBT	Cognitive behavioural therapy
CPN	Community psychiatric nurses
CT	Compliance Therapy
EWS	Early-warning signs
GDG	Guideline Development Group
HRS	High-risk situation
IRAS	Integrated Research Application System
MAT	Medication Alliance Therapy
MC	Medication concordance
MH	Mental Health
MHN	Mental Health Nurses
MIT	Motivational Interviewing Techniques
MMT	Medication Management Training
PANSS	Positive and negative syndrome scale
PIS	Participation Information Sheet
REC	Research Ethics Committee
RP	Relapse Prevention
RPMC	Relapse Prevention and Medication Concordance
RVE	Rule-violation effect
SC	Skills capability
SD	Standard Deviation
SE	Self-efficacy
SEMI	Serious and Enduring Mental Illness

SPSS	Statistical Package for Social Sciences
SU	Service users
TA	Thematic analysis
TAU	Treatment as usual
WSRT	Wilcoxon Signed Rank Test

Chapter 1 Introduction

This dissertation is in five chapters. In the introductory chapter, a brief rationale will be given, including the extent of non-adherence of medication in mental health, and the political and guidelines context of this issue. Also presented is the role of the psychiatric nurse in medication concordance (MC), and the case for relapse prevention and medication concordance (RPMC), along with the aims and objectives of the study.

The second chapter describes the search strategy and provides a literature review examining and critiquing papers relevant to this study.

The third chapter includes the research methodology and methods, the hypothesis and null hypothesis and the inclusion and exclusion criteria of the study sample. This chapter consists of samples and sampling methodology, along with the research design, data collection and any ethical considerations. Also presented are the study measures used to provide quantitative and qualitative data and the statistical tests used, including methods to analyse the data collection.

The fourth chapter is divided into four sections. In Section 1, the quantitative results are presented. In Section 2, the rationale and approach to the thematic analysis are discussed. In Section 3, the qualitative findings from the thematic analysis of the emerging themes from the focus group are discussed. Finally, in Section 4, the quantitative integration of the qualitative findings is examined.

Chapter 5 consists of discussions on the overall findings of the study. Also presented are the methodological limitations and procedural difficulties as well as the implications this study could have on MH nursing education/training practice.

1.1 Extent of Non-Adherence to Medication in Mental Health

Non-adherence to medication in mental health (MH) is a problem that is reflected nationally and internationally (Gray *et al.*, 2010), with an average incidence of 50 per cent (Gray *et al.*, 2002, 2010; Gilmer *et al.*, 2004) over the past three decades. This has resulted in poor outcomes impeding recovery, increasing relapse rates, higher rates of suicide (Higashi *et al.,* 2013), greater hospital bed usage (Haywood *et al.*, 1995; Weiden

et al., 2004; Valenstein *et al.*, 2006) and high societal costs (Foster and Jumnoodoo, 2008) if treatment is not addressed effectively and promptly (Mitchell and Selmes, 2007). To date, interventions used to address the issue of MC have produced mixed results not sustainable over time (see Chapter 2, Summary). As a result, a new approach is needed if psychiatric nurses are to make a sustainable difference in medication concordance (MC).

1.2 Political Context and Guidelines of Relapse Prevention and Medication Concordance (RPMC)

RPMC fits well with several DH initiatives such as the Care programme approach (DH, 1990), NICE guidance on medication adherence (NICE 2009), Effective Healthcare Coordination in MH services (DH, 1999), the Good Practice Guide for CMHT (DH, 2002) and those at the Social Care Institute for Excellence (SCIE, 2007), and key factors affecting adherence, identified in the WHO report (WHO 2003). All recommend psychological interventions to improve adherence to medication. To date, this position has not changed, and in the current literature it is recognised that there is no definitive use of a single model of MC that NICE (2009) guidelines can recommend. The recent study by York Health Economics consortium and the School of Pharmacy, University of London (2010), supported by Kongkaew *et al*. (2013) and Boswell *et al*. (2013), suggests that there is a clear relationship between medication adherence, a reduction in hospital admissions and improved outcomes in terms of costs and wellbeing among those with chronic conditions, including serious and enduring mental illness. However, new initiatives to improve medication adherence remain a challenge due to major compounding issues such as the nature of the illness, how patients view their medication, and the information they receive, especially about the negative consequences of taking medication and clear strategy to help overcome non-adherence (Greenburg, 2013).

It can be seen that testing the RPMC programme is an adjunct to existing interventions on medication adherence, offering alternative choices to mental health nurses (MHNs) in practice.

1.3 Role of Psychiatric Nurses in MC

Whilst it is often believed that taking medication is solely the role and responsibility of service users (SUs), it is also recognised that nurses play a vital part in managing, supporting and encouraging medication adherence (Gray *et al.*, 2002; Coombs *et al.*, 2003). This suggests that the overall responsibility for the extent of adherence is a nursing role (Byrne *et al.*, 2008). Therefore, nurses' involvement in RPMC is equally important.

1.4 Case for Relapse Prevention and Medication Concordance (RPMC)

The term 'relapse prevention' was originally coined by Marlatt and Gordon (1985: 3) in the treatment of addictive behaviours. They defined relapse prevention as a 'self-management program designed to enhance the maintenance stage of the habit-change process'.

1.5 Theoretical Perspective of RP

RP is based on cognitive behavioural therapy (CBT) (Beck *et al.*, 1977) and social learning theory (Bandura, 1979). It is purposeful to use this cognitive behavioural tool, that Jumnoodoo *et al*. (2002) have coined 'the whole system approach', to model patients' and nurses' experience and enhance their training and practice. All concepts used in the RPMC programme are described in Appendix 1.

1.6 RPMC Programme

As mentioned earlier, the proposed 10-session RPMC programme, in comparison to other studies, is highly structured (Appendix 2), simple to understand and simple to put into practice. As an accredited module by Middlesex University to train MHNs, SUs, carers and other MH professionals to improve MC, it has been in practice for the past seven years. The programme has undergone several evaluations with commendable outcomes.

Furthermore, the RP project in its various applications in MH services has won four national awards and most recently, in 2014, was endorsed by NHS England, which recommended its diffusion throughout the UK. Despite commendable outcomes, RPMC has not been formally tested in MH services on nurses' skill capability, self-efficacy and attitudes towards MC.

1.7 Purpose of the Study

The purpose of the study is to find and measure the changes in skills capability, self-efficacy and attitudes in MHNs following a two-day RPMC training programme supported by a comprehensive manual.

1.8 Aims

To investigate the effects of a two-day RPMC teaching programme, designed by the current applicant, for community psychiatric nurses (CPNs) at Band 5 and 6.

1.9 Objectives

The objectives of the study are to measure the immediate and medium-term changes in standardised scale scores relating to:

1. Skills capability
2. Self-efficacy, and
3. Attitudes of psychiatric nurses (Band 5 and 6) towards MC.

Chapter 2 Literature Review

2.1 Search Strategies

The PICO acronym (Population, Intervention, Comparison, if any, and Outcome) framework was used to break down the research question into its different sections to obtain the fullest possible picture of terminological variations linked to the search components.

First, the best-fit database for the research question was identified. As nurses form the target audience, the CINAHL (Cumulative Index of Nursing and Allied Health Literature) was searched, followed by the BNI (British Nursing Index). However, as other clinical databases might contain articles of interest to nurses, as well as references to the topic under observation (medication adherence) – albeit from different perspectives – it was decided also to search PsycINFO, EMBASE and MEDLINE. The NICE Evidence interface was used for all searches, that is, the Healthcare Databases Advanced Search (HDAS).

Different search strategies had to be devised in order to maximise retrieval in each database, resorting to a combination of available subject headings and free text approaches.

The geographical context limit (UK only) was initially applied but then removed due to practical (a dearth of UK-based findings) and principled reasons (learning from good practice elsewhere). The search covered 1998–2014, and was limited to articles in the English language.

The search yielded 14 studies originating in the UK, USA, Australia, Hong Kong, Amsterdam (Netherlands), Leipzig (Germany) and Verona (Italy). Ten of the 14 articles were selected, one being qualitative and the remaining quantitative.

2.1.1 Search strategy and history

First I conducted the search looking at the titles and abstracts (free text searching), using the truncation sign (*) to retrieve all derivatives of relevant word stems. Next I embarked on a search for all available subject headings by enabling the ‘map to Thesaurus’ feature.

Each search component was retrieved in full, separately (free text and subject headings, with results united via an OR operator).

Finally, all three search sections were merged by means of the AND Boolean operator, thus identifying the semantic intersection between medication concordance/training/mental health nurses.

2.1.2 CINAHL search history

1. CINAHL; Patient compliance/ or medication compliance/; 24,113 results
2. CINAHL; "medication complian*".tx OR "treatment complian*".tx OR medication adher*".tx OR "treatment adher*".tx OR "medication concord*".tx OR "treatment concord*".tx OR "patient compliance".tx OR non-compliance.ti OR non- adherence.ti OR non-concordance.ti; 34125 results
3. CINAHL; 1 OR 2; 34125 results
4. CINAHL; "training programme*".tx; 9981 results
5. CINAHL; education.mw; 317679 results
6. CINAHL; training.mw; 22951 results
7. CINAHL; 4 OR 5 OR 6; 338724 results
8. CINAHL; Psychiatric nursing/ or community mental health nursing/; 14860 results
9. CINAHL; exp Antipsychotic agents; 8992 results
10. CINAHL; 8 OR 9; 23670 results
11. CINAHL: 6 AND 10 AND 13; 188 results
12. CINAHL: 11 [Limit to: publication year 1998–2015 and (language English)]; 160 results.

Search Date: 14/04/2015

2.2 Effectiveness of Psychosocial Intervention

In response to this serious clinical need, several research studies have been conducted to evaluate the effectiveness of psychosocial interventions designed to improve adherence to psychotropic medication. The application of psycho/behavioural education, cognitive behavioural therapy (CBT) and family intervention studies has

benefitted patients, however the duration of these studies' effectiveness was short and the benefits had limitations (Gray *et al.*, 2002).

2.3 Terms Used in RPMC

The words compliance, adherence and concordance are used interchangeably in the context of prescribed medicine-taking behaviour (Royal Pharmaceutical Society of Great Britain, 1997). In MC engagement, the clinicians and the patients make shared decisions (Deegan and Drake, 2006), and lean more towards patient values, views and options including sharing information and uncertainties, which gives patients the autonomy to run the risk of relapse or to welcome the benefits of taking medication (National Institute for Health and Clinical Excellence (NICE), 2009a). (Refer to Appendix 3 for more information regarding this section.)

The term 'concordance' indicates a relationship between the two experts, the service user and the professional, whereby there is a sharing of information to understand the service users' values, beliefs, attitudes and skills and subsequently to discuss and agree a care plan towards his or her prescribed medication.

Coombs *et al.* (2003), in an Australian research paper, articulate that shared decisions may not be effective. This is because 84 per cent of nurses who participated in their study did not have any prior education or training in medication adherence strategies. Although it is a legitimate role of nurses to encourage MC, to date psychiatric nurses remain poorly trained (Feros *et al.*, 2010; Cormack, 1996).

2.4 Limitations of NICE Guidelines

However, NICE guidelines (2009b) advocate that adherence therapy should not be used routinely for the treatment of psychosis. This recommendation has serious implications in practice, as choices of treatment are imposed on patients and clinicians, consequently affecting medication compliance and leading to an exacerbation of their mental condition and an increase in relapse rates. It may be argued that if certain components of adherence therapy are integrated with other interventions, such as RP, they may produce better outcomes that may be more sustainable.

2.5 Rationale for Psychiatric Nurses' Training in MC

Byrne *et al.* (2005) acknowledge that attitudes, skills, beliefs and confidence apply equally to patients and nurses in changing their approach to improve MC. Therefore, specific nurse training programmes and further research into educational needs of nurses are needed to improve MC. This sense of direction is endorsed by NICE (2009c: 20), which advocates the development of an 'effective, equitable interventions to support adherence to appropriate prescriptions', and to have 'informed choice and shared decision making through cost-effective ways of communication'.

Furthermore, the need to train MHNs specifically in medication management was highlighted by Julia Jones (2003) of the Royal College of Nursing; it is common practice in most areas of healthcare such as osteoarthritis (NICE, 2008) and Type 2 diabetes (NICE, 2009d). New developments in this area are also supported by the Guideline Development Group (GDG) in partnership with the Royal College of Psychiatrists and NICE (2014).

To date, from the literature search, interventions used in the training of MHNs were found to be mainly focused on Compliance Therapy (CT) or related interventions such as Medication Management Training (MMT) therapy and Medication Alliance Therapy (MAT).

2.6 Inclusion and Exclusion of Studies

Given the paucity of literature that directly evaluates the relationship between MHNs using 'best practice' adherence therapies, the present study will focus exclusively on 10 (of 14) studies with a direct or indirect bearing on the training of MHNs to improve MC. Other studies such as by Parashos *et al.* (1999), Kavanagh *et al.* (2003), Merinder *et al*. (1999) and Peveler *et al*. (1999) were interventions aimed directly at educating patients to improve MC, and were studied but excluded from the main dissertation.

2.7 Compliance Therapy

To date, from the search, interventions used in the training of MHNs have mainly focused on Compliance Therapy (CT) or related interventions such as Medication Management Training (MAT) therapy and Medication Alliance Therapy (MAT).

CT has gained wide interest through the work of Kemp *et al*. (1996, 1997, 1998). CT comes mainly from two sources: CBT and Motivational Interviewing Techniques (MIT) (Miller and Rollnick, 1991).

2.8 Study Outcomes of CT

Kemp *et al.* (1998) tested CT theory by conducting a randomised control trial with 74 patients with psychotic illness, resulting in improved insight into patients' illness, better attitudes towards treatment, reduction in hospital admissions and increased levels of treatment compliance/concordance. However, two other research studies using CT have failed to replicate their findings (O'Donnell *et al.*, 2003; Byerly *et al.*, 2005). Despite these failings, other researchers have used modified versions of CT in nurses' training to improve adherence of medication.

2.9 Medication Management Training (MMT) and Community MHNs

Gray *et al.* (2003) conducted a quantitative research with a convenience sample size of 52 MHNs with a minimum of 12 months' experience, selected from two large MH care providers in London. The aim of the study was to investigate whether a 10-day MMT-based programme was effective in improving the clinical skills of Community MHNs. MMT is based on pharmacology, discussion on the link between practical strategies, stopping medication and staying well.

Data was collected at pre-, immediately post-training and at 26 weeks follow up, using knowledge and medication management semi-structured questionnaires. Results of this study were positive, indicating a significant improvement in skills and in factual and functional knowledge.

The results may have been influenced by the method of data collection, involving role play before and after training to reinforce knowledge and skill competencies. Similarly, anxiety about being videotaped during role play may have diminished post-training, thus yielding a positive result. The study was uncontrolled with no comparison group and its durability is uncertain in the long term. The training contents were not detailed.

Following their original investigation, Gray *et al.* (2004) conducted another quantitative study, designed as a cluster randomised control trial with a sample size of 60 CMHNs randomly selected from two MH care providers in London.

The CMHNs were each required to pick two patients from their caseload for the trial. The aim of the study was to investigate whether MMT is better than 'treatment as usual' (TAU) in improving clinical outcomes for patients with schizophrenia.

The CMHNs received 80 hours of MMT delivered over 10 weeks. Data was collected at baseline and 26 weeks after training using the positive and negative syndrome scale (PANSS), which had a reputable construct validity (Kay *et al.*, 1989, cited by Gray *et al.*, 2004). The results were that nurses who had received MMT produced a considerably greater reduction in clients' general psychopathology than TAU at 26 weeks post-training.

The positive results may have been influenced by the fact that nurses had the freedom to choose patients with whom they had a good relationship and who potentially would do well in this study. Therefore, the results of this study cannot be generalised.

2.9.1 The Quatro study

Gray *et al.* (2006) conducted an experiment using adherence therapy with people with schizophrenia in a European multi-centre randomised controlled trial in Amsterdam (the Netherlands), Leipzig (Germany), London (England) and Verona (Italy). The main aim of the study was to compare the effectiveness of medication adherence therapy (MAT) and a health education control intervention on the quality of life for patients with schizophrenia receiving treatment in psychiatric services. The interventions were delivered by trained and clinically experienced therapists. Throughout the study, the data collection at the baseline and follow-up stages was masked from the researcher allocating the participants. In each group, participants were given up to eight weekly sessions of MAT or health education programme based details in manuals. There were 204 participants in the adherence therapy group and 205 in the health education group. At the one year follow up, 178 participants in the adherence therapy group and 194 in the education group had completed the study.

The results showed no difference in the quality of life at baseline and after the one year follow up, and also no significant difference between MAT and health education at the same time points. Equally, there was no significant difference between the experimental and control groups at baseline and at follow up in terms of psychopathology.

It is plausible that the number of therapy sessions delivered over five months was insufficient and, with no booster sessions, the participants may not have had enough time to discuss their individual issues relating to adherence to medication and therefore did not improve. The participants, despite the inclusion criteria of evidence of disability and the ability to self-report treatment of adherence, may not have benefitted from the interventions, as these did not form part of their regular treatment.

2.9.2 Follow up Quatro study

This study was further explored with the available quantitative data to examine the relationship between non-adherence and health and social care costs, and societal costs (King *et al.*, 2014). The results of non-adherence on costs was mixed; that is, they were both positively and negatively associated with costs. The tendency leaned towards lower inpatient costs and higher odds of using community-based services among those who self-reported adherence to medication, compared to those who did not. Therefore the results cannot be generalised and suggest that other forms of psychosocial interventions need to be explored and with qualitative data analysis.

2.10 Medication Alliance Therapy (MAT) Training and Mental Health (MH) Workers

Another study conducted by Byrne *et al.* (2005) tested the impact of a three-day MAT on attitudes and work satisfaction of 23 MH workers, mostly community-based psychiatric nurses, in Australia. MAT is based on CT, focusing on identifying the causes of non-compliance of medication, engagement, questioning strategies, individual assessment and illness timelines and interventions.

The training was delivered in two groups with pre- and post-training measures, including a videotaped role play. The overall results were positive, with significant

changes in post-training attitudes, skill capability, work satisfaction, optimism, empathy and self-esteem.

There was no comparison group to compare the positive findings. The results should have been more persuasive if a qualitative approach was used to find out whether emerging themes complemented or rejected the findings. The study measures were carried out only at pre- and immediately after the training, with no follow-up plan; therefore, durability in the long term remains unknown.

2.11 MAT Training for Mental Health Staff using the Train-the-Trainer Model

The same lead author in the Byrne *et al.* (2010) study attempted to replicate the findings of the previous study in four inpatient settings in the US, using the train-the-trainer model with the opportunity of training the trainers. Some 113 MH staff were recruited, of whom 52 per cent were nurses and the remainder technicians, social workers, psychiatrists, psychologists and occupational therapists. Some 67 MH staff were recruited from two wards in the expert-trained group and the other 46 MH staff were allocated from the remaining two wards, representing the novice-trained group. The novice-trained group attended training six months after the expert group, and were trained by selected trainees from the expert group.

The measures used at pre- and immediately post-training showed significant improvement across both groups for knowledge and attitude, with modest improvement in overall skills in both groups, albeit more in the expert group. Attitudes improved significantly in both groups, but these outcomes were not found in the overall results. It is plausible that the poor results in attitude were not specifically targeted in the MAT programme.

2.12 MAT Training of Nurses and Patients

The participants did not show the expected results in identifying reasons for non-concordance, which may have been due to poor delivery of the training. Therefore, the authors of this study need to identify the weaknesses of the programme before advocating dissemination. There was also no measure of durability of improvements and comparison group.

Finally, **Byrne and Deane** (2011) tested the effects of a three-day MAT on clinicians and its impact on patients' adherence to medication in Australia. Fifty-five clinicians volunteered to participate including 39 nurses; the remaining staff members were made up of other healthcare professionals. Only 36 staff completed the study, with 38 patients providing a full data set at 12 months.

There were significant improvements in clinical measures immediately post-training in knowledge, however variables associated with taking medication showed a deterioration in scores of skill, optimism and work satisfaction at six and 12 months. There was also an improvement in the therapist/patient relationship for goal-setting and agreed task scores between baseline and the six months follow up, and no change thereafter.

There were limitations to this study. The measures used by the clinicians differed from those of the patient participants and so it was difficult to compare and interpret the data. There was no comparison group to compare the findings and hence the results were inconclusive. The participants, clinicians and patients were all volunteers, which may have influenced the positive outcomes.

Bressington, Mui and Wells (2013) conducted a qualitative study to understand how these changes impact upon clinical effectiveness over time to maximise the potential of treatment with medication, and also on the insight gained by Community Mental Health Practitioners (CMHPs).

Interventions: A five-day course of MMT based on the manualised medication adherence approaches and interventions adopted by *Gray et al.* (2006) and three-day clinical practice in Hong Kong.

Sample: 26 CMHPs completed the training programme

Methodology and methods: Concept mapping was used in this study. Data was collected from 10 invited participants to attend a semi-structured interview after nine months about their experience of using MMT techniques and to discuss their perceptions of the process of learning. Inductive content analysis was adopted to

analyse and to report themes and patterns within the qualitative interview data (Braun and Clarke, 2006).

