DR. MELINDA JANE BUNYAN (Orcid ID : 0000-0003-1893-3792)

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# Feasibility of Training Nurses in Motivational Interviewing to Improve Patient Experience in Mental Health Inpatient Rehabilitation: A Pilot Study

Short Title:

**Motivational Interviewing in MH Rehab Wards**

Authors:

Dr Mel Bunyan
Consultant Clinical Psychologist
Oxleas NHS Foundation Trust
mel.bunyan@oxleas.nhs.uk
**Author for Correspondence***

Dr John Crowley
Senior Lecturer
University of Greenwich

Dr Nicola Smedley
Clinical Psychologist
Oxleas NHS Foundation Trust

Marie-France Mutti
Lived Experience Research Assistant
Oxleas NHS Foundation Trust

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Angela Cashen
Lived Experience Research Assistant
Oxleas NHS Foundation Trust

Dr Trevor Thompson
Senior Lecturer
University of Greenwich

Dr John Foster
Reader in Mental Health Studies
University of Greenwich

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We would like to acknowledge the contribution of all the patients and staff on the rehabilitation units who participated in the study and gave of their time.

# Feasibility of Training Nurses in Motivational Interviewing to Improve Patient Experience in Mental Health Inpatient Rehabilitation Settings: A pilot study

Article Summary:

What is known on the subject?

- Recently concerns have been raised about how well United Kingdom National Health Service (NHS) nurses care for their patients and their level of compassion.
- Motivational interviewing (MI) is an established approach to helping people make positive behaviour changes, through directive, person-centred counselling within a collaborative relationship between clinician and recipient

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- Based on evidence that MI may influence nursing practice positively, an investigation into the feasibility of training nurses on mental health inpatient rehabilitation wards ("rehabilitation") in MI to improve patient experience was reported.

What this paper adds to existing knowledge?

- This pilot study demonstrates that training rehabilitation nurses in MI is feasible and provides preliminary evidence suggesting that a larger study to examine efficacy is warranted, including a calculation of sample size required to draw robust statistical conclusions.
- Nurses evaluated the training as highly relevant to their work
- Patients responded well to interviews and focus groups with support from experts-by-experience; they were generally fairly satisfied with the rehabilitation ward and slight improvements in their experience were found following MI training for nurses but not at six month follow up.

What are the implications for practice?

- Rehabilitation nurses may face conflicting demands between ensuring patients with severe difficulties meet their basic needs and working with them to develop greater independence
- Qualitative findings question whether nurse-patient interactions are fully valued as nursing interventions in inpatient rehabilitation
- Learning MI might be a useful way of helping nurses think in detail about their interactions with patients and how to improve communications with their patients.
- The principles of MI should be incorporated into pre-registration training.

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ABSTRACT

## Introduction:

There is limited research addressing the experiences of patients in inpatient rehabilitation (rehabilitation), who often spend long periods in hospital, and the nursing approaches utilised.

Aim:

Based on evidence that Motivational Interviewing (MI) may improve nursing practice, this was a pilot study evaluating the feasibility of training rehabilitation nurses in MI and measuring patient experience.

Method:

Nurses underwent training and supervision focusing on MI spirit. Quantitative and qualitative measures were taken pre-training, two months post-training and eight months post training. Expert-by-experience research assistants facilitated patients' participation in the study.

Results:

This study showed that training rehabilitation nurses in MI was feasible and relevant to their work. Patients participated in interviews and focus groups with support and potential improvements that require further empirical investigation in patient experience were found following the MI training.

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Discussion:

This pilot study establishes the feasibility of a larger study addressing efficacy. Tentative qualitative findings question whether interactions between nurses and patients are valued in rehabilitation and support MI as a promising skill-set for rehabilitation nurses.

Implications for Practice:

Bringing MI into inpatient rehabilitation provoked reflection on nursing practice. Dilemmas for nurses about balancing safety with promoting autonomy and communicating constructively with patients emerged as important.

Key Words: Inpatient rehabilitation, Mental health, Motivational Interviewing, Nursing, Patient experience, Staff training

**Relevance Statement**: With little research into inpatient rehabilitation, the nursing skillset for working with people with often the most life challenges in mental health has been underplayed in the literature and in practice.