Results: Four themes emerged: 1. barriers to implementation; 2. pharmacology knowledge increases confidence; 3. changes in attitudes approaches towards non-adherence, and; 4. pragmatic uses of manualised interventions.

This study used convenience sampling and concept mapping, a relatively new approach to guide the qualitative interviews. This may suggest that the study is exploratory and therefore its limitations require further investigation.

2.13 Key Methodological Issues

From the above studies, six main conclusive themes emerged:

Theme 1. Studies using interventions relating to the training of MHNs were conducted in different countries: two in London (Gray *et al.,* 2003, 2004); two in Australia (Byrne *et al.,* 2005, 2011); and one each in the US (Byrne *et al.*, 2010) and Hong Kong (Bressington *et al.,* 2013). The Quatro study was conducted in the four European centres of Amsterdam (the Netherlands), Leipzig (Germany), London (England) and Verona (Italy). Different cultures, behaviour and attitudes towards MC might have created different training outcomes if all were conducted in England.

Theme 2. The training was conducted by a variety of expert healthcare professionals. This suggests that the mode of training delivery might have been different, given that the programmes were neither structured nor supported by a comprehensive manual.

Theme 3. Different study measures were used, some without any established psychometric properties; this renders the results of the above studies suspect. These studies were based only on quantitative design and should have benefitted from the integration of qualitative data, which would have provided an alternative interpretation of the data that would have shaped the results with more rigour. Conversely, Bressington *et al.'s* 2013 study used only a qualitative methodology and methods, and may have benefitted from also using a quantitative design.

Theme 4. The cohort of some of the studies included various mental health professionals (Byrne *et al.*, 2010), meaning that the outcomes might have been different if nurses were used exclusively, due to how they are trained and their experience gained through practice.

Theme 5. All the studies were of short duration and the study measures were recorded at different time points and, in that context, the outcomes cannot be generalised.

Theme 6. The structure and content of the courses were not described or tested before the studies, apart from those by Gray *et al.* (2006) and Bressington *et al*. (2013), therefore an assessment of their overall effectiveness cannot be conclusive.

2.14 Summary

From the above emerging themes, it can be seen that a new nursing MC education programme with a clear evidence-based structure and content is needed to teach nurses to improve their knowledge, competency and attitude towards MC. To date, no studies have been conducted using the RP model in MC, although Byrne *et al.* (2004) recommend that RP planning be integrated into the core concepts of the MAT.

The author of this study has over 15 years' experience using the fidelity of the RP model and has conducted two published studies in MH settings (Jumnoodoo *et al.,* 2001; Foster and Jumnoodoo, 2008). These used a structured and RP programme, supported by a comprehensive manual, which has been recently revised and is used in clinical practice (Jumnoodoo and Coyne, 2011). These studies have been significant in patient care and its application in practice. In the Jumnoodoo *et al.* (2001) study the patients showed an increase in motivation, insight and control over their illness and gained important skills, most notably assertiveness at the six months follow up. Other outcomes included a reduction in hospital admissions and duration of stay in hospital as a result of improving compliance with medication. The Foster and Jumnoodoo (2008) study showed no differences in terms of relapse outcomes in the experimental or control groups, apart from knowledge between baseline and 52 weeks improving in the experimental group. Most of the changes were observed during the first 12 weeks. In both studies, the convenience sample used was small and the duration of the study was short.

Despite tentative claims that RP had an effect on improving adherence to medication, this theory needs further investigation into whether knowledge, skill capability, self-efficacy and attitudes of nurses can improve MC after following an RPMC course, providing nurses with additional options to current interventions (Feros *et al.*, 2010) to improve MC in psychiatric services.

Chapter 3 Methodology and Methods

3.1 Steering Groups

Two steering groups were set up to address the central issue of methodology and methods in the theory and practice in the study (Wastell, 2008). Their aims were to receive expert advice on the development, direction and implementation of the design of this research without influencing its fundamental scope and objectives. In that way the steering groups provided a logical approach to the structure and integrative processes of this study (Coughland and Coghlan, 2002).

The recommendations were to use a mixed methods research approach and design that included the quantitative and qualitative techniques to be used in sequence (Cameron, 2009) to provide logical structured and integrative processes (Driscoll *et al*., 2007). The quantitative data were collected prior to the qualitative data and at the eight months follow up. The integration of the qualitative and the quantitative data took place during the interpretation phase of this study, the purpose being to use the qualitative results to explain the quantitative findings (O'Cathain *et al*., 2010). It is recognised that, whilst the results of both methods may differ, the primary purpose is for them to support each other (Walsham, 2006).

3.1.1 Quantitative Steering Group

Advice and guidance were initially sought from the principal academic supervisor, followed up with two experts in the field of RP and research respectively. The aim was to have an improved designed and theorised RPMC intervention and the findings are measured by established and reliable instruments (Hawe *et al.,* 2004). However, since evaluation of interventions can be complex, discussions and agreement from the steering group to confirm the feasibility and potential of the design of this study were established (Bradley *et al.,* 2007; Pelham, 2010). Thereafter, the research approach was presented to a group of postgraduates at Middlesex University for their views and for any amendments that they felt should be made. Notes and comments from the group were noted. Interestingly, most of the comments were on the design of the structured programme, which was explained to them in brief. Another recommendation was to

have two separate flow charts to illustrate clearly the quantitative and the qualitative approaches of this study (Figures 1 and 2 on p. 20 and p. 21).

3.1.2 Qualitative Steering Group

A small advisory steering group was set up. The aim was to search for qualitative strategies for ensuring trustworthiness in this study (Shenton, 2004; Rowlston, 2010). Prior to the focus group, the themes of the questionnaire were shown to nurses and subsequently to selected service users/carers who were *au fait* with RP. The purpose was to bring together personal experiences that would complement the analytical and scientific perspective and enhance the study design (Hewlett *et al.*, 2006). Following feedback from these two forums, the themes were amended and finalised.

3.2 Purpose of the Study

The purpose of the study was to measure the changes in skills capability, self-efficacy and attitudes in MHNs following a two-day RPMC training programme supported by a comprehensive manual**.**

3.3 Research Approach and Design

A combination of qualitative and quantitative techniques was used. The recommendations were to use a mixed methods research approach and design that included the quantitative and qualitative techniques to be used in sequence (Cameron, 2009) to provide logical structured and integrative processes (Driscoll *et al*., 2007). Contrary to traditional methodological 'camps', there is a view that both qualitative and quantitative methods may be used in a research study to good effect (e.g. Howe, 1988; Polit *et al.*, 2001) to yield a more complete analysis by being complementary to each other (Creswell *et al.*, 2004). In this context, mixed methods should follow the research question in providing the best opportunity to obtain useful, needs-based answers (Johnson and Onwuegbuzie, 2004; Tashakkori and Creswell, 2008). In this study, a two-tailed approach was adopted to ensure the significance of the findings either support the hypothesis (Checkland and Howell, 1998; Denis, 2013) of predictions or reject the null hypothesis (Frick, 1996; Stang and Poole, 2013; Piedmont, 2014).

3.4 Hypothesis

The hypothesis of the study is as follows:

- **There is change in skills capability,**

Between Baseline (Point 1), Point 2 and at 8 months follow up (Point 3)

- **There is change in self-efficacy and,**

Between Baseline (Point 1), Point 2 and at 8 months follow up (Point 3)

- **There is change in attitude scores**

Between Baseline (Point 1) and at 8 months follow up (Point 3)

3.5 Null Hypothesis

The null hypothesis of the study is as follows:

- **There is no change in skills capability**,

Between Baseline (Point 1), Point 2 and at 8 months follow up (Point 3)

- **There is no change in self-efficacy and,**

Between Baseline (Point 1), Point 2 and at 8 months follow up (Point 3)

- ***There is no change in attitude scores***

Between Baseline (Point 1) and at 8 months follow up (Point 3).

3.6 Sequential Explanatory Strategy

A sequential explanatory strategy to explain and interpret the findings of the primary quantitative study was used in this study (Ivankova *et al.,* 2006):

RPMC training → **Quan** (Point 1 and Point 2) → **Qual** (10 weeks) → **Quan** (Point 3)

Key

Point 1 – Baseline

Point 2 – Immediately following group

Point 3 – 8 months after delivery of group sessions.

3.7 Setting, Sample and Sampling Methods

This study took place in a large community Mental Health Service in a deprived inner-city area with high demand for inpatient beds.

A combination of convenience and random sampling methods was used. Randomisation was used to create equivalent and representative groups (Gay, 1996). Different services were included to recruit participants who were essentially the same, in that they matched the variables of the inclusion criteria, thus the study was not at the mercy of any sampling bias (Kunz and Oxman, 1998).

3.8 Sample Recruitment Process

The initial intention was to recruit 15–20 qualified community or ward-based nurses (Bands 5/6) who had not received training in RPMC. All these nurses were on the Trust database (72 Band 5 and 60 Band 6). This formed a sampling frame (n=132) and names were placed in an urn. Initially 30 were selected by an independent person. Each of those selected was then invited by letter (Appendix4) to participate in the programme and 25 individuals were recruited in this way. They were then given a consent form to complete (Appendix 5) so that they could make an informed decision to participate in this study (Cahana and Hurst, 2008) after having read the Participation Information Sheet (PIS) (Appendix 6). In the final cohort, the number of participants was reduced to 21. Two left the Trust soon after the RPMC course; one participant did not respond to any questionnaires and another went on maternity leave and subsequently left.

Selection bias was avoided by not allowing self-selection by individual nurses, thus giving them an equal chance of being selected.

The inclusion and exclusion criteria as identified below were restricted, so as to produce stronger results by limiting the sampling frame to those who would potentially benefit the most from this study (Richter *et al.,* 2011).

3.9 Inclusion Criteria

Inclusion criteria were that participants were Band 5 and 6 and Registered Mental Health Nurses who had not previously undergone accredited academic training in any of

the following: post-registration training in motivational interviewing, CBT, RP, MC or Social Learning Theory.

3.10 Exclusion Criteria

Exclusion criteria were as follows:

- Non-qualified nurses
- Qualified nurses employed from a bank or agency, not working in a full-time capacity
- Nurses who had previously undergone accredited academic training in any of the following: post-registration training in motivational interviewing, CBT, RP, MC and/or Social Learning Theory.

3.11 Ethical Issues

3.11.1 Research and Development Compliance

The project complied with IRAS (Integrated Research Application System) and local R & D (Research and Development) procedures of the North Central London Research Consortium (Appendix 7). This is in line with the well-established Research Ethics Committee (REC) system that operates within the National Health Service (Department of Health, 2005; National Patient Safety Agency (Department of Health, 2007). Together they set the standards of improving research quality, promoting good practice and above all ensuring the safety of the research participants at all stages of the study.

The local R & D reviewer requested one minor amendment relating to the scale, in which 1= Negative and 5= Mostly Positive to Change. Change was implemented to the Likert scale with 1= Strongly Disagree to 5= Strongly Agree. As a result, the wording of the questions had to be modified somewhat to accommodate this change. Notwithstanding, three main ethical issues in the study were envisaged.

3.11.2 Independence of Researcher and Research Assistant

The applicant (RJ) delivered the programme and took no further part in data collection. All quantitative data collection was facilitated by an independent researcher employed for the study and RJ left the room when any data was collected. The purpose was to ensure the integrity and veracity of the collected data without being influenced by the

principal researcher, RJ (Deangelis and Fontanarosa, 2010). Furthermore, RJ took no part in the delivery of the focus groups, and a similar process was undertaken to collect the qualitative data.

3.11.3 Data Protection

The participants were informed that they would be given a code known only to the research assistant who would enter the data onto a computer. This was so the research assistant could ensure follow-up data related to the correct individual. Thereafter, all data was recorded, stored and analysed according to the requirements of the Data Protection Act, 1998. Specifically, all computerised data would be password protected and any transcription tapes stored securely in a locked drawer. Finally each participant was informed that the focus group data would be reported in such a way that anonymity could be preserved.

3.11.4 Confidentiality

We followed the notion that anonymity should be the default position, and this was observed throughout the study (Grinyer, 2002). Grinyer advocates a guiding principle that participants need to be in control of the disclosure of their identity and their contribution. Other information that can help to identify people, for example job title, age, gender, length of service, membership of clubs and strongly expressed opinions, was kept to a minimum. The belief is that the fewer pieces of information are presented together, the more difficult it is to identify someone.

3.12 Data Collection Methods

Data were collected from participants at Point 1, 2 and 3. Those from the RPMC Skills Capability Questionnaire, the Self-efficacy (SE) Questionnaire and the Leeds Attitude towards Concordance Scale (LATCon) were analysed at different times. The first two were analysed at Point 1, Point 2 and Point 3. However, the LATCon questionnaire was only administered at Points 1 and 3. These intervals were chosen to detect and analyse meaningful effects of RPMC on the dependent variables (Gill *et al*., 2008). The qualitative data collection at 10 weeks post-RPMC was carried out to keep it apart from the administration of the qualitative surveys, which would risk the participants being influenced by their answers (Li *et al*., 2011) (refer to Figures 1 and 2 below).

Figure 1: Quantitative Flow Chart

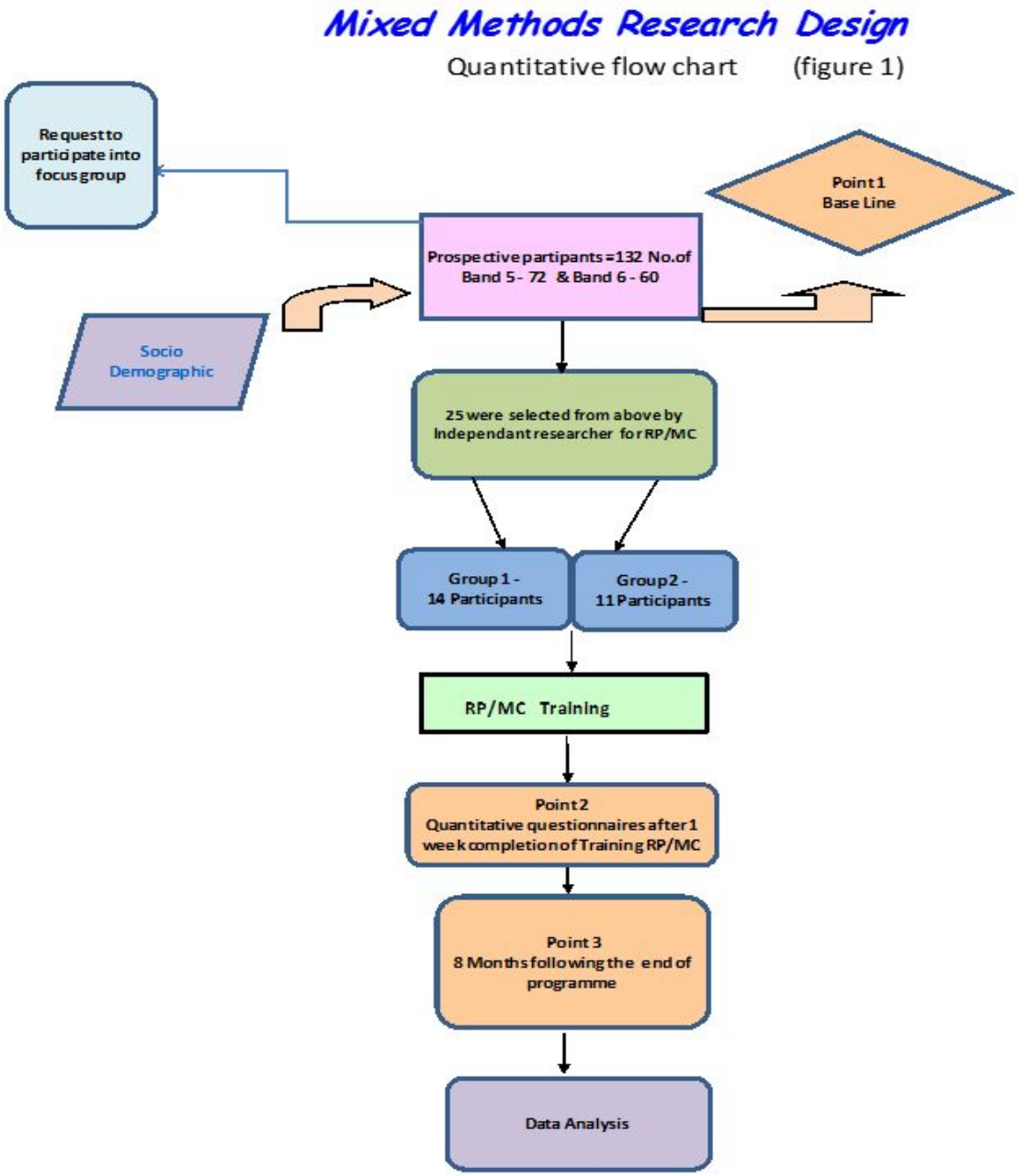
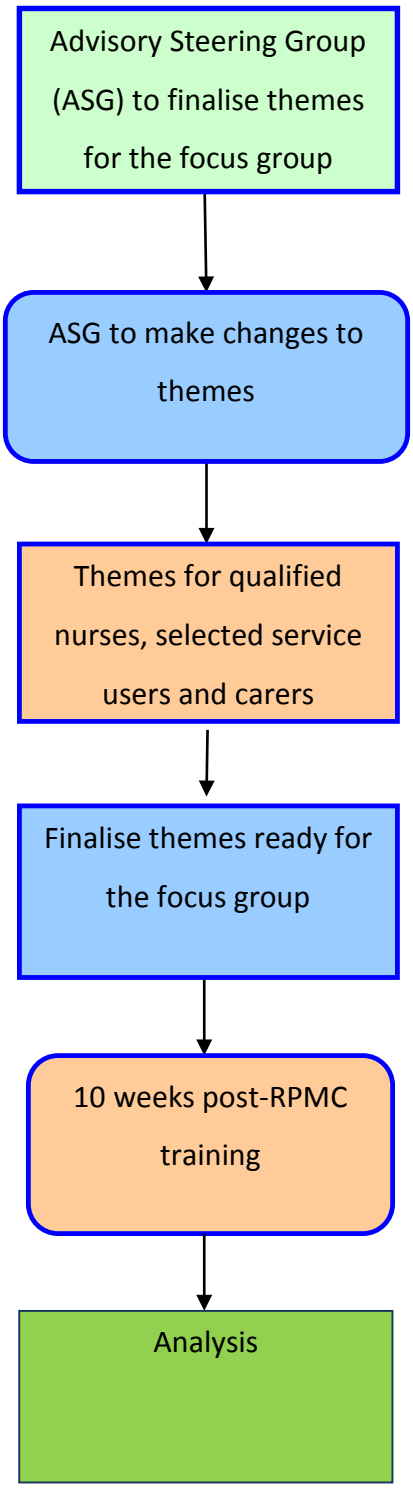


Figure 2: Qualitative Flow Chart

Mixed Methods Research Design



3.13 Demographics

Socio-demographic data was collected, including age, gender and highest level of education. In addition, each participant was asked to complete three surveys. The demographic group characteristics were limited to a few questions to protect the participants' identity and safety. They were randomly selected to create equivalent and representative groups of different services, which were essentially the same in matching the variables of the inclusion criteria of Data Protection Act (1998).

3.14 Data Collection Methods

3.14.1 Phase 1 – Quantitative Methods

Three study measures were used to score changes in participants' skills capability, self-efficacy and attitudes to RPMC at Point 1, Point 2 and Point 3.

3.14.1.1 Study Measures

1) **General Self-efficacy Scale (Appendix 8),** which has established psychometric properties, was developed by Schwarzer (1993). It is a 10-item scale designed to assess optimistic self-beliefs to cope with a variety of difficult demands in life. It measures the belief that one's actions are responsible for successful outcomes. The questionnaire is short (10 items) and takes five minutes to complete. It is recommended that not too much time is spent on each individual statement.

2) **Leeds Attitude towards Concordance Scale (LATCon) (Appendix 9)** (Thistlethwaite *et al*., 2003) describes the psychometric properties of the LATCon, which is used to measure attitudes of nurses towards patients and MC. However, a small adaptation was made to the LATCon scale by substituting the term 'nurse' for 'doctor' and 'service user' for 'patient' in the current study. It consists of 12 items, each scored on a four point Likert scale and thus the range of scores is 12–36. An item score of 2–3 means that the participant agrees with the principle of concordance.

Permission was obtained from the authors of the Self-efficacy and the LATCon questionnaires **(Appendix 10),** included in the frequency distributions in the next chapter.

3) **The Skills Capability Questionnaire (Appendix 11)** was designed for this study to measure the content of the RPMC course. To date, no work has taken place to measure its psychometric properties. A modified Likert scale of 1–5 was used, 1 being Strongly Disagree, 5 being Strongly Agree and 3 being Neutral. The scoring was analysed at Points 2 and 3 to find out if there had been a change in nurses' attitudes towards MC.

3.14.1.2 Data Analysis Methods

The main analysis was to investigate changes at Point 1 and Point 3 to establish whether any change in nurses' skills capability, self-efficacy and attitudes occurred as a result of the RPMC training.

The data were analysed using the Statistical Package for Social Sciences (SPSS). Non-parametric tests were used, in this case a two-tailed Wilcoxon Signed Rank Test (WSRT) that measures the strength, or otherwise, of 'within-group' changes. The WSRT was chosen because of the abnormal data distribution and the small sample size that required non-parametric testing. As this was a small sample, statistical power was not claimed as the effects are harder to detect in a small sample (Button *et al.*, 2013). The Wilcoxon test was used for the within-group analysis because there were repeated measurements on a single sample to assess whether their population mean rank differed from Point 1, to Point 2 and Point 3. It also provided the median and range for comparisons, along with the *P*-value. For more details, see Appendix 12.

3.14.2 Phase 2 – Qualitative methods

In order to explore the impact of the programme and to gain further insight (Krefting, 1991) into the 'real practice world', the five participants in this qualitative study were volunteers and, as it happened, they came from three different services. Consequently, views obtained of the impact of RPMC in practice were broadly realistic in the thematic analysis and integration phase of this study.

When the participants had initially been recruited onto the study a specific question was posed as part of the consent procedure, asking the participants whether or not they were prepared to take part. The interval of 10 weeks was chosen, as to have

integrated this with the administration of the surveys would risk the participants being influenced by their answers.

3.14.2.1 Data Collection Methods: Qualitative Steering Groups

This group was set up to devise the questionnaire and obtain accurate information relating to the level of knowledge, attitude, personalities and beliefs, or preferences (Leung, 2001). A small advisory steering group was chaired by a nurse consultant who had been involved with the project since its inception, along with the principal research applicant, an academic, a qualified nurse, a service user and a carer. It was convened following the programme to finalise the themes for the qualitative interview guide (Appendix 13).

An interview guide was used, whereby the same questions with the same wording and in the same sequence were asked of all respondents (Corbetta, 2003). In other words, the interviewees were presented with the same context of questioning (Aboraya, 2009).

The interviews of the focus group participants were conducted by two independent researchers, one to facilitate the discussion and a second to take notes regarding his or her interactions. To that effect, an interview guide was developed (Appendix 14) and finalised (Appendix 15) and training was provided to the interviewers to conduct the interviews in a systematic approach. The process was rehearsed until they felt sufficiently confident to conduct the interviews.

3.14.2.2 Data Analysis Methods

Following transcription, the transcripts were examined to extract themes using the framework set out by Braun and Clarke (2006). Thematic analysis (TA) is a method of identifying, analysing, reporting and interpreting various patterns or themes within the data (Boyatzis, 1998). The data were analysed in the following forms: interview transcripts; field notes; and audio recordings. Themes may be directly observed from data or may be seen at an underlying level. In this way it can be seen how the researcher made decisions on what I wanted to know from the data collected.

In order to ensure quality assurance, a nurse consultant educated to doctorate level helped me to examine the transcripts to derive themes. Thereafter, we met to negotiate, and finally to agree them.

Once the reflective quotes were received, I familiarised myself with them by going over them several times so that I could work out the themes emerging from the answers. As part of the TA, I devised a structure process with outcome measures leading to the persuasive theme. This structured approach included: Level 1 coded extract; Level 2 merging themes; and Level 3 naming the themes. The analytic process described the various stages from the interviews leading to the framing of the themes. This included the interpretation of themes, summaries arising from each question and the themes emerging from each summary, before naming the final or critical theme. Finally, there was a discussion and presentation leading to the persuasive theme of this thematic analysis. All aspects of the thematic analysis are presented in Chapter 4, Part 2, which in turn forms part of the data integration.

3.15 Data Integration – Qualitative and quantitative data

The integration of the qualitative and the quantitative data took place in the interpretation phase of this study, with the purpose being to use the qualitative results to explain the quantitative findings. It is recognised that, whilst the results of both methods may differ, their primary purpose is to support each other (Walsham, 2006).

As one method fits within another, this provided more insight into different levels of analysis (Tashakkori and Creswell, 2008). Another benefit of using such an integration technique was to increase my confidence about the validity of the results by testing alternative interpretations of the data that could shape the results. Quantitative and qualitative data may also be inconsistent with each other, in which case they can provide fresh insights into the outcomes of inquiry leading to the development of new knowledge for further research.

This richness could not have achieved using a single method (Tashakkori and Teddlie, 2003; Teddlie and Tashakkori, 2009). Tashakkori and Teddlie point out that divergent and complementary views can trigger deeper examination of the findings and therefore

open the door to future enquiry, leading to a holistic view that RPMC may have on inter-relationships, skills, self- efficacy and attitude change at Point 3.

Despite a robust design, any research method has its limitations; biases inherent in any single method may neutralise or cancel the biases of other methods. This is based on the notion that quantitative researchers attempt to eliminate bias, whilst qualitative researchers make an explicit acknowledgement of bias (Creswell, 2003).

Chapter 4 Section 1

4.1 Results of the Quantitative Data Analysis

A brief overall description of the group demographics was presented. This is followed by the routine evaluation and analysis of the RPMC course as perceived by the participants. Due to the small sample size, only the medians and range values were used to measure the changes in skills capability, self-efficacy and the attitudes at different time points. In order to analyse any within-group changes in total scores, two-tailed Wilcoxon tests were computed and results of any significance findings presented. To conclude, the overall results of changes in measures of skills capability (SC), self-efficacy (SE) and attitudes (LATCon) at different points in time will be presented in diagrammatic form, followed by a discussion (see Sections 4.4 to 4.10 below). This is to help with the development and understanding of the changes that took place, and to enhance self-reflection during the course of the quantitative analysis (Hay and Kinchin, 2008).

4.2 Experimental Group Demographic Characteristics

The total number of participants in the experimental group was 25. This cohort was comprised of 14 (56%) males and 11 (44%) females, with a range of 29–61 years and a median of 45 years. Participants had various qualifications: 15 (60%) were RMNs only, five (20%) had postgraduate MSc or MA, three (12%) had a Diploma in Higher Education, whilst two (8%) were operating as RMN specialists.

4.3 Routine Relapse Prevention/Medication Concordance (RPMC) Course Evaluation

The two-day RPMC training took place on two occasions as there were 25 participants in total and we could not accommodate them in a single room, so divided them into two groups. At the routine course evaluation, soon after the course ended, the participants were asked to answer 18 individual closed questions (Appendix 16). In addition, the participants were invited to make comments on four open-ended questions relating to the course itself. They were asked to tick their responses by choosing the appropriate number on a Likert scale of 1–5, with 1 being most negative and 5 being most positive. The results of the routine evaluation were presented in two parts:

1. To find the mean, median, standard deviation and range of each question, along with an explanation for the lowest and highest scores, and
2. To merge the answers of the participants in the form of text and to see the emerging themes and concepts that help to understand the scores of Q1–18.

Table 1: Routine Relapse Prevention/Medication Concordance (RPMC) Course Data Analysis (Routine Feedback)

Qs	Do you have better understanding of:	Mean	Median	SD	Range
1a	Engagement	4.24	4.00	0.60	3-5
1b	The Relapse Prevention **(RP)** model	4.04	4.00	0.61	3-5
1c	High-risk situations	4.12	4.00	0.67	3-5
1d	Difference between lapse and relapse	4.28	4.00	0.68	3-5
1e	Early warning signs **(EWS)**	4.20	4.00	0.65	3-5
1f	Managing stress	4.00	4.00	0.65	3-5
1g	Managing faulty thoughts	4.00	4.00	0.76	3-5
1h	Rule-violation Effect **(RVE)**	3.92	4.00	0.64	3-5
1i	Developing a lifestyle balance	3.92	4.00	0.75	2-5
1j	Problem- solving	4.04	4.00	0.61	2-5
1k	Medication Concordance	4.36	4.00	0.64	2-5
1l	Assess medication non-concordance:	4.16	4.00	0.75	2-5
1m	Apply relapse prevention techniques in medication non-concordance	4.12	4.00	0.88	2-5
1n	Measure the relapse prevention/medication concordance **(RPMC)** effectiveness	3.92	4.12	0.76	4-5
1o	Was your interest sustained throughout the training	4.28	4.00	0.68	3-5
1p	Would you recommend this course to others?	4.60	4.00	0.75	3-5
1q	Would you recommend this trainer to others?	4.36	5.00	0.50	3-5
1r	Overall, how would you rate the course?	4.32	4.00	0.70	4-5

Table 1 shows the results of the routine feedback sheet that all participants were asked to complete at the end of the RPMC. These data relate to the study participants only.

The average (mean) value is 4.16 (sum total of all the mean values divided by 18) and the average median value is 4.06 (sum total of all the median values divided by 18). This suggests the effects of the training were beneficial and valued, and that participants have a greater understanding of the concepts used in MC. The small SDs also indicate there was a minimal spread of data. The lowest mean scores (3.92) (17%) were in statements 1h (*Understanding of RVE*), 1i (*Developing a lifestyle balance*) and 1n (*Measure the RPMC's effectiveness*) (16.7%) compared to the rest of the scoring at mean values between 4–4.6. Statements 1h, 1i and 1l (*Assess medication non-concordance*) are relatively new concepts used in MC and therefore participants may not be familiar with them, which is the most likely explanation for the comparatively low mean values.

4.4 Questionnaires and Data Analysis

Initially, an analysis of the individual questions by the group was carried out. This was to ensure that, by comparing the scoring at different stages, a more complete picture of the development of participants might be formed. This meant analysis of the median and range values. In order to establish whether there were any within-group changes in total scores, two-tailed Wilcoxon tests were computed. On this occasion differences in median and range values are computed to take account of the small sample size.

4.4.1 Changes in Total Skill Capability Scores

These results are shown in Table 2. There was a significant difference between Skills Capability scores at Point 1 and at follow up Point 2 (Point 1) (n=21), (45, 30-58; Median, Range); (Point 2: (n=15) (52, 39-65; Median, Range) (p=0.002). Of greater import was the finding that there was a significant difference in Point 1 and Point 3 scores; (Point 1) (n=21,) (45, 30-58; Median, Range); (Point 3) (n=1,) (56, 42-65; Median, Range) (p=0.001), as this indicates the improvement is maintained. There was no significant difference or strong evidence in scores between follow up at Points 2 and 3 (p=0.444).

Table 2 shows the changes in individual skills items over the study period.

Table 2: Skills Capability Questionnaire Data Analysis

Skills Capability Data Analysis		Baseline (Point 1)		Point 2		Point 3	
Q	**Statements**	**Median**	**Range**	**Median**	**Range**	**Median**	**Range**
2a	Skills to engage with SUs in MC	4.00	2-5	4.00	3-5	5.00	4-5
2b	Skills to convey information on MC to SUs	4.00	2-5	4.00	3-5	5.00	4-5
2c	Skills to motivationally interview SUs to promote MC	3.00	2-5	4.00	3-5	4.00	3-5
2d	Skills to engage SUs in RP planning	4.00	2-4	4.00	3-5	4.00	3-5
2e	Skills to select appropriate techniques to promote MC with SUs	3.00	2-5	4.00	3-5	4.00	3-5
2f	Skills to select appropriate techniques to RP plan with SUs	3.00	2-5	4.00	3-5	4.00	3-5
2g	Skills to identify high-risk situations (HRS) of non-MC with SUs	4.00	2-5	4.00	3-5	4.00	3-5
2h	Skills to plan with SUs to improve their MC	4.00	2-5	4.00	3-5	4.00	4-5
2i	Skills to enable SUs to identify their EWS of non-concordance with their medication plan	4.00	2-5	4.00	3-5	5.00	3-5
2j	Skills to explore and manage stress, faulty thinking and Rule Violation Effect (RVE) with SUs as part of RP planning	3.00	2-4	4.00	3-5	4.00	3-5
2k	Skills to develop lifestyle balance with SUs as part of RP planning to support their plan for MC	3.00	2-4	4.00	3-5	4.00	3-5
2l	Skills to help SUs to plan an MC plan	4.00	2-5	4.00	3-5	4.00	3-5
2m	Skills to plan with service users an RP plan to ensure the implementation of their MC plan.	4.00	2-5	4.00	3-5	4.00	3-5

Comparison of the group for the individual questions of skill capability at Point 1 of the RPMC course and at Points 2 and 3.

4.5 Analysis of Skill Capability Median Scores

The reader is referred to Table 2.

Due to the small numbers and the number of variables, the quantitative analysis will concentrate on those changes between Point 1 and Point 3.

There was an increase in medians against Point 1 and Point 3 for statements 2a, 2b and 2i (*Skills in engagement, with SUs in MC*). This can mean an improvement in negotiating skills and inspiring confidence involving sharing information to SUs, and providing them with a more structured RPMC plan.

There were no increases in medians for statements 2d, 2j, 2h, 2l and 2m against Point 1 and Point 3 (S*kills in management and planning in developing and improving SUs MC plan*). As for questions 2d, 2g, 2h, 2l, and 2m, the median at Points 1, 2 and 3 were constant at the score of 4. Although the score points towards being beneficial and valued, there is a need to examine whether group or individual supervision and refresher courses can either sustain or improve this score over time.

4.6 Changes in Total Self-efficacy Scores

Table 3 shows statements that relate to individuals' self-efficacy, beliefs and confidence in dealing with problem solving and coping abilities.

Again, to establish whether there were any within-group changes in total scores, two-tailed Wilcoxon tests were computed. There was a significant difference between Self-efficacy scores at Point 1 and Point 2; (Point 1) (n=19,) (28, 18-40; Median, Range); (Point 2) (n=16,) (34, 26-40; Median, Range) (p=0.041). Of greater import was the finding that there was a significant difference in Point 1 and Point 3 scores; Baseline (Point 1) (n=19,) (28, 18-40; Median, Range); (Point 3) (n=15,) (35, 27-39; Median, Range) (p=0.026). This suggests the participants understand the use of RP concepts in MC. Furthermore, it indicates their skills, beliefs and confidence in understanding strategies used to engage and to motivate SUs to gain control over their medication increased after the RPMC course and that this improvement was maintained. Meeting

the needs of the group through increased awareness, with demonstration to assess non-compliance of medication and the implementation of a methodical and structured plan met, was significant. Changes in individual item self-efficacy scores are shown in Table 3.

Table 3: Self-efficacy Questionnaire Data Analysis

Self-efficacy data Analysis		Baseline (Point 1)		Point 2		Point 3	
Q	**Statements**	**Median**	**Range**	**Median**	**Range**	**Median**	**Range**
3a	I can always manage to solve difficult problems if I try hard enough	3.00	1-4	3.00	2-4	3.00	2-4
3b	If someone opposes me, I can find means and ways to get what I want	2.00	1-4	3.00	1-4	3.00	1-4
3c	It is easy for me to stick to my aims and accomplish my goals	3.00	2-4	3.00	3-4	3.00	2-4
3d	I am confident that I could deal efficiently with unexpected events	3.00	2-4	3.50	2-4	4.00	3-4
3e	Thanks to my resourcefulness, I know how to handle unforeseen situations	3.00	2-4	3.50	2-4	3.00	2-4
3f	I can solve most problems if I invest the necessary effort	3.00	1-4	3.50	3-4	4.00	3-4
3g	I can remain calm when facing difficulties because I can rely on my coping abilities	3.00	2-4	3.50	3-4	4.00	3-4
3h	When I am confronted with a problem, I can usually find several solutions	3.00	2-4	3.00	2-4	3.00	2-4
3i	If I am in trouble, I can usually think of something to do	3.00	2-4	3.00	2-4	4.00	2-4
3j	No matter what comes my way, I'm usually able to handle it.	3.00	2-4	3.00	2-4	4.00	2-4

4.7 Analysis of Self-efficacy Median Scores

There were changes between Points 1 and 3 and increases in median ratings for statements, 3b, 3d, 3f, 3g, 3i and 13j (s*tatements relating to problems, confidence, self-belief in problem solving, coping abilities and confidence in dealing MC*). These improvements in self-efficacy suggest a change in approach to their practice, ability to gain SUs' confidence in taking control of their medication and to help them to solve other problems such as side-effects of medication, finance and housing. The changes seemed to happen because of regular contact with course participants discussing issues relating to MC and also providing them with literature materials to facilitate their own progress in practice.

There was no change in medians between Point 1, Point 2 and Point 3 in statements 3a, 3c and 3h (*statements that relate to group participants self- beliefs and solving problems*). This suggests they believe in their own self-efficacy, but not wholeheartedly, and those three areas need to improve. This may be due to a lack of knowledge and experience in dealing with unexpected problems such as cultural issues and the conflicts of using drugs and alcohol rather than their prescribed psychiatric drugs.

Statement 3e (*Handling unforeseen situations*) showed an initial increase in medians at Point 2 and then a decline at Point 3. The participants believed they were able to solve unforeseen problems a week after the course, but over 8 months there was no further improvement in their self-efficacy due to possible barriers of putting MC into practice.

Statement 3b (*Opposition, conflict, confidence and self- efficacy*) showed the largest increase in median ratings between Point 1 and Point 2, but no further increase at Point 3. The reason for this is unclear. Statements 3i (S*elf-belief in getting out of difficult situations*) and 3j (*Confidence in handling difficult situations*) did not show an increase in median rating until Point 3. This suggests that there had been a period of reflection and increase in experience to improve practice and, as a result, growing confidence and belief in dealing with personal matters relating to MC.

4.8 Changes in Leeds Attitude towards Concordance (LATCon) Total Scores

The median and range values are computed in recognition of the comparatively small sample size. There was a significant difference between LATCon scores at Point 1 (n=20) (45, 35-59; Median, Range) and at Point 3 (n=17) (53, 42-60; Median, Range) (p=0.007). Changes in individual items Leeds Attitude scores are shown in Table 4

Table 4: Leeds Attitude towards Concordance Scale (LATCon) Data Analysis

LATCon Data Analysis		Baseline (Point 1)		Point 3	
Q	**Statements**	**Median**	**Range**	**Median**	**Range**
4a	Nurse-SU consultations should be viewed as negotiations between equals	4.00	3-4	4.00	2-5
4b	Nurses should respect SUs personal beliefs	4.00	2-4	5.00	2-5
4c	The best use of medicine is when it is what the SU wants and when it is likely to achieve the desired results	3.00	2-5	5.00	3-5
4d	Dispensing medication can be viewed as an experiment carried out SU under the guidance of the prescribing doctor just as taking medication is an experiment carried out by patients	3.00	1-4	3.00	1-5
4e	Nurses should allow SU to discuss their thoughts and feelings about their illness and how it should be treated	4.00	3-5	5.00	3-5
4f	Improved health would result from co-operation and mutual respect between nurses and patients	4.00	2-5	4.00	3-5
4g	It is important that nurses and SU establish an agreement about the need for medication	4.00	3-5	5.00	4-5
4h	Nurses should take account of SU's needs, desires and abilities when discussing medication	4.00	3-5	5.00	4-5
4i	The most important decision during the nurse-service user's consultation is that of the patient	4.00	3-5	5.00	3-5
4j	Nurses should be more sensitive to the reactions of service user towards information given regarding their treatment	4.00	2-5	4.00	3-5
4k	Nurses should learn about the beliefs held by service user about their medication	4.00	3-5	5.00	4-5

4.9 Comparison of the Group for the Individual Questions of LATCon Questionnaire Data Analysis at Points 1 and 3

4.9.1 Analysis of LATCon Median Scores

Statements 4a, 4f, 4j, and 4d that relate to *Attitude change in consultation/negotiation, co-operation with respect to patient centred approach and perceptions by SUs viewing taking medication is an act of experimenting by them* all saw no increase in the median rating at between Point 1 and Point 3. However, it must be noted that, with the exception of 4d, the Point 1 median was high anyway. Statement 4c (*Meeting patients' expectation*) underwent a major jump in median between Point 1 and Point 3, suggesting that staff views changed notably as a result of training at eight months follow up. Eight of the 12 variables (66.7%) areas showed an increase in the median rating, which suggests a change in attitude towards MC.

4.10 Changes in the Skill Capability, Self-efficacy and (LATCon) Scores

In this case the mean scores of the Skills Capability, Self-efficacy and LATCon questionnaires were plotted on a graph (Figure 3). It clearly shows that the mean scores rose in all three independent variables at three time points, with the exception of the LATCon scores measured at Point 1 and Point 3. It must be noted that some data were missing in the administration of questionnaires at Point 1, 2 and 3. The statistics are shown in Table 5. The tendency is for all the changes to occur at Point 2 (where relevant). The skills scores show a small non-significant change between Point 2 and Point 3 (p=0.444); in contrast the change in self-efficacy score between Point 2 and Point 3 is significant (p=0.05).