In this pilot study, we explore the feasibility of training inpatient rehabilitation nurses in Motivational Interviewing (MI) as a possible way of improving patient experience, providing information on acceptability and relevance of MI training/supervision for nurses, recruitment and acceptable measures for patients. Estimates of sample sizes for a larger study are given. Implications regarding nurse-patient interactions in rehabilitation, dilemmas facing rehabilitation nurses and issues for nurse training are explored.

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## INTRODUCTION

Mental health inpatient rehabilitation (rehabilitation) can be considered an under-researched area, despite the majority of UK National Health Service (NHS) Trusts offering inpatient rehabilitation placements (Killaspy *et al*. 2005). Rehabilitation services provide specialist assessment, treatment, interventions and support that "maximises an individual's quality of life and social inclusion" (Killaspy *et al*. 2005).

Typically, patients will stay in inpatient rehabilitation for about 18 months, are around 40 years old, diagnosed with psychosis (80%) but respond poorly to medication and have complicating difficulties; they will have had contact with Mental Health Services for 13 years and 4 previous hospital admissions (Killaspy *et al*. 2013). Despite this relatively small but complex patient group taking up to 25% of the mental health budget (DH 1999), there has been little research into the experience of rehabilitation inpatients and what approaches might improve their experiences. This study investigates training staff, especially nurses, as an approach to improving care.

The quality of relationships between nurses and patients has been linked to outcomes for people with severe mental health problems generally (Tattan & Tarrier 2000; Taylor *et al*. 2009) and in rehabilitation specifically (Chronister *et al.* 2008). Nurse-patient relationships may be negatively affected by stigmatising attitudes amongst nurses (Ross & Goldner 2009), patients' difficulties with social behaviour (Pinkham & Penn 2006), nurses' beliefs that patients can control problem behaviours (Berry *et al*. 2012) and intrusive nursing practices (Price & Wibberley 2012). Studies in acute inpatient wards have found that patients spend relatively little time in contact with nurses and much in isolation (Sharac *et al*. 2010), even though empathic

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relationships and time with nurses are desired by patients (Rethink 2010). In inpatient rehabilitation, the main aim is to develop skills and confidence to live more independently in the community (JCP-MH 2012); tensions in relationships may occur especially around “motivating” patients to look after their needs and participate in activities.

Recently, there has been a national outcry regarding poor care and lack of compassion in the UK NHS (DH 2013a) and a vision of nursing, characterised by the "6C's" (care, compassion, competence, communication, courage and commitment) has been set out by the Department of Health (2012). Locally, patient satisfaction surveys and serious incident reviews raised concerns about rehabilitation nurses’ communication, with listening skills training proposed as a solution. This was developed into a project implementing in-house staff training in Motivational Interviewing (MI) focused on improving patient experience by developing MI spirit amongst staff rather than MI for specific behaviour change amongst patients.

MI is a person-centred form of guiding to elicit and strengthen motivation for change, with listening skills at its core (Miller & Rollnick 2009). The efficacy of MI for behaviour change has been well researched, finding small to medium effect sizes (Miller & Rollnick 2012). The "spirit" of MI is described as collaborative, evocative and respectful of the recipient's autonomy (Miller & Rollnick 2002). Using specific reflective listening skills, the clinician validates the patient's views, gently timing the eliciting and strengthening of “change talk”, whilst resisting the “righting reflex” (the urge to “fix” things through persuasion, advice etc., that is counterproductive for change). Hence, MI encompasses listening skills but also wider skills to support motivation and autonomy that could be helpful in rehabilitation.

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Low level of engagement in activities is a major difficulty in rehabilitation (Killaspy *et al*. 2015). MI has been shown to aid engagement in some mental health treatments (Dray *et al*. 2014; Dean *et al*. 2016) and interventions for people with severe mental health problems (Fiszdon *et al*. 2016; Hampson *et al.* 2015; Barrowclough *et al*. 2001). Increasing engagement in other interventions may be the main mechanism of change (Romano & Peters 2015) and combining MI with other interventions may have an additive effect (Hettema *et al*. 2005), suggesting a case for combining MI with other rehabilitation interventions. Proposed adjustments to MI with psychosis, reflecting specific difficulties with cognitive deficits, thought disorder and social functioning, are relevant and include more structure, prompts, frequent review and shorter term goals (e.g. Carey *et al*. 2007). MI is used increasingly to improve physical health behaviours (eg. Hardcastle *et al*. 2013; Hettema & Hendrick 2010), so may also have potential for addressing current, serious concerns about the physical health of people diagnosed with schizophrenia (Schizophrenia Commission 2012; Open Public Services Network 2015).