Figure 3: Study Measures over Time

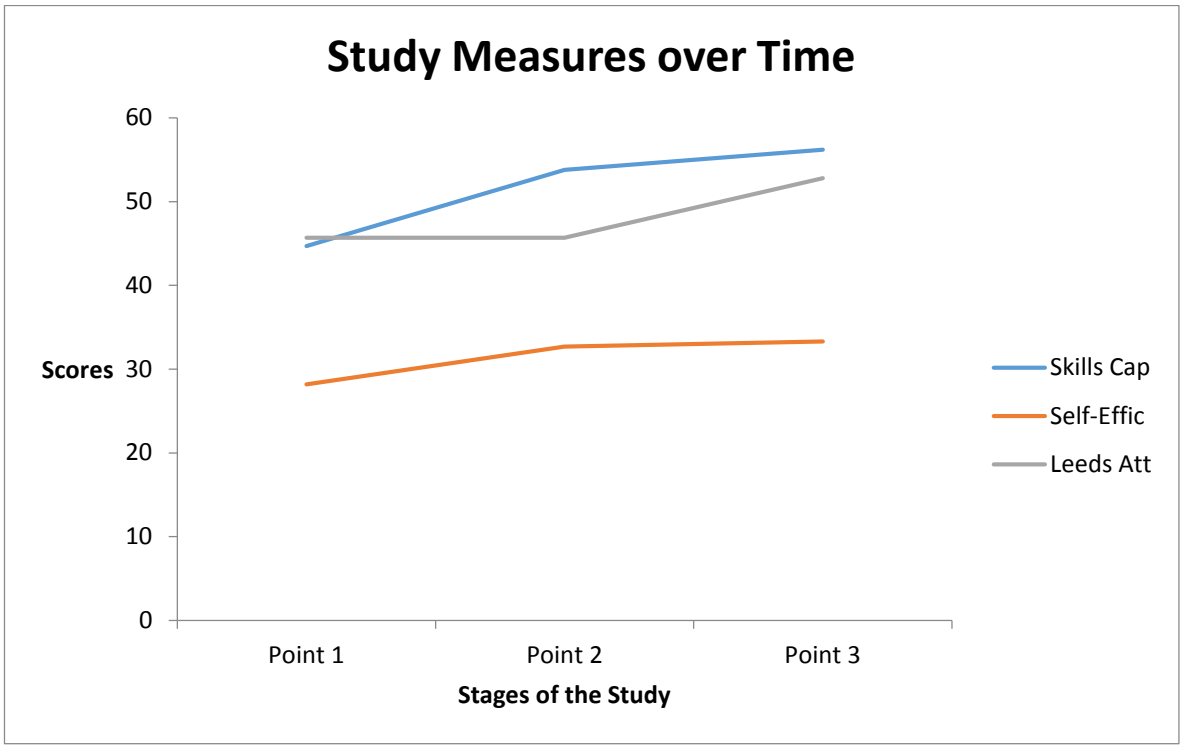


Table 5: Study Measures over Time

	Point 1		Point 2		Point 3	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
Skills Capability	44.71	7.80	53.87	7.00	56.24	6.45
Self-efficacy	28.26	6.11	32.69	4.51	34.33	3.70
Leeds Attitudes	45.70	7.24			52.76	5.44

Self-capability Point 1: n= 21; Point 2 n=15, Point 3 n=15.

Self-efficacy Point 1: n=19; Point 2 n=16; Point 3 n=15

LATCon Point 1: n=20; Point 3 n=17

4.11 Summary

The findings from the quantitative data were presented in text and diagram format to highlight significant changes in RPMC evaluation, and changes in skills capability, self-efficacy and attitudes at different time intervals.

The mean, median values and SD all pointed towards the RPMC course as being beneficial to the nurses in skills acquisition, self-efficacy and attitude changes. This led to significant improvement in their skills capability scores at Point 1 and Point 3; p=0.001, but no significant difference at Point 2 and Point 3, p=0.444. Similarly, there was also a significant difference in self-efficacy scores between Point 1 and Point 3 scores, p=0.026, with a noteworthy significant difference in scores between Points 2 and 3; p=0.05. The difference in LATCon scores at Points 1 and 3, p=0.007 was equally significant, supported by the fact that eight of the 12 (66.7%) areas showed an increase in the median ratings, suggesting a change in attitude towards MC.

The data suggest that the improvement in attitude is maintained at eight months. However, it is important to remember that this variable was not assessed at Point 2. The changes in the other variables are of note. The self-efficacy scores improved from baseline to Point 2, and from Point 2 to Point 3. This suggests that the improvement in self-efficacy is maintained over the eight month period. In contrast, the improvement in skills and knowledge took place largely in the early part of the study; although there is an improvement in scores between Point 2 and Point 3, it is not significant. This indicates that booster sessions in skills and knowledge may be beneficial.

Chapter 4 Section 2

4.12 Background

For the purpose of the qualitative study, investigation of the views of nurses about the changes on their skills, self-efficacy and attitudes by thematic analysis (TA) was conducted. Five participants from the focus group were interviewed 10 weeks after the RPMC course. Their interviews were audio recorded and then transcribed. This was followed by the TA of their individual responses reflecting their views, experience, knowledge, skills, attitudes and effects on their career. They were asked if they wanted to contribute anything towards the research questions. Each participant was asked to indicate agreement with questions (Appendix 17) by answering either 'yes' or 'no'. This was followed by an open-ended question where reflective quotes by participants were taken for the TA using an adaptation of Braun and Clarke's (2006), six-phase guide.

4.13 Why Braun and Clarke?

Methods used to identify and interpret respondent views by TA can be complex, for instance using inductive techniques such as grounded theory, designed to identify categories and concepts within the text (Lingard, 2008). Currently researchers acknowledge there is no best specific method, but that there are different tools used across different methods in TA (Holloway and Todres, 2003). Braun and Clarke's work is well researched and has been used by researchers over two decades. Their model provides a core flexible approach with examples of the application of TA and good theoretical backing, including use of their own experience. This enabled me to account for the 'hows' and 'whys' of doing this TA in a clear, consistent and coherent manner (Thomas and Harden, 2007), making my own assumptions to provide a persuasive argument for my findings.

4.14 My Approach to Thematic Analysis

Being a novice in TA, I had to make sense of the reflective quotes through structure and process to eventually name the theme. The initial process, as illustrated in Figure 4 below, was to examine the best way to begin this analysis, which required:

The initial mapping of the stages from the data corpus to naming the end theme (all concepts are explained below),

Data Corpus: All interview data x 5

Data Set: Data used for analysis only

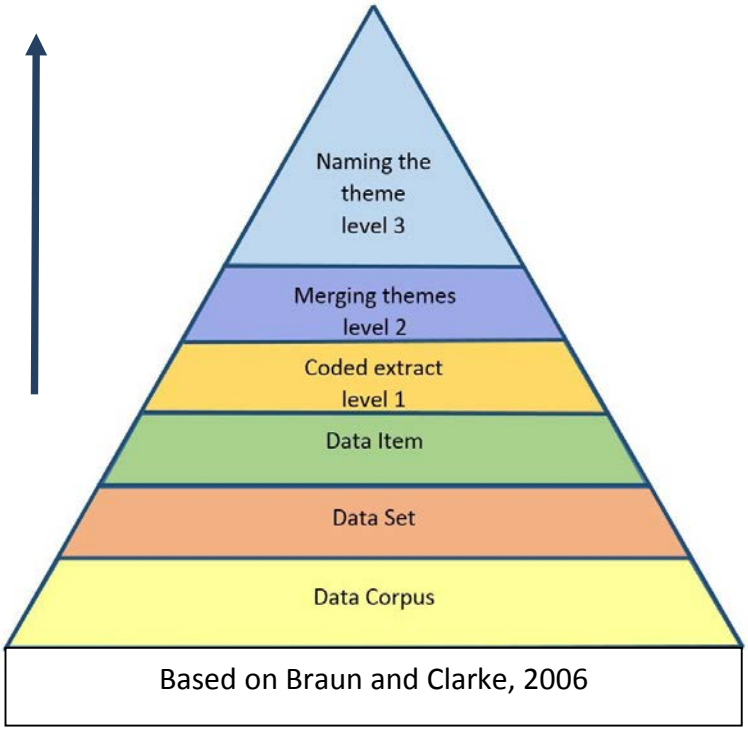
Data Item: Quotes - Typed text of interviews

Coded Extract: Themes from quotes (Level 1)

Merging Themes: Themes from quotes (Level 2), and

Naming the Theme: Contextualising the combination of all the meanings extracted from the themes (Level 3).

Figure 4: The Structured Approach to Thematic Analysis



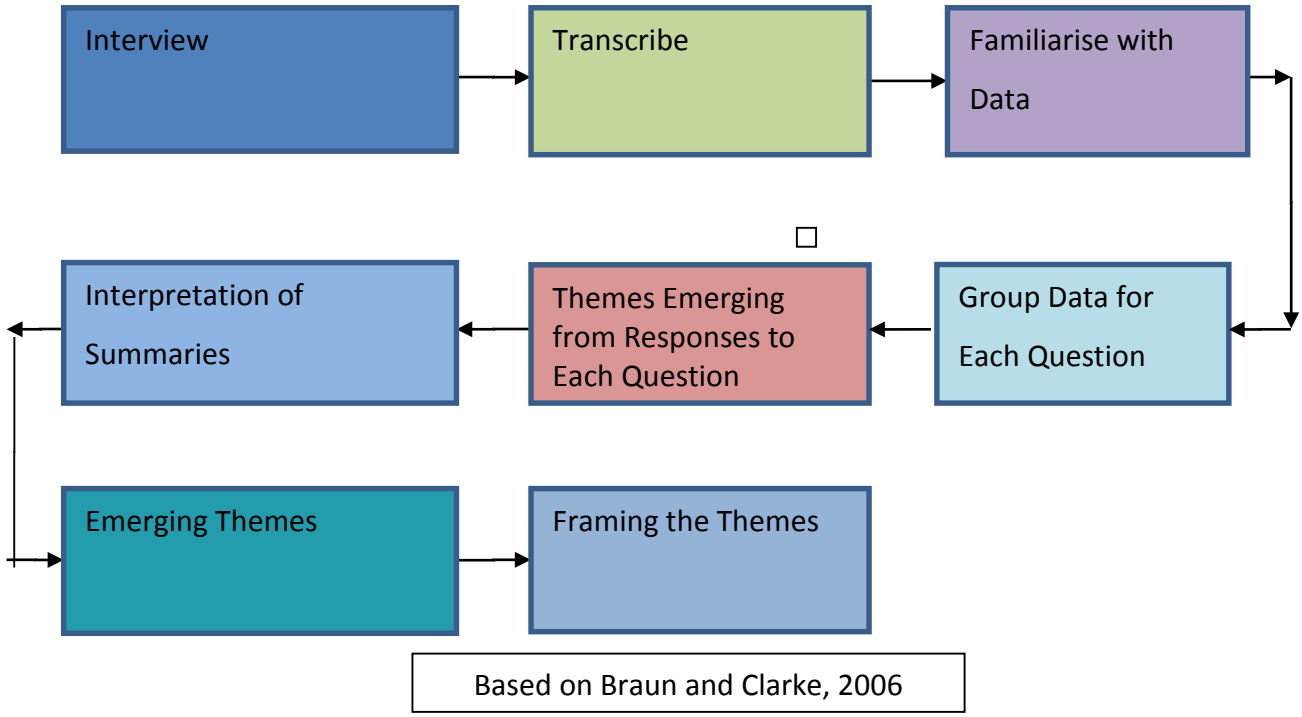
4.14.1 The Thematic Analysis Process

From the quotes collected from the interviews of the five focus group participants, it was obvious that analysis of the transcripts was complex, and grouping responses from individual questions enabled me to remember and familiarise myself with the data (Appendix 18). From there, I inserted the data in a table format with my interpretations of the meaning of the quotes. This was followed by a summary of my overall

interpretation of the questions. This process was repeated for the other five questions. After completing that task, I was able to analyse and detect any patterns in the views of the participants that would require further investigation.

My initial interpretation was that respondents' answers to the questions were in general similar, but that the way they described them and the examples provided were different. In that context, I felt reassured that they were accurately describing their experiences and, as they worked in different services, it was unlikely that they had been able to discuss their responses as a group in order to present similar answers to the questions. In this case, validation of their approach to the thematic analysis was not in dispute. This process is illustrated in Figure 5 below.

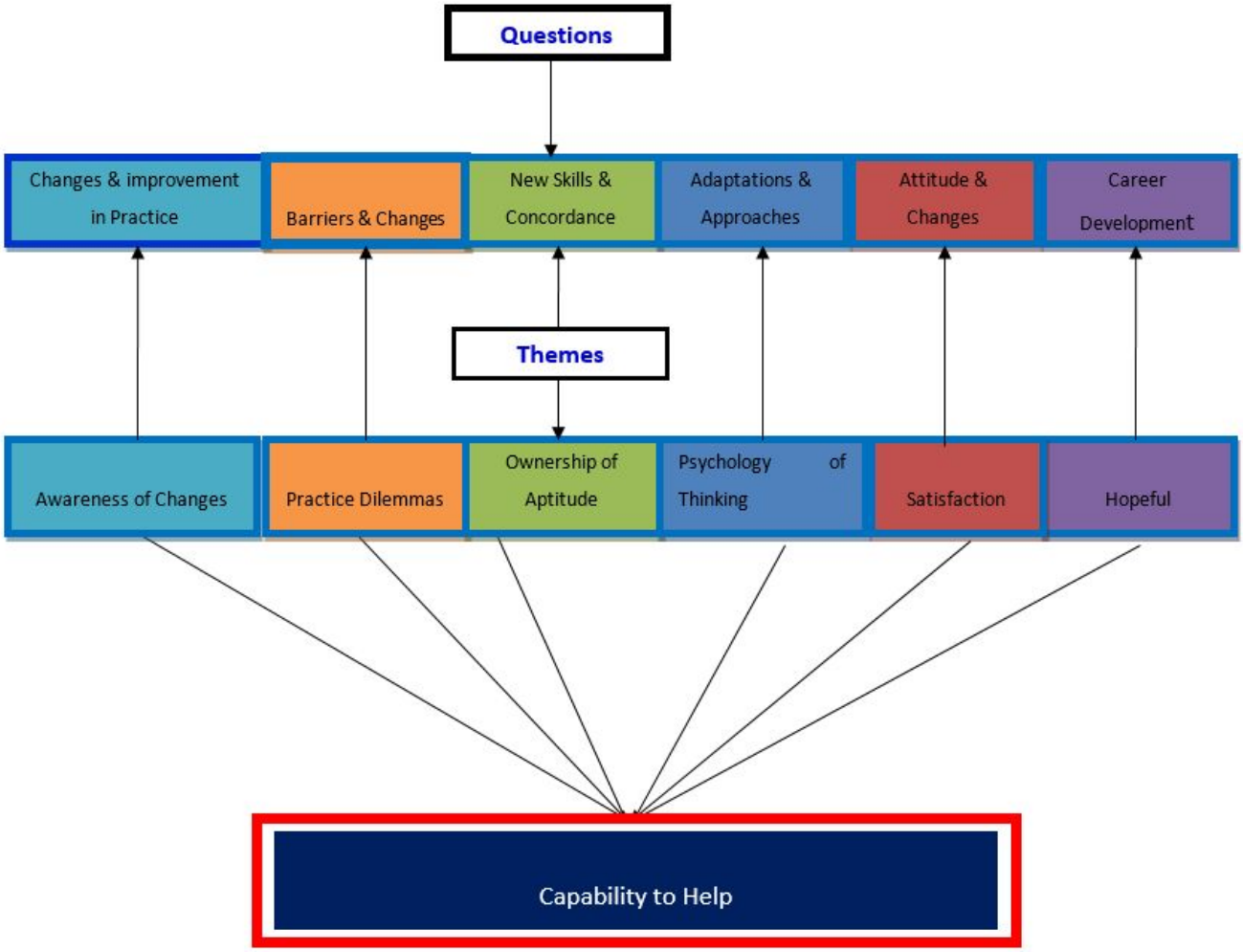
Figure 5: Thematic Analysis Process



This exercise proved extremely useful in that I was able to start thinking and reflecting on themes that were beginning to emerge. Initially, I thought the identified themes were persuasive, but this was found not to be the case. I had to go backwards and forwards over them, often changing the names of the themes, to make sure that I was on the right track to support my research question. This process was revised many times before saturation point was reached, where I could not go any further in substituting the final theme with another word or words.

The outcome of this process is illustrated in Figure 6, below.

Figure 6: Thematic Analysis Outcome, based on Braun and Clarke, 2006



Chapter 4 Section 3

4.15 Thematic Analysis Outcomes

4.15.1 Participants and Demographics

There were three male (E9, E39 and E22) and two female (E20 and E21) participants. The mean length of experience, following qualification of participants, was 8.8 years (range 30–53 years). Of the five participants, one had a Higher Diploma, one had a degree and one had a Master's degree. At 10 weeks after the RPMC course, the five respondents were interviewed and their responses analysed.

Following the analysis of the transcripts as detailed in Chapter 4 Part 2, six themes were seen to emerge:

- Awareness of changes
- Practice dilemmas
- Ownership of aptitude
- Psychology of thinking
- Satisfaction
- Hopefulness.

4.15.1.1 Number 1: Awareness of change

Respondents identified their awareness of change to their way of working with patients, with one respondent stating how she worked differently by being able:

> to change approach to a more structured, methodical way and therefore implementing things better now. (E21)

Another respondent focused on how he was able to improve the way in which he engaged with patients in a more open dialogue on specific and personal issues by being able to:

> Increase my knowledge and skills to become more resourceful in dealing with complex issues such conflicts between using drugs and alcohol instead of their prescribed medication. (E39)

On this occasion, a CPN was able to use concepts of RP as a way to improve engagement with his patients by showing a 'greater understanding of EWS' and

‘increased negotiation skills to inspire confidence through motivating them (patients) to take their medication’ (E22).

Another respondent focused more on changing the culture of her service by introducing a ‘medication concordance clinic’ where she was able to engage with patients dealing with their medication issues, so that ‘we can share our opinions and views in a respectful way’ and discuss the ‘therapeutic benefits of medication also any side-effects or problems, etc’ (E20).

This particular respondent saw awareness of change in assessment and problem solving by being ‘more aware of the problems with MC’ and ‘being able to develop my skills with SUs whilst giving information about their medications’ (E9).

It can therefore be seen, following the RPMC, that respondents were able to identify a range of ways to use what they had learnt in order to enhance their practice. This included using a more systematic approach, dealing with complex issues, being innovative and sharing of information better with SUs.

4.15.1.2 Number 2: Practice Dilemmas

The respondents saw barriers to implementing RPMC in practice in a variety of ways. One CPN identified difficulties due to an ‘increase caseload and large volumes of paperwork and documentation’ (E20). Another CPN saw the effects of this increase in caseload resulting in ‘not having enough time during the day to fully implement, monitor and to review the effects of their (patients’) medication’ (E22).

Another respondent felt an absence of supervision to support RPMC had created difficulties having ‘to work with patients, who are adamant not to take their medication because of their culture and religion’ (E39). Similarly, one nurse saw that, without academic support, she envisaged ‘difficulty will also arise when it comes to put MC in practice after learning such a lot on the course’ (E21).

Another respondent felt that lack of support could hinder his professional practice. He explained, ‘We need updates, supervision and time to reflect of where we go wrong and lessons to learn from our colleagues when they get things right’ (E9).

As shown above, the respondents identified a range of barriers, in particular the increased caseload, its effects on RPMC and SUs and a lack of support and time available for reflection to improve MC.

4.15.1.3 Number 3: Ownership of Aptitude

The respondents showed a readiness for quick learning by demonstrating their individual approach in a variety of ways; one CPN identified his aptitude had changed to 'being more empathetic towards the patients' (E39).

On the same issue, another respondent recognised she thought that she did not have the aptitude to talk to carers about RPMC but had now changed, being able to 'Listen to carers now more than before and feels more confident to answer their questions' (E21).

Lack of confidence to engage with his patients led another nurse to change by improving his 'negotiation skills to increase SU's confidence and motivation levels in order to, understand SU's capacity, choice and control' (E22).

In order to engage on issues of cultural differences not previously addressed, another respondent is now able to recognise the link between religion and mental health by being able to talk 'about their religious and cultural backgrounds and impact this can have on someone's mental health' (E20).

It can be seen at 10 weeks following the RPMC that the respondents were able to show change in aptitudes in a variety of ways, by an increase in their listening and negotiation skills whilst also showing more empathy towards SUs and dealing with issues such as their religious and cultural needs.

4.15.1.4 Number 4: Psychology of thinking

The respondents have shown changes in their cognitive capabilities in different ways to effect their personal approach to enhance MC. As one CPN implied, his,

> knowledge and skills has become more resourceful in dealing with complex issues such conflicts between using drugs and alcohol instead of their prescribed medication. (E39)

Another respondent found her cognitive approach to SUs' care plans had improved in a pragmatic way by being able to 'explain to clients it's very important to take medications and explaining to them about their medications and interventions to improve their mental health' (E21).

Selected psychological concepts taught on the RPMC course were used by one CPN in responses to SUs' needs, 'understanding EWS had increased my dialogue with my patients and had increased my confidence through motivating them to take their medication' (E22).

In order to improve his assessment skills, another respondent gave a different example of a psychological concept: being able to 'work with their faulty thinking such as the tablets they are being given are poisoning their brains and body' (E9).

To ensure independent decision making regarding medication, another nurse found she is now able to offer counselling to SUs by 'advising people and making sure they have the autonomy and in making sure they're given as much choice as possible' (E20).

From the above persuasive arguments, it can be seen that respondents have improved their cognitive, affective and behavioural capabilities. Since the RPMC course, the CPNs are working more skillfully in identifying psychological concepts taught on the course and to offer choices and interventions to improve MC and autonomy among SUs.

4.15.1.5 Number 5: Satisfaction

The RPMC triggered a sense of a 'feelgood factor' among the respondents. On reflection, one respondent changed his behaviour in being motivated to 'read more on RPMC now to increase my knowledge and skills to become more resourceful in dealing with complex issues' (E39).

Similarly, another respondent conveyed a sense of achievement through 'Increasing negotiation skills to inspire confidence through motivating SUs to take their medication' (E22).

On a different notion, a respondent felt quite proud of her achievement in introducing and running the first MC clinic in the Trust: 'I think it was triggered by me and I can now

offer better explanation and education to SUs regarding positive and negative aspects of medications' (E20).

It can be seen that the RPMC had positive effects in a range of ways, as the respondents felt satisfied and grew in confidence and motivation to improve MC.

4.15.1.6 Number 6: Hopefulness

The respondents showed signs of optimism in different contexts to enhance RPMC; one respondent saw it as a potential to improve his continuing professional development and realised that with 'a reality check I have got a long way to go to be competent in RPMC but I feel I am getting there but not all there yet' (E9).

Another CPN expressed her views of sustaining RPMC in practice and she recommended that 'clinicians need to be more flexible rather than dictating to clients and to present a more balance information to them' (21).

When working with non-adherent patients, a respondent concurred that RPMC can be a potential asset in that:

> nurses may develop more insight as to why SUs are not compliant with taking medication and become more resourceful in dealing with complex issues in MC. (E39)

From personal expectation, another respondent felt that applying RPMC in practice could enhance his reputation to be a:

> role model within the service and promote the positive outcomes of the model in challenging circumstances and within a high service provision. (E22)

Following the RPMC course, the respondents have shown optimism over improving and sustaining RPMC in different ways by reflecting how lessons learnt from the course could be of benefit to their own professional and practical development.

4.15.1.7 Capability to help

From the above six themes and arguments, I have been persuaded to believe the overarching theme of 'capability to help' is appropriate. This theme is quantified by the

respondents being able to demonstrate an improvement in their intuitive capabilities to enhance MC with their patients.

In the next chapter, there will be a presentation of how the quantitative data and the qualitative data integrate, and whether they support each other or not.

Chapter 4 Section 4

4.16 Integration of Quantitative and Qualitative findings

The integration of quantitative and qualitative findings in this chapter ascertains whether they confirm or confound each other in the three study measures of:

- Skills capability,
- Self-efficacy, and
- Attitudes.

4.15.2 Skills Capability

From the quantitative data of the skills capability measures, the increase in median scores for statements 2a, 2b and 2i, '*Skills in engagement with SUs in MC*' at Point 1 and Point 3 (4.00-5.00) were confirmed by the qualitative data for responses by three respondents, with one participant feeling that after the RPMC he was able to, 'Increase negotiation skills to inspire confidence...' (E22). Another nurse felt more resourceful in being able to 'develop my skills with SUs whilst giving information about their medications and to be more aware of the problems with MC' (E9). Another CPN indicated that she had improved her skills capability by expressing the 'need to engage in a very therapeutic way with the clients and to know their views' (E21).

The quantitative data for statements 2d, 2g, 2h, 2l and 2m relating to '*Skills in management, planning, developing and improving SUs MC plan'* were constant at the median score of 4, and this data was also confirmed in the qualitative data by responses from respondents who were working towards improving themselves in those areas. Providing RPMC to all SUs was a challenge to one respondent, in having to 'offer RP techniques to every patient especially when they are either not well or not taking their medication' (E20). In the same context, another participant found responding to patients' RPMC needs difficult when 'dealing with quite a lot of clients in the community with complex cases more skillfully and offer more alternative choices if possible to improve MC' (E39).

It can be seen therefore that the quantitative was confirmed by the qualitative data in skills capability measures.

4.15.3 Self-efficacy

There was an increased change in median scores at Point 3 for statements 3b (2.00–3.00), and 3d, 3f, 3g, 3i and 13j (3.00–4.00) relating to 'self-belief in problem solving, coping abilities and confidence' in MC. Responses to those variables have shown a range of approaches by the interviewees. Following RPMC, one nurse was able to apply his improved knowledge and skills to 'have a better understanding of what MC is about and to offer more alternative choices' (E9). Another respondent demonstrated that his approach to MC had improved by being able 'to inspire confidence through motivating them (patients) to take their medication' (E22). In order to deal with a specific issue, after RPMC one nurse is coping better by becoming 'more resourceful in dealing with complex issues such conflicts between using drugs and alcohol instead of their prescribed medication' (E39). It can be seen therefore that the quantitative data confirms the qualitative data for the above statements.

Statement (3e), that relates to '*unforeseen problems'* in the overall quantitative data, showed an initial increase in median scores at Point 2 (3.00–3.50) and a decline at Point 3 (3.50–3.00). To that effect, responses from the following respondents' statements of, 'I now have a better understanding of what MC is about' (E9), 'with my cultural background, I can explain to clients (with similar backgrounds) why it is very important to take medications... (E20) and, 'to provide them with a more structured approach, (E39). These statements suggest the respondents' self-efficacy was still maintained at 10 weeks post-RPMC thus confirming the quantitative data. However, beyond that point, it was difficult to provide an answer to the decrease in median score. The only plausible answer could be a lack of support, supervision, updates and time to reflect on RPMC, as indicated by the respondents in the 'Problem Dilemmas' section of the previous chapter.

Conversely, statements 3i, '*Self-belief in getting out of difficult situations'* and 3j, *'confidence in handling difficult situations*' did not show an increase in median rating until Point 3, (3.00–4.00), when the respondents showed they were still in the contemplation stage of handling difficult situations at 10 weeks post-RPMC although they were becoming 'more aware of the problems with MC...' (E9) and also in 'dealing with complex issues...' (E39).

It can be seen, therefore, that the quantitative data confirm the qualitative data at 10 weeks post-RPMC. However, the increase in median score at Point 3 may be due to the respondents being aware of routine difficult problems and were reflected in improving their self-efficacy and confidence in these areas, thus confirming the quantitative data.

4.15.4 Attitude Changes

After RPMC, respondents showed a change in attitudes in a range of ways, highlighted particularly in the 'Awareness of Changes' section of the previous chapter.

Statements 4a, 4f, 4j, and 4d in Table 4 (Chapter 4, Part 2) that relate to attitude change in consultation/negotiation and co-operation with respect to patient-centred approach showed no increase in the median rating between Point 1 and Point 3 (4.00) .

On several occasions respondents attitudes changed in, '*Increasing negotiation skills to inspire confidence through motivating them (patients) to take their medication'* (E22); 'we can share our opinions and views in a respectful way' (E20) and 'to change approach to a more structured, methodical way and therefore implementing things better now' (E21). They also showed to become 'more responsible in whole treatment and giving them (SUs) opportunity to say their opinions about medication' (E9) and 'feeling more skilful and positive to deal with my patients...' (E20). Therefore, it can be seen the quantitative data has confirmed the qualitative data for statements 4a, 4f, 4j, and 4d.

Statement 4c (*Meeting patients' expectation*) showed a very large jump in median score (3.00-5.00) between Point 1 and Point 3. From the qualitative data, and the quote above, the respondents have shown they were listening, negotiating and finding better ways to work with SUs in MC as one respondent said, 'so I do listen to them now when they say they don't want to take it (medication)' (E21). It can be seen, therefore, that the quantitative data confirm the qualitative data for statement 4c.

In eight of the 12 variables (66.7%), statements made by respondents' attitude towards MC, in respect of '*Consultation, negotiation and ability to meet SUs expectations including beliefs held by them'* showed an increase in the median (4.00–5.00) with the exception of the median score for statement 4c (3.00-5.00). In that context, the

respondents have shown a change in attitudes in these areas in many ways, as highlighted below.

> 'I now have a better understanding of....' (E9)
>
> 'to act as advocate to carers' (E22)
>
> 'to change approach to a more structured, methodical way... now; more aware that we need to engage in a very therapeutic way with the client, to know their views... and to see from their own perspective... how they feel about their medication' (E21)
>
> 'to share our opinions and views in a respectful way... and I can explain to clients (with similar backgrounds) why it is very important (E20).

From these responses, it can be seen that the quantitative data confirm the qualitative data.

4.17 Summary

First, the quantitative data confirm the qualitative data in this chapter of the three study measures of skill capability, self-efficacy and attitude towards RPMC. Secondly, this approach has tested the validity of the results by testing alternative interpretations of the data that shaped the results. These include areas such as, '*unforeseen problems'* and in '*Handling difficult situations'*. Finally, the mixed method results point out divergent and complementary views, that is, different approaches to RPMC, through deeper examination of the findings. This has led to a holistic view of RPMC in the inter-relationship between skills capability, self-efficacy and attitude changes at 10 weeks and at Point 3.

Chapter 5 Discussion and Conclusion

The outcome of the study into the effects of the RPMC on CMHNs showed 'within-group changes' in the quantitative scores, with significant changes in skill capability, self-efficacy and attitude at eight months follow up. The emerging themes from the qualitative results explained, supported and complemented the quantitative results and were consistent with each other. As a result, a 'second phase' data collection is currently underway to evaluate the longer-term outcome of this study.

The findings from this project suggest that the nurses benefitted from the person-centred and proactive nature of the 'evidence-based structure and content' of the RPMC programme. It is therefore plausible that patients' care in MC will improve with better engagement through information sharing enhancing their overall wellbeing and their relationship with their illness and medication (Byrne *et al.,* 2008; Jagessar, 2008), in turn reducing relapse rates.

5.1 Methodological Limitations

Little research has been carried out into the success of nurses' interventions in MC or the best training for them and the effects on SUs. This limits the literature review underpinning the study. However, it also highlights the need for more comprehensive studies into RPMC to explore this potentially beneficial intervention.

In this study, nurses' own past experience, skills, knowledge and attitudes towards MC were not taken into account and therefore these positive outcomes may be subject to confounding influences.

Within the resources allocated to the project it was not possible to have a control group to compare the effects of RPMC with routine nursing interventions and, therefore, the true effects remain untested.

Another limitation was the small sample size and therefore lack of statistical power to detect clinically important effects (Suresh and Chandrasekara, 2012), but this was compensated for by having a more robust design in the selection of the sample and the mixed methods triangulation. The results from a larger sample size would be more

conclusive but, in having to expose a larger number of subjects to the procedure, it would be more costly.

The convenience sample was chosen to have some degree of control with accessible facilities and data collection (Skowronek and Duerr, 2009). Thus, the study could have benefitted from a variety of differences and agreements of the participants' views, experience, skills, and knowledge (Hedt and Pagano, 2011).

Compared to the self-efficacy and attitude scales, the skills capability tool did not have established psychometric properties. This means a validated tool to measure skills capability of RPMC is required for future studies.

The CPNs engaged well in the qualitative interviews and were able to identify a number of challenges when implementing RPMC, including time limitations, and patients' hard-held beliefs and views about their medication.

Time limitations have been associated with difficulties implementing new and evidence-based interventions such as RPMC (Sin and Scully, 2008), therefore it is not surprising that the CPNs experienced similar issues. However CPNs may choose a more pragmatic approach by using RPMC with responsive patients (Brown *et al*., 2013).

RPMC training did not focus on knowledge about pharmacology, therefore CPNs may not have the confidence to deliver medication management and discussions effectively (Byrne and Dean, 2011). This omission ought to be considered in future RPMC training.

Missing data have not been taken into account in this study, therefore the overall outcomes cannot be assumed conclusive (Jackson, White and Leese, 2010). This is further compounded by the study measures being self-reporting; although nurses said their behaviour changed, the outcomes cannot be claimed as factual because this is not what was measured or observed.

All these limitations point to the need for a randomised control trial with a qualitative component that can account for intervening variables and verify an improvement in skills capability, self-efficacy and attitudes of not only nurses but healthcare professionals, as well as SUs and carers.

5.2 Procedural Difficulties

The original proposal for completion of the study was three months but, because of the sickness and holidays of the two assistant researchers, it was difficult to take alternative measures and no other resources were available. A broader view of the participants' experiences on other aspects of their clinical practice was not explored due to the inexperience of the research assistants conducting the interviews. These untapped views could have provided a more critical insight into this study, which potentially could affect future clinical nursing management in MC.

5.3 Implications for Mental Health Nursing Education/Training and Practice

RPMC could provide a framework that might have cost-effective benefits for the NHS, SUs, carers and others in contact with MH services. Equally important is to change the existing service delivery in line with modernising change in the NHS (Cameron, 2011) that advocate that nurses will continue to play a vital role. In RPMC it is more likely that nurses will see an improvement in MC as a core vocational responsibility (Coombs *et al*., 2003). The RPMC training has been designed with a simple didactic, interactive and cost efficient approach (Foster and Jumnoodoo, 2008) that everyone can understand.

It is important to encourage more nurses to be trained in RPMC techniques and thereafter outsource these skills to other professionals and lay people including SUs, carers and members of the community. Theoretical training on RPMCs needs to be followed up with work-based practice and supervision in action. The 'whole systems' approach coined by Jumnoodoo *et al. (*2002) would, in the future, be led by service users and carers who will deliver the RPMC programme and draw upon their own personal experiences.

If policy makers and commissioners decide the RPMC is a model that should be widely introduced into nursing and other professional practices, then a dynamic system of supervision is required, from a basic introduction of RPMC to more advanced academic levels. RPMC can also be offered to individuals, or in a series of group sessions through counselling, knowledge and skills training on MC, where the individuals can learn how

to manage the relationship between their illness and the medication required to enable them to stay well and prevent them from relapsing.

For those who choose distance learning, a range of computerised RPMC, tele-medicine and digital apps could be made available. Universities should also consider including RPMC programmes in their curriculum, some of which could be delivered by distance learning. Those interested in the subject might further their studies to degree, Master's and Doctorate/PhD levels. Consequently, a cohort of experts would be available to make further contributions and provide consultancy support to clinicians, SUs and carers to improve their existing knowledge and skills to enhance MC.

The RP protocol and training could also be cascaded via publications such as in-house magazines, local newspapers, peer-reviewed journals and be presented at conferences and workshops.

5.4 Conclusion

Whilst this study does not constitute a methodologically rigorous test, it is still a demonstration of the benefits of the RPMC education programme to nurses' skill capability, self-efficacy and attitudes. However, it remains unclear whether the nurses' knowledge, skills and motivation would remain improved after the eight months follow up.

The overall outcome of this mixed method study of educational programme of RPMC has benefitted the CMHNs in their skills development, knowledge and confidence, which is transferable to patients and SUs to improve MC. In that context, this study has been effective in meeting the NICE recommendations (NICE, 2009b: 20) for the development of an 'effective, equitable interventions to support adherence to appropriate prescriptions' and to encourage 'informed choice and shared decision making through cost-effective ways of communication'.

Although this study indicates that more research is needed, it has also highlighted changes to service delivery and potential improvements for continuous professional development of CMHNs.

Other recommendations arising as a result of this study are the need for changes in nurses' education on MC to improve the competency of nurses in MC at informal and academic levels. The whole ethos of this study is to prevent relapse due to non-concordance of medication and, by improving MC, the expectation is that relapse rates will be reduced, improving patients' quality of life and cutting the cost of hospital admissions. Money thus saved can be redirected to other community services, where there is a shortage of resources to improve care.

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Appendices

Appendix 1: Concepts used in RP

Affect: The way we express ourselves through feelings and emotions. It can have a range of high to low emotional tones and range from pleasant to unpleasant feelings. For example, anger is an affect of high emotional tone along with unpleasant feelings, whilst depression has low emotional tone along with unpleasant feelings. Conversely, mania is seen as high tone and pleasant feeling.

Attribution: The process of assigning causality to events around us. It is individuals' attempt to make sense of their world when they do not have the full facts, consequently it relies on individual perception. For example, a client believes they cannot move forward in life to do things other people do because they have been diagnosed with mental illness, are seeing a psychiatrist and taking psychiatric medication.

Cognitive behavioural: Psychological intervention that targets specifically thoughts, images, beliefs and behaviour. It is aimed at the treatment of delusions, hallucinations, depression and, most obviously, obsessive compulsive disorders. For example, a client who refuses to comply with medication could try a behavioural intervention such as crushing the tablet before swallowing. Cognitively, the same client could change their belief concerning the efficacy of medication by extending the trial period or agreeing to a blood test to prove prescribed compliance.

Cognitive reframing/restructuring: The process of positively challenging and modifying thinking errors in a non-threatening way with clients. An example could be a client who has auditory hallucination about a car crash and then assumes they are going to die in the car crash. This client will benefit by thinking differently about the meaning of their hallucination.

Cognitive: A human response to thinking, images and beliefs. It is a tripartite relationship involving one or more of these mental processes. For example, errors in rational thinking can interfere with problem solving, intrusive mental images can cause emotional distress, and faulty beliefs can lead to unrealistic appraisal of the situation. A

practical example could be someone who experiences visual hallucinations, and who might believe they are being controlled by some other person and would then think that taking their medication does not really solve their problems.

Coping response: People's response to a high-risk situation in which they attempt to use previously learnt, cognitive and behavioural skills or techniques to avoid lapse or relapse. An example could be the client who has learnt the importance of a user support group and decides to follow the good example of other clients by attending their drop-in centre when they feel pressurised at home because of recent events.

Craving: A recurrence of a thought process that, in the past, has lead to a desirable yet unhealthy behavioural pattern that after treatment is kept under control; for others it could easily get out of control if acted upon. A patient who is under section starts craving for another overseas holiday (previously a great experience) and thinks obsessionally about how to get off section and to pursue that course of action.

Cue: Anything in the environment that triggers urges, cravings and seemingly irrelevant decisions, leading to potential lapse or relapse. For example, in the previous case, a client who is always craving to go on an overseas holiday may be triggered by a staff member who freely discusses their personal plan of going on holiday.

High-risk situation (HRS): Breaking down of a resolution or a control situation, which may be due to inter- or intra-personal relationships or other factors in a person's life. This may precipitate a lapse or a full-blown relapse. An example could be someone who has achieved a sense of control in dealing with problems associated with mental illness in day treatment, but who then goes home in the evening to a situation of high expressed emotion. As a consequence, this person may become vulnerable to a stressful situation, reject treatment, feel 'what's the point' and subsequently relapse.

Lapse: A slight error or a slip, a temporary fall, a single event a re-emergence of previous habits, which may or may not lead to a relapse.

Lifestyle balance: A balance that service users have learnt to maintain healthy behaviours by being able to recognise things they continue to do in order to sustain that

life style. An example could be the improvement in someone's social life in order not to go back to being withdrawn and consequently to relapse.

Lifestyle interventions: Activities leading to correcting an imbalance in lifestyle. An example could be doing daily exercise to counteract weight gain due to medication side-effects.

Positive outcome expectancies: The anticipation of feeling better as the result of some course of action. An example could be the abuse of prescribed medication, e.g. the patient who is on a maintenance dose of 5mg valium then decides they will feel even better on 10mg valium and starts self-medicating without appropriate consultation.

Rule violation effect (RVE): This is a term we use here as a replacement of the term 'abstinence violation' effect because we feel it is more appropriate to mental illness. RVE is therefore used to signify breaking a resolution the client has made to him- or herself, such as medication compliance, abstaining from self-harm, not following command hallucinations, etc, resulting in feeling guilty and thinking the situation is out of control. The strength of RVE helps determine the probability of a full relapse.

Seemingly irrelevant decisions (SID): A precursor to being exposed to the likelihood of falling into a trap leading to a high-risk situation. At the time the decision in itself does not seem harmful and can easily be defended, rationally or irrationally, but may signal a change of course away from a healthy behavioural pattern. An example, it could be someone who decides to stay up late one night and then oversleeps in the morning, causing them to miss an appointment with the psychiatrist to review their medication, something they have been contemplating in order to stop medication. In this case the client may go back to make another appointment or may stop their medication, leading to a lapse or subsequently to relapse.

Self-efficacy: A person's beliefs in his or her ability to carry out or succeed in a specific task. The focus is on helping the client to make the change in a problem area as, once the skills and confidence have been developed and rehearsed, the client should be able to overcome his or her difficulties either with minimal help or independently. An example could be a client who after rehearsal will be able to travel by bus

independently. Improving self-efficacy with this task will promote self-efficacy in related tasks that require greater independence such shopping, banking and socialising.

Self-monitoring: After developing RP skills through training, service users will be able to detect high-risk situations and their antecedents. An example could be in cases such paranoia and anxiety states, when service users may exhibit high levels of hyper-vigilance to their environment. In this case the service user will be taught to transfer those skills to include themselves, to become aware of high-risk situations and their antecedents such as craving, urges, etc.