The principles of MI resonate with the recovery principles that have shaped mental health care over recent decades (Anthony 1993) and the new vision of nurses with "specialist knowledge and skills to interact with patients in a therapeutic and purposeful manner to aid their recovery and quality of life" (DH 2013b). Slade (2013) argues that in a recovery-oriented service, "actions by staff will primarily focus on identifying, elaborating and supporting work towards the person's goals" and must avoid the "imposition of meanings and assumptions about what matters" (p.16). The skills taught in MI may guide rehabilitation nurses in how to operationalise this person-centred approach in everyday interactions. MI spirit is underpinned by the belief that people themselves possess the expertise to develop positively given the

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right support; Miller and Moyers (2006) argue that "this spirit is less a precondition than a result of practising MI" (p.5), proposing that staff can develop a compassionate, as well as skilful, approach through the practice of MI.

Given that MI may have the potential to influence nursing practice positively as discussed above and the dearth of studies relating to MI within rehabilitation contexts, an investigation into the feasibility of training rehabilitation nurses in MI in order to improve patient experience in rehabilitation is warranted. The purpose of the present pilot study was to examine the acceptability of a brief MI training and supervision package for rehabilitation inpatient nurses and an approach to measuring the experiences of patients, in order to inform the design of a future large-scale trial addressing efficacy. The specific objectives were to:

1. Examine acceptability of the approach taken to evaluating patient experience through the i). recruitment and retention of patients and ii). their responses to the measures
2. Examine acceptability of a brief MI training and supervision package for rehabilitation nurses through nurses' i). evaluation of the training and ii). up take and use of supervision groups
3. Provide information on sample sizes required for a future larger-scale trial.

## METHOD

### Setting:

The study was carried out with staff and patients from three wards, in one South East London NHS Trust:

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- one all male gender closed rehabilitation inpatient unit -13 bedded, “low secure rehabilitation”/”high dependency rehabilitation unit” (JCP-MH 2012, p.13)
- two mixed gender open rehabilitation inpatient units -15 and 17 bedded, “high dependency units” (JCP-MH 2012, p.13).

Participants

1. Patients

Patients were invited to participate in the study at three time points, before the staff underwent MI training, after the training and intensive supervision period and at 6 months follow up. All patients on the three rehabilitation wards (n = 45 at each time point) were made aware of the study and invited to participate. Initially the expert-by-experience research assistants were offered close supervision by a clinician to develop their interviewing skills and confidence in interacting with patients. The expert-by-experience research assistants then spent time on the wards building rapport to increase participation by the patients in completing the measures and attending the focus groups.

2. Staff

All staff from the three wards (n = 60), including nurses, health care assistants (HCAs), psychiatrists, clinical psychologists, occupational therapists, social workers and administrators, attended the MI training sessions (delivered by 6 trainers, two nurses, two clinical psychologists, a social worker and an occupational therapist, who had attended an advanced MI training course). As 82% of staff who attended the training days and almost all who attended the supervision sessions were nurses (42%) and HCAs (40%) (subsequently “nurses”), this paper focuses on nursing practices.

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Measures

Patient experience was measured using questionnaires, focus group discussions and diaries.

Questionnaires:

1. The Good Milieu Index (GMI) (Rossberg & Friis 2003):

This is a simple measure chosen for its potential accessibility for people with cognitive difficulties. Patients rate their "general satisfaction with the ward, staff and other patients", and "improvements in their confidence" and "expression of abilities through being there" on a scale of one to five (from ''not at all'' to ''completely'' satisfied). Total scores range from 5 to 25. There is no published reliability data for the GMI; it was designed as an adjunct to the Ward Atmosphere Scale (WAS) (Moos 1997) and correlates strongly ($r$ = .74, $p$ < .01) with the WAS subscales found to be clinically important for people with psychosis (Rossberg & Friis 2003).

2. The Motivational Interviewing Measure of Staff Interaction (MIMSI) (Hohman & Matulich 2010):

This is a 10 item measure evaluating MI spirit in staff-patient interactions in order to assess the impact of staff MI training, through ratings made by service users. The measure was validated in two different residential settings. Overall reliability was good (α = .90), indicating good internal consistency. Scores have been correlated with the Working Alliance Inventory (WAI; Busseri & Taylor 2003; Horvath 1994) indicating good construct validity ($r$ = .82, $\rho$ < .01).