Skill acquisition: A client who has gone through skill training after having the necessary information, knowledge and support in order to gain the skill required to perform a task. An example could be a client suffering from agoraphobia, who can now travel by public transport after having received a course and booster sessions of cognitive behavioural therapy.

Social learning theory: This assumes that a new behaviour can be learnt simply by exposure to another person modelling that behaviour. In practice, once a skill has been learnt by copying the model it can be maintained with reinforcement. An example would be a staff member modelling socially acceptable behaviour such as speaking calmly when a client is upset, and raising their voice and then praising the client when they do the same.

Therefore a corrective measure can resolve problems, which can be regarded as 'not getting out of control'. A lapse can be seen as process, behaviour or an event. For example, someone who was managing well mentally may suddenly notice a change in symptomology in that they start becoming slightly more paranoid or depressed. This may or may not lead to an acute phase of disorder.

Thinking errors: Any irrational thinking or belief, not supported by evidence, which is unhelpful to a person in managing their mental wellbeing. An example could be a female client who believes all her problem would disappear if she regains custody of her children who are in the custody of social services.

Urge: A strong impulse to suddenly act without careful thinking, for example a patient who needs instant access to psychiatric services, suddenly booking a taxi or calling an ambulance and ending up at an A & E department.

Appendix 2: Structure of RPMC

Relapse Prevention and Medication Concordance (RPMC)

This simple model helps service users to learn individual coping skills so they present for help at an early stage of relapse, mapping out and recognising the impact of early-warning signs on their health. By taking an active role in managing their own conditions, service users may be able to help determine the most effective medication regime and understand the importance of maintaining contact with helping services. To achieve those aims nurses need to be trained in RPMC and eventually trained alongside service users and carers to enhance MC in a coordinated manner.

The RPMC 10 Session Model

Recovery and Relapse prevention can be undertaken as a general approach to work, open exploratory sessions, or individual or closed group structured sessions with homework. When working with service users, training in the therapeutic sessions covers the following areas:

1. **Engagement:** The primary consideration is for the nurses to give primary consideration to the individual and family to engage in RPMC therapy on an RPMC programme. The expectation is for them to learn how to involve other individuals in the initial stage of engagement to highlight the benefits of RPMC and the feeling of the community within the group setting, thus enhancing the benefits for all.

2. **Introduction to the model**: An initial session explains the RPMC model to clarify how this simple but useful model can help nurses, individuals and families. It covers the expectations of the service user and the people delivering the education and training. At this point, the nurses on the programme will learn of the requirements to formalise commitment of all parties involved by a signed agreement, suggesting willingness to participate in the RPMC training.

3. **Understanding the ideas of lapse and relapses:** A session to clarify that health deterioration is usually a staged process, where rarely are people simply 'well' and then 'unwell'. It is an important session for clients to appreciate the power of this fact, i.e. that the stages are opportunities for action; to reverse where possible an otherwise trend towards a return to illness or to undesired states. It is also an opportunity to explore with the client previous relapses, the precursor lapse, and to begin to put together the relapse repertoire.

4. **Identifying High-Risk Situations**: The is a stage for identifying those circumstances that stress the client, which may be associated with reccurrence of an illness process or one which may initiate such a process. Training would look at what these are, for the

patients, mapping these, making a list, raising an awareness of them, and keeping a diary. The carers in training will look at the awareness of these and develop an RPMC plan to minimise those risks and to develop confidence to avoid those situations. It is also an opportunity to continue with previous exploration to further identify the 'Lapse and Relapse History': What is the pattern of relapse from the past? Can we learn anything from that? Do we know why service users do not take their medication? With that knowledge, are there any actions or strategies that can be practised when next experienced that might reduce the risk of relapse?

5. Identifying Warning Signs: What does the individual believe to be their earliest warning signs? These are not psychotic symptoms. These may include such things as withdrawal from help; a reluctance or refusal to take medication; a desire to take alcohol and/or drugs; sleeplessness, restlessness, increased agitation or irritability.

6. **Identifying Stress and Stress Management:** How does the person with mental illness experience and cope when in stressful situations? Does this contribute to an increased risk of relapse? What effective (adaptive) coping strategies can be put in place when dealing with a stressful event? A plan is drawn up for dealing with stressful situations. For carers, the plan will also be about them and how they cope.

7. **Identifying Thinking Errors/Faulty Thoughts and management**: There may be evidence that the patient has adopted what we call 'thinking errors', with statements such as 'the medication you are giving me will poison my brain'. Collect a list of thinking errors and get service users to gather the evidence to support their thinking. Give them a thought diary that gets them to record what they thought and their resulting behaviour. Then one can introduce new possible ways of thinking about given situations.

8. **Identifying and Exploring Rule-violation Effect – Emotions and management:** How does the person feel when they have not continued with a health plan, e.g. with their medication regime, for example? The rule-violation effect is about helping the service user look at their feelings, e.g. of guilt or blame when they have lapsed or relapsed in some way. It is also about having a plan to manage them, so that they are not distracted from further developing their relapse plan so that it is more successful.

9. **Identifying and Exploring Life Style Balance:** This session is about teaching the service user to make choices that maintain a balanced life style. The notion of life style and its many components include:

- Nutrition
- Diet
- Exercise
- Friends
- Family
- Education
- Recreation
- Occupations
- Holidays
- Spiritual self
- Accommodations
- Finance
- Partners

It covers some of the practical things issues about ensuring that the client has some activity in each field, and is specifically aimed at educating the service user about choice and empowerment. Ultimately it forms the 'global recovery and relapse prevention

plan' as a background to the 'specific recovery and relapse prevention plan' targeted on avoiding or coping with specific high-risk situations.

10. Devising a Lapse and Relapse Plan: This session (sometimes two sessions) looks at problem solving techniques with the aim of teaching or reminding the service user or carer of problem solving. It pulls together all the information gathered in the previous sessions and draws up a plan for managing high-risk situations, such that the plans will reduce the risk of lapse or, if one occurs, the chance of continuation to the state of relapse. Each plan is very individual as relapse in each individual is triggered by different factors.

11. Review/Evaluate Progress or Other: The final session is to review the work and how it has gone.

Booster sessions may be needed if service users have a further need for training. This usually happens on reflection. The model proposed here provides a more comprehensive list of interventions for clinicians, service users and carers to work on, rather than a selective aspect of recovery and relapse prevention.

Techniques commonly used in the Recovery and RP include: cognitive behavioural therapy; social learning theories; motivational interviewing techniques; family intervention; role play; visualisation; relaxation techniques; complementary therapy; solution focused therapy; harm minimisation and medication concordance; planning; network development; group therapy, etc.

Therefore users, carers and healthcare workers would be working in partnership to discover how best to achieve individual goals with the ultimate aim of leaving the service user empowered. RP is a simple model to understand and to practice, but advanced competencies for users, carers and mental health workers are achievable on completion of advanced training in Recovery and RP.

Instruments used in practice are:

a. Attitudes of nurses
b. Engagement measures
c. Self-efficacy
d. Empowerment
e. Skills required for Recovery and RP.

Rami Jumnoodoo
Lead Nurses Relapse Prevention Project
Reviewed May 2011 and 2013

Appendix 3: Terms in MC

The words compliance, adherence and concordance are used interchangeably in the context of prescribed psychiatric medicine-taking behaviour for those with Serious and Enduring Mental Illness (SEMI). The definitions and analysis of these terminologies are discussed fully in Appendix 1. Cameron in 1996 suggested there was no consensus on the determining criteria for non-compliance. This view is further supported by a report published by Horne and Weinman (1999) and Horne *et al.* (2005) for the National Co-ordinating Centre for NHS Service Delivery and Organisation Research & Development (R & D) on Concordance, Adherence and Compliance in Medicine-taking (2005) (NCCSDO). Non-compliance is described as 'sub-optimal adherence to treatment regimens' (Kemp and David, 1995; Kemp *et al.*, 1998) and 'as active refusal or passive failure to adhere to the treatment regime as prescribed' (MacPherson *et al.,* 1997). The most popular definition is that of Haynes (1979: 174–90), who defines compliance as 'simply an extent to which the patient's behaviour matches the prescriber's recommendations', which implies that there is little room for negotiation in order to get better.

The Royal Pharmaceutical Society of Great Britain (RPSGB, 1997) has written a report in which it advocates a model of 'concordance' rather than compliance or adherence, but the fact that patients with SEMI continue to relapse suggests that there is a need to re-examine all three definitions.

Bell *et al*. (2007) conclude that concordance is not synonymous with compliance or adherence. Here the focus is based on the patient's relationship with the clinicians and has nothing to do with whether the patient takes their medication or not (National Institute for Health and Clinical Excellence (NICE), 2009). Concordance does not refer to a patient's medicine-taking behaviour, but rather the nature of the interaction between clinicians and patients. This suggests patients have the freedom to either take risks of relapse or benefit from taking their prescribed medication; a view supported by Alaszewski (2005), who also purports equal partnership between clinicians and patients. NICE (2009) supports these arguments by recommending active involvement of patients in decisions about prescribed medicines and, in effect, endorsing the concept of concordance in practice. However, it must be said it is left to the clinicians to find

suitable training and developing ways to tackle concordance of medication in practice. Currently the choices of existing interventions by nurses is difficult to identify as often these are mentioned in the literature but not described fully. This notion is central to this study.

However, there is a gulf between these ideals and practice, as there are inherent complexities and partnership-related values (Cribbs, 2011). These may include the concept of concordance, which is often misunderstood (Clyde, 2005); nurses may believe they are practicing concordance when in reality they are not (Latter *et al*., 2007, 2010) and concordance may not have a realistic impact in patients centredness (Gray, 2010).

There are further difficulties with decision making and autonomy. Patient's values are not necessarily coherent (Cribbs, 2011) and it can become meaningless if they do not engage with nurses or clinicians; conversely they may engage in discussion options but not necessarily agree to decision making on taking their medication (De Las Quevas, 2011). Therefore, recognising these issues makes the concept of concordance clearer in the clinicians' minds in practice and makes it more plausible to enhance success. To enhance concordance, therefore, there is a need to share power and to value leaning towards the patient's values, views, options, by sharing information including uncertainties that may require further assessment and treatment plan. In addition, there should be dedicated time and careful listening to the patients' concerns (Degan, 2004).

In this assignment, the focus will be on medication concordance. This is to tackle the factors of medication non-concordance leading to relapse and to establish how a new teaching programme of RPMC can be of benefit to mental health nurses in their role of facilitating medication concordance. However, the words 'concordance', 'adherence' and 'compliance' will all be used as there is no agreement over preferred use in healthcare settings (Horne, 2005; NCCSDO (National Co-ordinating Centre for NHS Service Delivery and Organisation Research & Development (R & D) on Concordance, Adherence and Compliance in Medicine-taking).

Appendix 4: Letters to Participants

Dear Sir/Madam

Re: Relapse Prevention: Relationship to Medication Concordance: A Programme of Staff Education

Please read the following the information leaflet carefully. It describes what will happen to you if you decide to participate in the above study. We are attempting to investigate the effects of a two-day Relapse Prevention and Medication Concordance (RP/MC) teaching programme delivered to staff over two days. This will include changes in scale scores relating to: Skills, Self-efficacy and Attitudes of psychiatric nurses towards medication concordance.

If you agree to take part in the study you may be asked to attend the Relapse Prevention programme held at Brondesbury Road, Training Room 12.

We hope you will participate in the study as we believe that, if it is shown to be beneficial, the RP/MC programme will improve the care of Mental Health Service users in general.

Yours sincerely

Rami Jumnoodoo, Principal Researcher
Relapse Prevention Office
13-15 Brondesbury Road
Kilburn, NW6 6BX

Tel: 02089371641
Mobile: 07958367753
E-mail: rami.Jumnoodoo@nhs.net

Appendix 5: Consent Form

Rami Jumnoodoo, Principal Researcher

Relapse Prevention Office

13-15 Brondesbury Road

Kilburn

NW6 6BX

Tel: 02089371641

Mobile: 07958367753

E-mail: rami.Jumnoodoo@nhs.net

Name:

Address:

CONSENT FORM

Title: **Relapse Prevention: Relationship to Medication Concordance: A Programme of Staff Education**

Name of Researcher: **Rami Jumnoodoo**

Please initial boxes

1. I confirm that I have read and understand the information sheet dated 8th April 2012 for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my duty to care or legal rights being affected. ☐

3. I understand that all the relevant data collected during the course of this research will be kept confidential on the computer which will be password protected and any transcriptions tapes etc will be secured in a locked drawer and in a locked room. Only members of the research team will have access to those data. ☐

4. I agree to take part in the above study. ☐

5. Do you agree to be part of the focus group?

☐ Yes ☐ No

Name of Participant…… Date…….

Signature…….

Name of Assistant Researcher ……Date…….

Signature ……..

When completed, 1 (original) for researcher site file.

Appendix 6: Participant Information Sheets

Participant Information Sheet

Relapse Prevention:

Relationship to Medication Concordance -

A Programme of Staff Education

by Rami Jumnoodoo

8th April 2012

Rehabilitation Service Line Research Initiative – in partnership with Middlesex University

Introduction

You are being invited to take part in a research study. Before you decide on your participation, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and talk to others about the study if you wish. If there is anything that is not clear, or if you would like more information, please do not hesitate to ask questions. Take time to decide whether or not you wish to take part.

Should you decide to take part, your line manager will be informed of your involvement in the study and that it will not affect your nursing activities in anyway.

What is the purpose of the study?

During the past thirty years a number of techniques that were originally applied to substance abusers have been transferred to the mental health field. One of these is Relapse Prevention with a focus upon encouraging medication compliance.

The study involves a two-day group Relapse Prevention and Medication Concordance **(RP/MC)** teaching/training programme for staff, using a manual template designed by the current applicant. This face-to-face training will be delivered by an experienced trainer, i.e. the applicant, in two groups of 10 over two consecutive days, 10.00 am - 4 pm. At the end of the programme there will be an evaluation questionnaire to assess whether the training has been absorbed and to measure changes in skills, self-efficacy and attitudes of psychiatric nurses towards medication concordance. This will be done by an independent researcher.

This project forms part of a Master of Professional Studies (MProf) programme and is a student research project. The supervisor is Dr Kay Caldwell - Head of the Institute of Nursing and Midwifery at Middlesex University and the Clinical Supervisor is Dr John Foster, Principal Research Fellow - Department of Family Care and Mental Health at the University of Greenwich.

Why have I been chosen?

The reason you have been chosen is that the study focuses on qualified community or ward-based nurses, (Bands 5/6), employed by Central and North West London NHS Foundation Trust (CNWL) who have not received post-registration training in any of the following - motivational interviewing, cognitive behavioural therapy, relapse prevention and medication concordance. In total, 20-30 Community Psychiatric Nurses (CPNs) have been selected for this study and you are one of them.

Do I have to take part?

No. It is up to you to decide whether or not to take part. If you do, you will be given this information sheet to keep and you will be asked to sign a consent form. You are free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect you in any way but it will count towards your professional development.

What will happen to me if I take part*?*

You will be asked at the initial stage to complete a socio-demographic questionnaire which will include age, gender, ethnicity, length of time in service, and previous training experience. Then you will be allocated to either Group 1 or 2. The names will be placed in an urn and initially 30 will be selected by an independent person. It is purely for convenience reason as the training room can only accommodate 12-14 people in comfort.

At this initial stage you will also be invited to be part of a small focus group. There will be no pressure put on you if you do not wish to participate in the focus group.

In addition each participant will be asked to complete three survey tools.

1. General Self-efficacy Scale. This is a 10-item psychometric scale that is designed to assess self-beliefs to cope with a variety of difficult demands in life. It measures the belief that one's actions are responsible for successful outcomes.

The questionnaire is short (10 items) and take 5 minutes to complete. It is recommended that you do not spend too much time on each individual statement.

2. Attitudes towards patients who do not wish to take their medication. It consists of 12 items each scored on a four point Likert scale and thus the range of scores is 12-36. An item score of 2-3 means that the participant agrees with the principle of concordance. The adaptations are to substitute the term nurse for doctor and service user to patient for that question.

Permission for the use of the above questionnaires was obtained from the designers.

3. Level of skills in using relapse prevention techniques with the aim of enhancing MC. On this occasion we will be designing a tool that specifically relates to the relapse prevention programme as no validated measure currently exists. This will be based on the topics covered and techniques used in RP/MC course. The researcher's knowledge/experience/literature will be used to devise the questionnaire which will then be shown to other professional colleagues and service users/carers who will advise

as to whether or not the tool is comprehensive enough and who may suggest other items that could be added. The questionnaire will then be piloted by participants who will not be in the final study. A modified Likert scale of 1- 5 will be used: 1 being Strongly Disagree, 5 being Strongly Agree and 3 being Neutral. The scoring will be used to analyse the total scores at Point 2 and 3 (see below), to find out whether there has been a change in attitude.

You will be surveyed at three time points by an independent researcher who will not deliver the programme;

- Baseline (Point 1)
- One week following the end of a 10-session RP/MC programme (Point 2)
- Three months following the end the programme (Point 3)

10 weeks following the programme, the agreed participants in the focus group will be interviewed to explore the impact of the programme and gain further insight into the value of the programme delivered. This interval has been chosen as to have integrated this with the administration of the surveys would risk the participants being influenced by their answers.

Description of the Programme

RP/MC uses skills that help individuals to develop self-efficacy and maintain overall wellbeing in their own communities. RP skills training involves improving self-management of illness-related problems in order to restore and enhance hope. Training staff in the following areas is expected to enhance their skills, to improve their attitude to medication concordance.

The topics covered will be as follows:

1. Engagement/Contracting
2. Introduction to the RP model
3. High-risk situations
4. Learning the difference between Lapse and Relapse
5. Early-warning signs and relapse signatures
6. Managing stress
7. Managing faulty thoughts

8. Rule-violation effect
9. Developing a balanced life style
10. Learning problem solving (individual)
11. Personal lapse and relapse plan
12. Evaluation of progress
13. Disengagement
14. Reinforcement sessions if required.

All the above items are issues that are linked to medication concordance.

What are the other possible disadvantages and risks of taking part?

This study is not invasive and the research team do not envisage any risks or disadvantages from taking part. During the RP/MC two-day training you need to make sure you feel comfortable about the sessions. If these sessions cause you to feel uncomfortable in any way (e.g. having to express yourself in front of others) then you should notify us immediately and you will be free to withdraw from the study without any consequences. You will be offered extra support if required.

What are the possible benefits of taking part?

We anticipate great benefits to participants receiving the **RP/MC** training in improving their self-efficacy, skills and knowledge and attitude to medication concordance which in turn will benefit their patients with medication compliance problems. If you are one of the participants of the focus group, the intention is to explore the concepts in greater depth and in this study we have chosen a focus group consisting of 6-8 participants. This study will provide data that will help participants to understand the best services to offer mental health service users. Some participants may wish to use the research outcome to further their own academic studies and test other aspects of **RP** and **MC.**

What happens when the research study stops?

Firstly, there would be an analysis of all quantitative and qualitative data collected from the questionnaires and also from the focus group interviews. The outcomes will form part of my Master of Professional Studies thesis which will no doubt provoke some critical discussion and also recommendations for the future direction of the project. A copy of the outcomes from this research will be made available for you to read.

This study will in the first instance be published in the *Health and Social Service Bulletin* and the *Trust In Brief* newsletter and at Clinical Governance meetings to raise awareness locally and Trust wide. There is also the possibility of presenting this work nationally and internationally through conferences, workshops and entry to National Award competitions e.g., *Health Service Journal* and the *Nursing Times.* The aim is that the findings will be published in academic, clinical and practice-related journals such as the *Mental Health Journal of Psychiatric or Mental Health Nursing* or *the British Medical Journal.*

Finally, you will be rewarded with a certificate of attendance and participation in this piece of research.

What if there is a problem?

If there are any problems you should approach the principal researcher, Rami Jumnoodoo (contact details at the end of this document) to provide you with support in the first instance. Furthermore, counselling and support will also be available to you during the **RP/MC** programme to deal with any administrative or personal issues you may have.

Will my taking part in the study be kept confidential?

Your personal details will be kept anonymous and instead, you will be allocated a number that will be known only to the research assistant who is entering the data. This is so that the research assistant can ensure that follow-up data relates to the correct individual. Thereafter all data will be recorded stored and analysed according to the requirements of the Data Protection Act 2003. Specifically all computerised data will be password protected and any transcription tapes etc. will be secured in a locked drawer. Finally, each participant will be informed that the focus group data will be reported so that anonymity is protected.

What will happen if I don't want to carry on with the study?

You are free to withdraw from the study at any time. You will not be disadvantaged in any way.

What will happen to the results of the research study?

This study is part of a professional Master's qualification. It will be written up and submitted for assessment as part of that process. We also hope to publish the findings more widely in professional and academic journals. Should you wish to receive a summary of the research findings please contact Rami Jumnoodoo (0208-937-1641). Please be assured that the reports from the study will be written in such a manner so that you cannot be personally identified from them.

Who is organising and funding the research?

The research was organised by Middlesex University and funded by Brent Mental Health Services. Researchers, participating in this study, will not receive any additional funding as a result of the study.

Who has reviewed the study?