3. Views On Inpatient Care (VOICE) (Evans *et al*. 2012):

This is a 19 item measure of patients' perceptions of inpatient care, co-produced by staff and patients. The measure demonstrates good internal consistency (α = .92) and high test-retest reliability ($r$ = .88, 95% [CI = .81 - .95] ).

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Patient Focus Groups:

At each time point for every ward, all the current patients were invited to attend a meeting to discuss their views and experiences of the ward, led by the expert-by-experience research assistants.

Diaries:

Patient participants were offered notebooks and invited to keep diaries on their experiences.

Qualitative information was taken from:

1. Clinical notes:

   All entries made by staff in the electronic clinical record of each patient participant on one day were analysed at the three time points.

2. Shift handover sessions:

   Audio-recordings of 3 handover sessions were made pre-training, 2 post training and 2 at 6 month follow up.

3. Staff Supervision Groups:

   Facilitators kept records of the themes.

Procedure:

The study was presented to the NHS National Ethics Committee (ref14/LO/0656) and passed as a service evaluation. Staff attended a two day team MI training. Details of the training and subsequent supervision arrangements are shown in Table 1.

Data were collected at three stages across the three wards, over a 3-5 week period at each stage; before the training, after the training and intensive supervision period (14-19 weeks after the pre-training measures, 9-11.5 weeks after the completion of

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MI training respectively) and at 6 months follow up (36-41 weeks after the pre-training measures, 31-36 weeks after the completion of MI training respectively). Patient participants were recruited by MB, AC or MM (AC and MM have personal experience of using mental health services). All available patients were invited to participate in the study; the patients on the ward during each 3-5 week data collection phase were invited to participate and all those who agreed and who had mental capacity to consent (DH 2005) were included in the study. After giving informed consent, they were invited to complete diaries and questionnaires (through a structured interview with the researcher), and attend a focus group. All data were collected on the rehabilitation wards. Other information was collected from existing databases and clinical records. Handover sessions were recorded.

Analyses:

Quantitative data were analysed using non-parametric statistics, because of the lack of normality of the data on SPSS v24.0 (IBM 2016) and G*Power software to compute power. Means and standard deviations are also shown.

The aim of the current study was to establish the feasibility of MI training in a rehabilitation setting and the criteria for establishing this are shown in table 2.

Differences between participants and non-participants in baseline characteristics were analysed by two-tailed Chi-Squared tests for categorical variables and Mann Whitney U tests for continuous variables. During data recruitment, participants joined the study at different time points a) pre-training, b) post-training/supervision,c) follow-up. Demographic data of the group at baseline is reported and thereafter Mean SD of patient GMI, MIMSI and Voice scores are reported at each time point.

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Patient responses to GMI, MIMSI and Voice scores were analysed using Spearman's rho to explore the relationship between the three study measures and thereafter their relationship to time in rehabilitation.

Qualitative data from patient focus groups were analysed using thematic analysis (Braun & Clarke 2006; 2012). Two authors, J.C. and M.B., explored the focus group transcripts independently, compared their findings and resolved any discrepancies.

Nurse evaluations of the training and take up of supervision groups are described with frequencies and percentages. Themes in the staff supervision sessions, clinical notes and shift handovers were analysed using thematic analysis as described above.

The sample size in this pilot study was within recommended levels, between 24 and 50, for calculating the sample sizes needed for an adequately powered larger trial (Julius 2004; Sim & Lewis 2012). Sample size estimates, to inform a future larger scale trial, are made based on changes in the mean and standard deviation of MIMSI scores between pre-training and post-training and follow-up. A probability of .05 (two tailed) is used and two power values are presented .80 and .50.

## RESULTS

### Recruitment, Retention and Engagement Process:

Researchers spent approximately 120 hours on the rehabilitation wards interacting with patients to build rapport, gain informed consent and gather data via interviews and focus groups. This amounts to approximately 2 hours per set of data collected at each time point.

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Patient Participants:

Thirty-four patients (68% male gender with a mean age of 40 years, SD=12.4) chose to participate in completing the questionnaire measures; 21 (46.6%) of the 45 patients on the wards participated at the pre-training stage (the ward complement was 45 at all three time points), 19 (42.2%) at the post-training stage and 15 (33.3%) at the follow up stage. This meant that 24, 26 and 30 patients declined participation at the three stages respectively. Of the 34 who did participate, 4 (8.8%) participated at all three time points and 22 participated in focus groups. The most common reason for attrition was discharge from the ward, with mental state deterioration in a few cases. The majority had been diagnosed with schizophrenia, 68 .2% had a secondary diagnosis and 41.1% were under treatment sections (3 and 37/41) of the Mental Health Act (MHA 1983 amended 2007).