The Middlesex University Academic board and the Research and Development Committee/ Integrated Research Application System have reviewed this study independently.

Do you have any questions?

Remember, if you have any questions, to ask the researcher or the independent adviser:

1. Rami Jumnoodoo, Principal Researcher
Relapse Prevention Office
13-15, Brondesbury Road
Kilburn
LONDON NW6 6BX
Tel: 020 8937 1641
Mobile: 0795 836 7753
E-mail: rami.Jumnoodoo@nhs.net

2. Dr Kay Caldwell, Research Supervisor
Head of Institute of Nursing and Midwifery
Middlesex University
The Archway Campus
Highgate Hill
LONDON N19 5 LW
Tel: 020 8411 6458

E-mail: K.Caldwell@mdx.ac.uk

3. Dr Patrick Coyne (Independent Adviser)
Lead for Education
Westminster Sector Manager
Latimer House
40-48 Hanson Street
LONDON W1W 6UL
Tel:020 7612 1620
Mobile: 0783 788 5178
E-mail: patrick.coyne@nhs.net

Thank you for reading this information sheet.
Please keep it in a safe place.

Appendix 7: R & D Approval 12, MHS 16

North Central London Research Consortium
3rd Floor, Bedford House
125 - 133 Camden High Street
LONDON NW1 7JR
North Central London Research Consortium
18/07/2012

Mr Rami Jumnoodoo
Relapse Prevention Unit
12-15 Brondesbury Road
Kilburn
LONDON NW6 6BX

Dear Mr Jumnoodoo,

I am pleased to confirm that the following study has now received R & D approval, and you may now start your research in the Trust(s) identified below. (Trust name deleted)

Study Title: **Relapse Prevention: Relationship to Medication concordance- A programme of Staff Education**

12MHS16
N/A
R&D reference:
REC reference:

If any information on this document is altered after the date of issue, this document will be deemed INVALID.

Please ensure that all members of the research team are aware of their responsibilities as researchers which are stated in page 2. For more details on these responsibilities, please check the R & D Handbook or NoCloR website: http://www.noclor.nhs.uk

We would like to wish you every success with your project.

Yours sincerely,

Mabel Saili
Senior Research Governance Officer
R&D approval 18f7!2012 R&D reference 12MHS16 Page 1 of 2

Appendix 8: General Self-efficacy Questionnaire

This self-efficacy measure was chosen because it has established psychometric properties developed and used use in 10 cultures (Schwarzer, 1993). The General Self-efficacy Scale is a 10-item psychometric scale to assess optimistic self-beliefs to cope with a variety of difficult demands in life. It measures the belief that one's actions are responsible for successful outcomes. The questionnaire is short (10 items) and take five minutes to complete. It is recommended not spend too much time on each individual statement. The participants were asked to provide the level of agreement with each of the statements below, by circling their response, using the scale provided.

The questionnaire should not take long to complete. Please do not spend too much time on each individual statement. Answer the statement in accordance to how you feel in the here and now.

	[illegible]				
2.	If someone opposes me, I can find means and ways to get what I want	1	2	3	4
3.	It is easy for me to stick to my aims and accomplish my goals	1	2	3	4
4.	I am confident that I could deal efficiently with unexpected events	1	2	3	4
5.	Thanks to my resourcefulness, I know how to handle unforeseen situations	1	2	3	4
6.	I can solve most problems if I invest the necessary effort	1	2	3	4
7.	I can remain calm when facing difficulties because I can rely on my coping abilities	1	2	3	4
8.	When I am confronted with a problem, I can usually find several solutions	1	2	3	4
9.	If I am in trouble, I can usually think of something to do.	1	2	3	4

Thank you for your time and effort to participate within this research.

(This questionnaire was adapted from Ralf Schwarzer's research on General Perceived Self-efficacy in 14 Cultures (1993).

Schwarzer R (1993) *Measurement of Perceived Self-efficacy. Psychometric scales for cross-cultural research.* Berlin: Freie Universität.

Appendix 9: Leeds Attitudes towards Concordance Scale

The Leeds Attitude towards Concordance scale (LATCon) (Thistlethwaite *et al*., 2003) is a validated measure and consists of 12 items each scored on a four point Likert scale and thus the range of scores is 12-36. An item score of 2-3 means that the participant agrees with the principle of concordance. There is a small adaptation adaptations are to substitute the term nurse for doctor and service user to patient for that question.

The participants were asked to provide the level of agreement with each of the statements below, by circling their responses, using the scale provided.

1.	Nurse-service user consultations should be viewed as negotiations between equals.	1	2	3	4	5
2.	Nurses should respect service user's personal beliefs.	1	2	3	4	5
3.	The best use of medicine is when it is what the service user wants and when it is likely to achieve the desired results.	1	2	3	4	5
4.	Dispensing medication can be viewed as an experiment carried out by service user under the guidance of the prescribing doctor just as taking medication is an experiment carried out by patients.	1	2	3	4	5
5.	Nurses should allow service user to discuss their thoughts and feelings about their illness and how it should be treated.	1	2	3	4	5
6.	Improved health would result from co-operation and mutual respect between service user and patients.	1	2	3	4	5

7.	It is important that nurses and service user establish an agreement about the need for medication.	1	2	3	4	5
8.	Nurses should take account of service user's needs, desires and abilities when discussing medication.	1	2	3	4	5
9.	Nurses should try to help service user's make as informed a choice as possible about the benefits and risks of alternative treatments.	1	2	3	4	5
10.	The most important decision during the nurse-service user's consultation is that of the patient.	1	2	3	4	5
11.	Nurses should be more sensitive to the reactions of service user towards information they are given regarding their treatment.	1	2	3	4	5
12.	Nurses should learn about the beliefs held by service user about their medication	1	2	3	4	5

Thank you for your time and participation

Thistlewaite J E, Raynor D K, and Knapp P (2003) Medical students' attitudes towards concordance in medicine taking: Exploring the impact of an educational programme. *Education for Health.* 16**(3**)307–17.

Appendix 10: Approval for Use of Questionnaires

Everything you wanted to know about the
General Self-Efficacy Scale
but were afraid to ask

by Ralf Schwarzer, May 30, 2011

The purpose of this FAQ is to assist the users of the scales published at the author's web pages http://www.ralfschwarzer.de/

DOWNLOAD of PDFs: http://userpage.fu-berlin.de/~health/self/selfeff_public.htm

Before attending to the questions below you might want to study our web pages. You might not have any questions after reading the web pages.

Do I need permission to use the general perceived self-efficacy (GSE) scale?

You do not need our explicit permission to utilize the scale in your research studies. We hereby grant you permission to use and reproduce the General Self-Efficacy Scale for your study, given that appropriate recognition of the source of the scale is made in the write-up of your study.

The main source is:
Schwarzer, R., & Jerusalem, M. **(1995)**. Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). Windsor, England: NFER-NELSON.

An additional source for the German version is:
Schwarzer, R., & Jerusalem, M. (Eds.). (1999). *Skalen zur Erfassung von Lehrer- und Schülermerkmalen: Dokumentation der psychometrischen Verfahren im Rahmen der Wissenschaftlichen Begleitung des Modellversuchs Selbstwirksame Schulen.* Berlin: Freie Universität Berlin.

I am not sure whether I want to measure general perceived self-efficacy (GSE) or specific health-related self-efficacy.

You have to decide which one fits your research question. If you intend to predict a particular behavior you are better off with a specific scale. You might be best off by designing your own items, tailored to your study, such as:
"I am certain that I can do ...xy..., even if ...zz ..." (1 2 3 4).

Health-specific self-efficacy scales can be found at:
http://userpage.fu-berlin.de/~health/healself.pdf

For the English version of the teacher self-efficacy scale, see Schwarzer & Hallum (2008).

If you are interested in other health behavior constructs, consult the NCI Health Behavior Constructs Website:

RE: Permission to use Latcon

Jumnoodoo Rami (CENTRAL AND NORTH WEST LONDON NHS FOUNDATION TRUST)

Sent: 27 January 2012 07:32

To: Jill Thistlethwaite [j.thistlethwaite@uq.edu.au]

Dear Jill

Many thanks for allowing me to use the Latcon.

Certainly i will provide you a copy of the findings of my reasearch and the intention will be to have it published. You work is immensely important to me. May be we can have a chat at some point if you drop me your contact details

Best wishes

Rami

Rami Jumnoodoo
Project Lead Relapse Prevention, Brent
Branch Secretary UNISON
13-15 Brondesbury Road
Relapse Prevention Office
London NW6 6BX

Tel: 020 8937 6451
Mobile:07958 367753

From: Jill Thistlethwaite [j.thistlethwaite@uq.edu.au]
Sent: 26 January 2012 20:59
To: Jumnoodoo Rami (CENTRAL AND NORTH WEST LONDON NHS FOUNDATION TRUST)
Cc: d.k.raynor@leeds.ac.uk
Subject: Re: Permission to use Latcon

Dear Rami
I am copying this reply to Prof Raynor who developed the LATCon with myself and Dr Knapp. There is no problem with using this – the wording has been changed previously and there are several versions. Prof Raynor I think will have the most current version.
WE will be very interested to read your results.
BW
Jill

Jill Thistlethwaite
Professor of Medical Education
Director of the Centre for Medical Education Research and Scholarship
The University of Queensland - School of Medicine,
288 Herston Rd, Herston
Qld 4006 Australia.

Direct line: (0061) 7 336 55206

AA: Charles Eddy (0061) 7 336 55016
C.eddy@uq.edu.au

From: "Jumnoodoo Rami (CENTRAL AND NORTH WEST LONDON NHS FOUNDATION TRUST)" <rami.jumnoodoo@nhs.net>
Date: Wed, 25 Jan 2012 20:55:39 +0000
To: Jill Thistlethwaite <j.thistlethwaite@uq.edu.au>
Subject: Permission to use Latcon

Dear Ms Thistlethwaite

I am currently doing the MProf and was looking to use the LATcon questionnaire to measure attitude of nurses following a course on relapse prevention to concordance of medication. To that effect, i would be very grateful, if i can have your permission to use your questionnaire for my research. Can i also change the word medical students to that of nurses. Using your tool will be of tremendous value to my reasearch project.

I will also give the appropriate recognition of the source of the scale is made in the write-up of my study

Looking forward to hear from you

Best wishes

Rami

Rami Jumnoodoo
Project Lead Relapse Prevention, Brent
13-15 Brondesbury Road
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London NW6 6BX

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Appendix 11: Skills Capability Questionnaire

Maintaining Medication Concordance
Using Relapse Prevention Skills
Skills Capability Questionnaire

On this occasion the above tool was designed to relate specifically to the relapse prevention programme, as there was currently no validated measure. This was based on the topics covered and techniques used in RP/MC course. The author's knowledge/experience/ literature were used to devise the questionnaire, which was then shown to other professional colleagues and service users/carers who advised as to whether or not the tool was comprehensive and made suggestions for additional items. Changes were made to ensure the questionnaire reflected the contents of the course. Then it was piloted by participants who were not to be part of the final study. Only one minor suggestion was made. ***It was felt that it ought to be more user friendly. This was achieved presenting it more elaborately, without any alteration of its contents. At that point, the questionnaire was ready for use.***
A modified Likert scale of 1–5 was used, 1 being Strongly disagree, 5 being Strongly agree and 3 being Neutral. A mean item score of 2–3 means that the participant tended to agree with the concept of concordance whilst an average score of lower than 2 suggested he/she did not.

		Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
1.	I have the skills to engage with service users in Medication Concordance	**1**	**2**	**3**	**4**	**5**
2.	I have the skills to convey information about Medication Concordance to service users.	**1**	**2**	**3**	**4**	**5**
3.	I have the skills to motivationally interview service users to promote medication concordance	**1**	**2**	**3**	**4**	**5**
4.	I have the skills to engage service users in Relapse Prevention planning	**1**	**2**	**3**	**4**	**5**
5.	I have the skills to select appropriate techniques to promote Medication Concordance with service users	**1**	**2**	**3**	**4**	**5**
6.	I have the skills to select appropriate techniques to Relapse Prevention plan with service users	**1**	**2**	**3**	**4**	**5**
7	I have skills to identify the causes (high risk situations) of non concordance of medication with service users	**1**	**2**	**3**	**4**	**5**
8	I have the skills to plan with service users to improve their medication concordance	**1**	**2**	**3**	**4**	**5**
9	I have the skills to enables service users to identify their early warning signs of non-concordance with their medication plan.	**1**	**2**	**3**	**4**	**5**
10.	I have the skills to explore and manage stress, faulty thinking and rule violation with service users as part of relapse prevention planning.	**1**	**2**	**3**	**4**	**5**

11.	I have the skills to develop lifestyle balance with service users as part of relapse prevention planning to support their plan for medication concordance.	**1**	**2**	**3**	**4**	**5**
12	I have the skills to help service users plan a medication concordance plan.	**1**	**2**	**3**	**4**	**5**
13.	I have the skills to plans with service users a Relapse Prevention plan to ensure the implementation of their medication concordance plan.	**1**	**2**	**3**	**4**	**5**

Please indicate your level of agreement with <u>each</u> of the statements below, by circling your response, using the scale provided

Thank y

Jumnoodoo, R (2011)

Appendix 12: Wilcoxon test, P-value, Means, Medians, SDs

Wilcoxon Signed Rank Test, *P* values, mean, median ranges and Standard Deviation (SD)

The Wilcoxon Signed Rank Test was chosen because of the abnormal data distribution and the small sample size, which required non-parametric testing. The Wilcoxon test was used for within-group analysis because in this study there is repeated measurements on a single sample to assess whether their population mean rank differs between the pre-, the post- and the follow-up sessions. It will also provide the median and range for comparisons along with the *P*-value.

The *P*-value is often fixed at 0.05 and serves against the test generated P-value, which must be either higher or lower than 0.05. Therefore the *P*-value is significant to determine whether to accept or reject the null hypothesis: in other words, there is no significant difference in the measured outcomes.

If the *P*-value associated with the test statistic is less than *P*-value=0.05, the null hypothesis is rejected because there is a statistically significant difference between the two groups. Conversely, if the *P*-value is greater than *P*=0.05, then the null hypothesis is accepted because there is no statistically significant difference between the groups. In order to either accept or reject the study findings, other metrics based on the *P*-value should be considered. The mean, Standard Deviations (SDs), median, ranges and *P*-values will all be reported. The median is the number that occurs in the middle of an ordered sequence of scores. The range is a measure of how spread the scores are (i.e. minimum and maximum values). SDs measure the spread of individual results around the mean of all results. This is used, together with the median, in describing either a normal or abnormal distribution of data (skewed data), where the scores could be either high or low. The *P*-value is a summary of what the data said about the credibility of the null hypothesis.

Appendix 13: Initial Themes from Steering Group

We envisaged these will include:

- Changes made in clinical practice since the RPMC course
- Problems encountered when attempting to put enhanced knowledge and skills into practice
- Any new skills gained during the 10 weeks since the RPMC course
- Any adaptations made of the use of relapse prevention techniques, etc, in practice settings
- Changes in attitude towards SUs with MC since completing the RPMC course
- How attending this course may have enhanced personal or professional career development.

Prior to the focus group, the themes were shown to nurses who have had accredited academic training in some form of psychosocial intervention for comment on whether the themes were comprehensive. A similar procedure was followed with selected service users/carers who had attended the RP course earlier. Following feedback from these two forums, the themes were amended and finalised. These amendments include that the fonts were too small, the word 'clinical' should be deleted and to use the word 'problem' instead of the word 'barrier'. Those comments were acted upon and amendments were made to finalise the questions, ready for use by the focus group (Appendix 15). A closed-ended question to each open-ended question, with a 'yes' or 'no' answer, was also included to enable an aggregate data quickly. In this way, the respondent may want to justify their answer and thus add richness to both the qualitative and the quantitative data (Boynton, 2004).

Appendix 14: Development of the Interview Guide

An interview guide was developed to explore the impact of the RPMC programme and gain further insight into the value of the delivered programme. The interview guide was a necessary component in conducting the interviews. The idea was to obtain a personal story behind participant experiences (McNamara, 1999), where the interviewer will work directly with the interviewee, in comparison to merely administering semi-structured questionnaires. Another aspect of using this method was that the interviewees provided valid responses to the impact of RPMC, rather than just a conversational approach, whilst allowing some flexibility and adaptability in extracting the required information from them. However, motivating the respondents to give precise replies may not be necessary in all cases as this depended on individual interest in the subject (Hoyle *et al.,* 2002: 144). Another negative side of interviews is that they are time consuming in terms of setting up, interviewing, transcribing, analysing, feedback and reporting (Gillham, 2000: 9) and the interviewer has to be well trained to be able to respond to any contingency (Hoyle *et al.*, 2002: 145).

Rami Jumnoodoo

Appendix 15: Interview Guide Finalised

14/06/2013

INTERVIEW SCHEDULE

Key

In Italic – instructions to the interviewer

In black – information relayed to participants

Re: Relapse Prevention: Relationship to Medication Concordance: A Programme of Staff Education

The participant would have been briefed by the investigator and consent obtained at this point by the principal investigator. The following is intended to be used by the research assistant when collecting interview recording from participants.

WARM UP

My name is Nisha Parmar and I currently work the Trust as an Administrator/ Organiser. Although I work for the Trust I am only here to collect information that will remain confidential. Although the information will be used as part of a research project nobody will know who has provided the information, as names will be kept anonymous. I will give you an outline of the process and then I will ask you if you are happy to continue.

The focus groups (research participants) will be delivered by two independent researchers, (Nisha and Albert) Albert who will facilitate the discussion and Nisha who will take notes regarding group interactions etc. The aim will be for the focus group participants to be representative in terms of gender, age, ethnicity, grade and type of professional experience. The proceedings will be recorded and thereafter transcribed.

Brief view of what the interview involves:

Today I will be asking you questions for you to answer and I will be here to clarify any questions to support you with answering the questions. These will be about:

What changes (if any) have you made in your practice?

What barriers have you encountered when attempting to put your enhanced knowledge into practice?

Can you describe any new skills gained during the last 10 weeks?

What adaptations have you had to make to use relapse prevention techniques etc. in a practice setting?

Can you describe how attending this course may enhance your career development?

Take your time answering the questions

This is not a test. If you are not able to answer any questions please feel comfortable enough to move onto the next one. I will also be here if you need me to clarify any of the questions. *Give clarification without leading the user to a particular answer.*

If you want to stop the interview for any reason then let me know - that is not a problem at all and will not affect you in any way whatsoever. It is important that you feel happy with the whole process.

As I explained before although the information will be used in a research project, only the researchers will see this and no other individuals particularly those who are involved in your care will see individual responses. I will not be attaching your name to the questionnaires. Instead I will put down a number that is an individual code. This number will be used in place of your name, which will help me, identify for data analysis purposes – No one else will be able to know who completed the questionnaire. Are you happy that your information will be kept confidential? Do you have any questions on how it is kept confidential or what we do with the information?

Are you happy for us to continue?

If the participant is happy to do so, please present the first questionnaire

Remember, this is not a test. I am only interested in what you feel, so there are no right or wrong answer.

Do you have any questions before we begin?

COOL DOWN and ASSURANCES

I would like to thank you for taking the time to help us with this. Again I would like to assure you that your answers will not be used in any other way but for research purposes. Nobody will be provided with your individual answers. I have shown you how I record a number at the top of each questionnaire – This will ensure that your answers cannot be identified and your questionnaire will remain anonymous.

The information you have provided will be of great importance to us and once the study is completed you will have a chance to see the outcomes of the entire research study. Do you have any questions? If you have further questions that you think of after today please refer to the information sheet that you were provided with where you will find a contact number. Please remember you can only answer questions that are related to today's process and not any clinical questions you may have as I am not part of the team that provides you with support around your care.

Thank you again and I wish you all the best

Ensure that the coding is consistent and that the following demographic information is collected.

If the research participant has asked you any questions during the process please ensure that you have recorded this down along with your answer – Please inform them that you will be doing this.

Appendix 16: Routine RPMC evaluation questions

Relapse Prevention/Medication Concordance Training Evaluation Form

To help us improve the quality of our training, we would appreciate your feedback.

Please indicate your response to the questions below by circling the appropriate number,

With 1 = Strongly Disagree and 5 = Strongly Agree

1. a) Was your interest sustained throughout the training 1 ☐ 2☐ 3☐ 4☐ 5 ☐

2. Do you have a better understanding of:-

a) Engagement…….. 1 ☐ 2☐ 3☐ 4☐ 5 ☐

b) The relapse prevention model …….. 1 ☐ 2☐ 3☐ 4☐ 5 ☐

c) High-risk situations…….. 1 ☐ 2☐ 3☐ 4☐ 5 ☐

d) The difference between lapse and relapse…… 1 ☐ 2☐ 3☐ 4☐ 5 ☐

e) Early-warning signs and relapse signatures…… 1 ☐ 2☐ 3☐ 4☐ 5 ☐

f) Managing Stress…….. 1 ☐ 2☐ 3☐ 4☐ 5 ☐

g) Managing faulty thoughts……. 1 ☐ 2☐ 3☐ 4☐ 5 ☐

h) Rule-violation effect……. ……. 1 ☐ 2☐ 3☐ 4☐ 5 ☐

i) Developing a balanced lifestyle……. 1 ☐ 2☐ 3☐ 4☐ 5 ☐

j) Problem solving…… 1 ☐ 2☐ 3☐ 4☐ 5 ☐

k) Medication concordance…… 1 ☐ 2☐ 3☐ 4☐ 5 ☐

3. Did the course give you ideas about how to:

a) Assess medication non-concordance

1 □ 2□ 3□ 4□ 5 □

b) Apply relapse prevention techniques in medication non-concordance

1 □ 2□ 3□ 4□ 5 □

c) Measure the relapse prevention/medication concordance effectiveness.