Referral to rehabilitation was usually from acute wards (21) but also from Forensic (5), Psychiatric Intensive Care (3) and Long Term wards (1) or the community (4), 53.2% had a forensic history or history of violence. Patient participants were compared with a sample of the patients who had declined participation (non-participants): these were 23 patients admitted at the time of the follow up stage who had not participated in the study (non-participants). Participants were significantly younger than non-participants ($\rho = .021$) but did not differ significantly on other variables. The results are shown in table 3.

Acceptibility of Patient Assessment Procedures

Out of 55 data sets collected, 13 included two out of the three questionnaires only, suggesting that completing three questionnaires was challenging for most patients. In total a subset of 22 patient participants attended the seven focus group meetings

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(a range of two to eight attendees at each). Two of the nine sessions offered were cancelled due to non-participation and none of the patients kept diaries, suggesting these were valued less or less acceptible for some patients than an individual interview with a researcher.

Patient Questionnaire Results:

1. Satisfaction Ratings (GMI):

Satisfaction with the ward (GMI) was generally rated around the middle of the scale, with the highest scores for "2. In general how much do you like the patients on this ward?"; the modal rating was 3 (fairly satisfied). The results are shown in figure 1.

Figure 1 Mean GMI Scores:

2. Correlations and Changes in Patient Evaluation Scores:

Correlations were calculated to explore the relationship between the three main patient evaluation study measures and thereafter the association between these three measures and length of time in rehabilitation (at the point at which each participant first participated in the study). There was a significant relationship between all three study measures. The largest was between MIMSI (n=34) and VOICE (n=25) scores ($r$ = .73, n = 25, $p$ < 0.001). The other relationships were as follows; ($r$ = .62, n = 25, $p$ < 0.001) (GMI; MIMSI) and ($r$ = .52, n = 34, $p$ = 0.008) (GMI; VOICE). Thirty four individuals provided GMI data. There were no significant associations between any of the three previous measures and length of time in

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rehabilitation (LTR). The relevant statistics are as follows ($r$ = -.12, n = 34, $p$ = 0.484) (LTR; GMI), ($r$ = .08, n =34, $p$ = 0.669) (LTR; MIMSI) and ($r$ = - .03, n=25, $p$ = 0.885) (LTR; VOICE).

The changes in MIMSI and VOICE and GMI scores are shown in table 4. Due to the fact that each group consisted of a mixture of participants providing data at different time points and joining the study after baseline (only 4 participants provided data at all the study time points) inferential statistical analysis were not performed and instead descriptive statistics are presented as preliminary data. Table 4 shows there was a tendency for scores to increase at the end of the period of training and intensive supervision (improvement) but this fell away by the time of the follow up.

Patient Focus Groups: Themes

The authors reviewed the transcripts for comments by patients which suggested staff behaviours were consistent with MI spirit, defined as partnership, acceptance, compassion and evocation. The number of MI consistent comments comprised a relatively small proportion of the overall comments. The numbers are separated into the pre- and post-training and follow up periods. This data is shown in Table 5.

Offering choices and allowing patients to make choices or decisions, and expressions of care and compassion were the most common MI consistent staff behaviours mentioned by patients. There was little evidence of evocation.

Using thematic analysis (Braun & Clarke 2006; 2012), two main themes were identified from the patient focus groups:

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1. Rigid structures and rules applied strictly by nurses and, on occasions, aggressive communication styles, such as:

   "I found it hard to fit in, it's like boot camp, not a place to get well"

   "they lay down authority. It's like you've broken the law"

   "you're not warned that they're going to be shouting at you"

2. Uncertainty and Fears about coping after hospital, such as:
   "I'm wondering where they are going to put me next. I'd become homeless, at least I could be on my own. It's not very nice to say this but if I go to a hostel I won't be able to function, I'd get thrown out and end up back in hospital"
   "It's difficult thinking about the future"

Further details are presented in a separate article on patient experience in rehabilitation (Bunyan *et al*. in press).