1 □ 2□ 3□ 4□ 5 □

4. Overall, how would you rate the course?

1 □ 2□ 3□ 4□ 5 □

5. Would you recommend this course to others?

1 □ 2□ 3□ 4□ 5 □

6. Would you recommend this trainer to others?

1 □ 2□ 3 □ 4□ 5 □

7. What did you like most about the course?

……

……

8. Is there anything you would change to improve the course?

……

……

9. Now that you have completed the course what additional training if any would be helpful?

……

……

10. Other comments, observations or suggestions

……..

……..

Thank you for your feedback!

Appendix 17: RPMC Interview Guide (Semi-structured Questionnaire)

1. Following the RPMC course have changes occurred to improve your practice

Yes ☐ No ☐

If yes please refer 1.1

1.1. Can you describe what changes have taken place in your practice?

……
……

2. Have you encountered any barriers to implementing your learning from the course?

Yes No ☐

If yes please refer 2.1

2.1. What barriers have been encountered when attempting to put enhance RPMC knowledge into practice?

……
……
……

3. Following the RPMC course did you acquire any new stills to promote medication concordance?

Yes ☐ No ☐

If yes please refer 3.1

3.1. Describe any new skills gained during the previous three months?

……
……
……

4. Have you made any adaptations to your previous approaches to medication concordance?

Yes ☐ No ☐

If yes please refer 4.1

4.1. What adaptations have you made of the use RPMC techniques in your practice setting?

……
……
……

5. Has your attitude towards services users with medication concordance changed since you commence the medication concordance course?

Yes ☐ No ☐

If yes please refer 5.1

5.1 Can you describe the changes in your attitudes following participation in the course?

……
……
……

6. Do you think participation in the course will have had an effect on your career development?

Yes ☐ No ☐

If yes please refer 6.1

6.1 How has you career development been improved as a consequence of attending this course?

……
……
……

6.2. Think back a little. Do you think your initial score was accurate in comparison to that after the course?

……
……

6.3 Any further comments you may wish to add

……
……
……

Thank you for your participation!

Appendix 18: Thematic Analysis Transcripts

Q1. Following the RPMC course, have changes occurred to improve your practice?

Interviewees: All 5 participants responded 'Yes'.

Level 1 Interpretation
They all think that something has changed in their practice

Q1.1: Can you describe what changes have taken place in your practice since the medication concordance course?

Q1.1	**Reflective Quotes**	**Level 1 Interpretation**
E9	I now have a better understanding of what medication concordance is about. I am also more aware of the problems with MC and now I am able to develop my skills with service users whilst giving information about their medications.	1. Believed there is clarity about MC. 2. Detect problems and solutions to MC.
E39	I'm dealing with quite a lot of clients in the community with complex cases more skilfully and offer more alternative choices if possible to improve medication concordance. I read more on RPMC now to increase my knowledge and skills to become more resourceful in dealing with complex issues such conflicts between using drugs and alcohol instead of their prescribed medication. As part of my work, practising RP on a continuing basis has helped me to reflect and to	1. Too many difficult cases to manage 2. Able to provide clients with choices to get better MC outcomes. 3. Able to self-teach RPMC and independently solve difficult issues.

	develop more skills in terms of medication concordance. We need to offer other medication alternatively when it's possible, what I mean is to review their medication and change them if needed. I am not a prescriber at the end of the day.	4. Able to think back and make more progress in MC. 5. To assess and review medication as required 6. It is not my responsibility at the end of the day.
E21	I think it has improved my practice in the way I'm dealing with clients, who doesn't want to continue with their medication, because initially if someone said to me 'I don't want to take my medication because its giving me side-effects', I need to convince and to negotiate with them to take their medication. Since we went for this training I am more aware that we need to engage in a very therapeutic way with the client to know their views because they're the one in this position and they know how they feel about it, they know this medication in and out even though we are the ones giving it to them but they are the ones experiencing it. I am able now to see from their own perspective not from my own one, as a clinician wanting them to be on this medication and thinking it's good for you, best for you, so I do listen to them now when they say they don't want to take it and sometimes some of them will say 'OK, I just want to go without it for a couple of months and see how I will be able to manage and if	1. Believe in finding a better approach to clients with a negative view of taking medication. 2. Foster better discussions with them to agree to take their medication, without being pushy. 3. Since training recognises the need to have better relationships with patients to understand their thinking and feelings about not wanting to take medication (behaviour). 4. They are the one with experience regarding their medication.

	things go wrong I will come back to you', now I do really tend to listen to what they have to say and just say OK if you don't want it now, just let us know, so that now I tend to work more with their carers or whoever is around them, now I am very sensitive to that.	5. Paying more attention to the patient's views as well as telling them the benefits of taking their medication. 6. Keep an open door for them in case they want treatment after a trial period without it. 7. Turn to carer or whoever is identified for help to assess patient if he/she is not engaging in MC.
E20	Well it has actually changed my practice following the course. I was approached in November/ December time by my manager, Nurse Lead, to introduce a medication concordance clinic, so that's something that started at the beginning of December and she specifically approached me because I'd done the course and this was very useful to implement in to day-to-day practice. we booked patients in for a chat about their medication, what their expectations were in terms of therapeutic benefits of medication also any side-effects or problems, etc. All the time we are learning new tricks to negotiate with them about whether they believe the medication they are taking is good or bad for them and we want to know	1. Recognition by manager to introduce MC Clinic to the service after the RPMC course. 2. Patients talked about what they want to know—pros and cons of medication. 3. Discover new ways to come and get them involved in discussions, to understand their views, feelings and their beliefs

	what they are thinking so that we can share our opinions and views in a respectful way. Why they are taking medication and any other questions, how they should take it and just to give them a bit more reassurance, a bit more autonomy and choice over their medication as well. We've had someone to come over to try and do an audit on the benefits of it, can't remember the name of the audit but it's an audit about quality control within our team, so we met my manager and other colleagues there has been a lot of changes and I think it was triggered by my attending the course.	about the good and bad effects of medication. 4. Felt she was instrumental in raising the profile of the service through a positive quality standard monitor. 5. Recognised the training was the instrument for such a change.
E22	I can now offer better explanation and education to service users regarding positive and negative aspects of medication and treatment programme re concordance. Service users are in a better position to evaluate their progress, ability to recognise early-warning signs and relapse signature. It also improved service users' ability to recognise their strengths and weaknesses.	1. Feel at ease in getting the information and knowledge across on positive and negative aspects of medication with confidence. 2. Service users are developing their assessment skills for their symptoms of relapse. 3. Service users are becoming more aware of their strengths and weaknesses regarding their medication.

Level 2 Summary Interpretation of Q1

Level 2: Summary Interpretation of QI by the Focus Group
The beliefs among participants are reported to be clearer for the understanding, assessing, planning and monitoring of an MC plan. This is achieved through confidence in fostering better relationships with patients and being able to negotiate skilfully with the patients in order for them to continue to take their medication. Should they decide not to do so, then alternative options are left open for them to choose from, including getting back into the treatment service as soon as they feel the need according to their self-assessment of their lapse or relapse symptoms, i.e. EWS. In practice, the nurses involved in the focus group are seemingly able to investigate the thinking, feelings and approach of patients regarding their medication. In so doing they are now becoming to some extent more familiar with the cognitive behavioural theory fundamental to the relapse prevention model, which is the basis of RPMC. Whilst the relationships between the nurses and patients are becoming transparent, one participant has been instrumental in introducing the first MC clinic in her service. She is proud to be recognised for her success and innovation in bringing prestige and quality to the service.

Thematic Analysis of Interview Transcripts

Q2. Have you encountered any barriers to implementing what you have learnt from the course?

Interviewees: All 5 participants responded 'Yes'.

Level 1 Interpretation
They all think that there are problems in applying RPMC to their practice.

Q2.1: What barriers have been encountered when attempting to put enhanced RPMC knowledge into practice?

Q2.1	Reflective Quotes	Level 1 Interpretation
E9	Yes there are various, significant increases in our workload. Asking the right question. How to answer the question. It is difficult to put Relapse and Prevention strategy techniques for all of them when you do the following-up process over medication concordance, it's a skill you promote, when people are not well and when they stop taking their medication. Our own beliefs as nurses who spend more time with the patients, [we] think we know best of how to deal with patients who are not taking their medication but with a reality check we have got a long way to go to be competent in medication concordance. We need updates, supervision and time to reflect on where we go wrong and lessons to learn from our colleagues when they get things right. Medication to prevent relapse, many clients have got high risk and could not remember all of them so it's difficult to implement RPMC strategies.	1. Too many things to do 2. Only some patients get the RPMC benefits in the after care. When they are not well and not taking their medication concordance needs to become more focused. 3. Nurses can be inaccurate in their perception in that they believe they know more about MC when in the 'real world' there is a lot for them to learn in the future. 4. There doesn't seem to be proper supervision and team learning of MC. 5. Self assessment by patients can be problematic for nurses to implement an MC plan.

E39	The course itself is not the barrier but it is difficult to keep track on all patients as they are discharged as soon as they are well and new ones come in and therefore difficult to monitor them. I am not prescriber and need to consult Drs for medication changes. If patient is well for few months, then he/she can relapse if there are changes in medication so there is fear to relapse if medication changed. Unfortunately I can't remember all the clients; yeah basically what I do is a triage, where the clients are assessed and referred to the appropriate service.	1. It is difficult to know what is going on with the patients once discharged from the service as they are constantly being replaced by new ones. 2. It is not in nurses' power to prescribe medication. 3. Patients are afraid of relapse due to changes to medication which had previously kept them well over the last few months. 4. Not really following or treating patients in their new role.
E21	Difficult to work with patient who is adamant not to take their medication because of their culture and religion. What they are saying is something to do with their culture, some time Muslim service users says they will read Quran and it will help them to calm down. Difficulty will also arise when it comes to put MC in practice after learning such a lot on the course. There is not enough time during the day to fully implement, monitor and to review the effects of	1. Patients' strong beliefs because of their culture can affect their MC as they may have a fierce resistance to take medication, e.g. Muslim SUs rely on reading the Quran to improve their mental health. 2. Too much information from the course can actually create problems for

	their medication and we feel bad about it all the times. I can recognise their cultural background and their beliefs. The course has helped me to understand them better way now.	implementing MC on the whole. 3. Not enough time to complete a MC process and there is an associated guilt feeling about this. 4. RPMC course has helped participant to a greater understanding about patients' beliefs and culture.
E20	Given example of depot injection; No matter how we work, there are a few clients who do not want to take medication. Difficult to offer RP techniques to every patient especially when they are well or not taking their medication. Guess we all have a bit of nerves when putting things in practice and RPMC without supervision makes it difficult for us to apply. It's quite a difficult question seeing as it's been so long I can't quite remember, some of the stuff that we did learn, I think probably because I work in a more of a primary care setting rather than secondary care, some of the medication compliance and concordance issues, so it's something good to know. I know there are many barriers especially an	1. Having a depot injection instead of having to take medication every day is useful if patients explicitly refuse to take their medication. 2. Patients when well do not feel the need to take medication and therefore it is difficult to apply an RPMC plan. 3. Putting RPMC in practice without supervision can be stressful for some nurses to apply. 4. Having learnt so much from the course it is difficult to use RPMC in the participants' current role but they can see the benefit of the lesson learnt and they also recognise

	increased caseload and large volume of paperwork and documentation.	nurses' heavy caseload and administrative duties can impact on working with RPMC.
E22	I do not have sufficient time to fully implement, monitor and review medication concordance approach due to large caseload. There is also an increase volume of documentation. There is also a lack of appropriate levels of support to staff to educate service users in medication concordance.	1. Too busy to implement MC properly due to too many cases and paperwork 2. Not enough support from line managers to recognise the importance of sharing knowledge with patients about MC.

Level 2 Summary Interpretation of Q2.1

Level 2: Summary Interpretation of Q2.1 by the Focus Group
It is clear from patients' views about taking medication that the burden on nurses to implement MC is difficult, in practice. Although nurses have good intentions to use RPMC, the volume of increased caseload and paperwork seems to be the main barrier to implementing it and this is compounded by lack of support, supervision and updates or too much information from the course, which they do not have the confidence to apply in practice. Adding to these variables, some patients' recovery is hindered by not taking their medication until they recognise they are unwell. Instead beliefs and culture are often used as an alternative to medical treatment and they fear relapse when changing to a new medication regime. Although nurses can see the benefits of the course, they are not able to practise MC in situations where patients have been discharged from their care.

Thematic Analysis of Interview Transcripts

Q3: **Following the RPMC course did you acquire any new skills to promote medication concordance?**

Interviewees: All 5 participants responded 'Yes'.

Level 1 Interpretation
They all think that something has changed in their practice.

Q3.1: Describe any new skills gained during the past six weeks?

Q3.1	**Reflective Quotes**	**Level 1 Interpretation**
E9	Developing strategies, it has provided me with broader knowledge, I have been implementing strategies with clients who don't want to take their medication, making them aware of medication. I feel a bit better about solving problems after the course and now after six weeks or so, I feel I am getting there but not all there yet. We are becoming more like medication detectives in working with their faulty thinking such as the tablets they are being given are poisoning their brains and body and they are here only for the good of the doctor who gets lots of money from the drug companies and they do not care about them really.	1. Developing more knowledge of RPMC to implement it in practice 2. Satisfied in improving problem-solving skills regarding issues relating to RPMC. 3. Better skills assessment in dealing with RPMC concepts such as negative perceptions of patients' medication, which could lead to them leaving their support service.

E39	I have a better understanding of SUs' capacity/ choice and control they have and more insight as to why SUs not compliant with taking medication. The course itself provided me with insight as to why patients were not compliant with medication, helping to develop strategies, our strategies with clients, it has helped basically to develop more skills in terms of medication insight, they don't want to talk about medication all the time. Service users need to have better understanding of their medication. There is more educative awareness for SU's and also to provide them with a more structured approach, together with information presented on the course. My favourite approach was not methodical, not structured the way it should be done, but going to the course I have more insight, how to implement it, how to bring some changes, so definitely it has helped and the knowledge is worthwhile though this one is more methodical way of implementing it's a successful way. it's very structured and there is rationale for doing that, I can implement it differently and the success rate is higher than the normal approach , I'm not saying it is a big high jump	1. Have learnt that patients' choices and feeling in control are important to MC. 2. Have developed new ways of working with noncompliant patients and can help them to develop care plans other than just talking about medication. 3. The patients should be educated more about their medication to improve compliance. 4. The course has increased the competencies of the nurse in adopting a new structured approach to RPMC in practice 5. Can now find that changing to the new approach has been successful in helping the nurse and in turn the patients, to improve on RPMC

	but at least slightly higher than normal approach as research involved. I am not saying that my attitude changed because we have to understand why the client doesn't want to accept medication or do not want to take their medication. As key issue, I said to you my attitude has changed because obviously, you have to understand from their point of view, it gave me more empathy, in putting myself in their shoes and how to deal with it. I mean I can't exactly say yes that you have to take this medications. If I was a clinician obviously it will have an impact but if you're a manager it will have a very limited effect but the knowledge will help you to train your clinicians. So if you have a firsthand knowledge of relapse prevention this information can be shared with your practitioners, if I'm a manager I am not dealing with clients directly. Yes, very true and I have gained skills and knowledge.	6. It could be only a slight improvement in MC but it is visible and encouraging from the nurse's point of view 7. It is simply a nursing duty that the nurse is talking about but changes in attitude have occurred since the course in that they are more empathetic and acknowledge the possibility that they do not understand the reason patients are not taking their medication. 8. The course is helpful in sharing information even if you are a manager. 9. Overall there seemed to be an improvement in skills and knowledge after the RPMC course.
E21	With my cultural background, I can explain to clients which is very important to take medications and explaining them about their medications.	1. I can now work with clients to take their medication because of the learnt skills from the

	I have learnt these skills from course. I have now changed my approach to more structured, methodical way and therefore implementing MC better now.	course in linking culture and effects of taking medication. 2. Now nurse seemed to believe a more structured approach in a systematic manner is useful in practice.
E20	One of the main ones is the culture of people like some of them who are Muslims they think if they read Quran it will help them to calm down their thoughts. With my cultural background, I can explain to clients it's very important to take medications and explaining them about their medications. I have learnt more of these skills from course. I can recognise their cultural background and their beliefs. Now with the training done, it has enlightened my way of thinking and ways of relating to people about their religious and cultural backgrounds and what impact this can have on someone's mental health and our interventions to improve their mental health. They have alternative therapies or treatment apart from the medical regime.	1. Can now deal with cultural issues which may affect MC by explaining to them in a more appropriate way about their medication. 2. Nurse is now able to think clearly about people with different religious and cultural backgrounds and can engage with them better in order to draw up an RPMC plan to improve their mental health.
	I have a greater understanding of EWS and increase negotiation skills to inspire confidence	1. Have increased ability to assess EWS and confidence

E22	through motivating them to take their medication. I have also an increase in negotiation skills to increase service users' confidence and to increase their motivation levels. I have increased ability to understand service users' capacity, choice and control.	in motivating patients to take their medication. 2. Much improved skills to instil confidence and motivation in patients to take medication. 3. Acknowledges what patients are able to do regarding making choices and taking control of self-administering medication.

Level 2 Summary Interpretation of Q3.1

Level 2: Summary Interpretation of Q3.1 by the Focus Group
The course has improved the capability of service users for better MC. More importantly, nurses have recognised the importance of developing an RPMC plan in a structured and systematic manner. Although it is too early to verify its success in practice, the nurses tentatively feel satisfied about the positive outcome of MC in practice. Two important concepts that nurses' skills have improved are: assessing the perceptions and negative beliefs of service users about their medication, and sharing knowledge with patients to report their EWS to activate an RPMC plan quickly, to prevent a lapse or relapse episode. The participants' attitudes seem to have changed by working with cultural and religious issues that may affect MC. The course has emphasised that building good relationships whilst showing empathy seems preferable to the traditional view of the patient being passive about their treatment. The belief is that helping the patients to be in charge of their treatment and making choices independently or in agreement with the nurses may be more productive in getting them to take their medication.

Thematic Analysis of Interviews Transcripts

Q4. Have you made any adaptations to your previous approach to medication concordance?

Interviewees: All respondents except for E39 replied 'yes'.

Level 1 Interpretation
They all think that something has changed in their practice but E39 has moved to a different job where he/she could not make changes to his/her practice.

Q4.1: What adaptations have you made in the use of RPMC techniques in your practice setting?

Q4.1	**Reflective Quotes**	**Level 1 Interpretation**
E9	Developing strategies, it has provided me with broader knowledge. I have been implementing strategies with clients who don't want to take their medication, making them aware of medication.	1. The nurse's enhanced knowledge has improved the RPMC Plan. 2. Raising patients' awareness of the cost benefits of the RPMC plan against not wanting to take medication.
E39	NA	
E21	I can understand service users' concept towards medications, improvement to their mental state, medication and tend to trust their beliefs and it just helps my practice now as I have a better relationship with the family because now	1. Meeting patients' needs through negotiation, to understand their beliefs and to improve their mental wellbeing. This incorporates working with

	you are doing things the way they wanted or the way they would like to do things. We are able to have trust to improve way of life.	the family and allowing them to make choices in negotiation with the nurse.
E20	Yes, I think so yeah, I think yes, more so in terms of a bit more reflective in terms of someone taking medication and the experiences they have and so many people don't want to take medication, it's not something they want to become dependent upon as people don't feel themselves. It's about advising people and making sure they have autonomy and as much choice as possible.	1. Can now understand better that they do not want to take their medication because of negative side-effects. Despite that negative feeling, the nurse works with them to allow them more freedom of choice.
E22	Being more task-driven, focused on medication aspects. Provision of relevant information to enhance service users' knowledge on an ongoing basis. Ongoing 1:1 discussions about negative and positive effects of medication and/or mixing with illegal substances and poor dietary intake.	1. More practically orientated in adopting learning methods from the course to improve awareness of medication 2. Provide them with information on a 1:1 basis. 3. Discuss pertinent issues such as taking drugs whilst on medication or improving overall wellbeing.

Level 2 Summary Interpretation of Q4.1

Level 2: Summary Interpretation of Q4.1 by the Focus Group
Nurses are seemingly more capable of developing RPMC plans following the course. Their strategies include: information sharing, dealing with the negative side-effects of medication, issues with drugs whenever they arise and working with families. All these interventions are carried out in a user-friendly way, thus making patients' choices easier and in this way the RPMC plan is more likely to succeed.