Acceptibility of Training and Supervision for Nurses

When evaluating the MI training at the end of the study period, all staff agreed or strongly agreed that the course achieved its objectives and, on a scale from 1 to 10 for "relevance" to rehabilitation (1 = "not at all relevant" and 10 = "extremely relevant"), 89% rated it between 8 and 10 (56% rated it 10 and 6 was the lowest rating). Twenty-nine supervision sessions were offered, 3 were cancelled and 26 held with up to eight staff in each. Discussions in supervision sessions appeared to be constructive as evidenced by the emergent themes observed by facilitators and expressed by staff: Table 6 shows the themes from the supervision session notes and illustrative quotes.

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Clinical Notes and Handovers: Themes

The majority of note entries reviewed were made by nurses, with a few examples from other disciplines. Nursing notes and handover meetings tended to focus on basic physical needs, whereabouts and mental state, with comments on sleep, mood, sociability, medication concordance, observation level, hygiene and personal care. Nursing interventions ~~mentioned~~ focused on getting up, taking medication, washing, eating or occasionally joining in activities. Staff described how they "encouraged", "prompted" or "supervised" patients in these tasks. One-to-one sessions were recorded but notes on content were brief. Only occasionally were patient-initiated interactions noted, generally relating to physical needs (e.g. reporting pain) or practical arrangements (e.g. requesting money). Occasionally nurses noted probable psychotic experiences but rarely noted any intervention offered in response. There appeared to be few MI related behaviours noted directly or indirectly or mentioned in handovers, aside from one affirmation and one incidence of staff asking more about someone's motivations in the notes and two incidents of discussions about a person's goals in handovers. No differences were found in the notes or handovers between the time points of the study. What appeared to be examples of the "righting reflex" did occur, such as staff "advising", "explaining" or "reassuring".

## DISCUSSION

This pilot study examined the feasibility of delivering MI training to rehabilitation nurses to improve patient experience in rehabilitation. Patient participation was good with a third to half the patients on the ward at each time point participating, amongst a client-group who tend to struggle with engagement (Killaspy *et al*. 2015); this was in the context of high levels of informal contact between patients and experts-by-

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experience in the research team. Patient participants tended to be younger than non-participants and preferred individual interviews but many also attended focus groups.

The MI training was experienced by rehabilitation nurses, as highly relevant to their work. Supervision sessions were well-attended and nurses explored how to listen to patients and respect their autonomy whilst working with them to reach goals (see Table 6). A shared language using MI concepts developed to support this thinking. Nurses found the approach useful in specific areas, such as implementing smoke-free environments and collaborative, recovery-oriented interventions such as the Recovery Star (MacKeith & Burns 2008). They used sessions to explore dilemmas between making sure basic needs were met and facilitating autonomy and personal growth in their patients, between the demands of running a safe ward (e.g. hospital infection control requirements) and working at the patient's own pace, alongside how to implement the principles, like recovery, upon which the work is based.

The small sample size in this study meant that conclusions about the efficacy of MI to improve patient experience cannot be reliably evaluated. A slight improvement in patient experience was found at the end of training and frequent supervision sessions though, which fell away in the follow up period. This suggests that frequent supervision sessions, allowing better access for nurses working a 24-hour shift pattern, may need to be offered for MI spirit to be sustained. In addition our data suggests that a great deal of preparation is required to explain to the patients the benefits for them from taking part in research and ideally this should involve "experts by experience" in the process.

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The clinical notes and handovers completed by nurses seemed formulaic, focusing on basic functioning and task completion, on observations of behaviour rather than accounts of conversation or the patient's views. This may reflect nurse training and guidance that notes and handovers should be "accurate, clear and complete" (NMC 2014 p.9), aligned with a tendency for nurses to focus on documenting physical representations of illness rather than interactions with patients (Moyle 2003). A general tendency to undervalue nursing interventions compared to interventions by other disciplines has been found in rehabilitation settings and linked to the multi-disciplinary focus in rehabilitation (McCloughen *et al*. 2008)*.* There was little evidence of MI spirit-related behaviours, such as attempts to understand the patient's point of view or develop a collaborative approach, whereas some MI-inconsistent responses were noted. Difficulty "unlearning" habitual righting reflex responses may have been one possible barrier to learning MI (Schumacher *et al*. 2014). If it is the case that conversations take place but go unreported, the extent to which nurse-patient interactions and the patient's views are considered a valuable part of rehabilitation nursing might be questioned, in contrast to MI, where the conversation *is* the intervention (Miller & Rollnick 2012).

## LIMITATIONS OF THE STUDY

This pilot study was carried out in three wards from the same South London NHS Trust. The data gathered at the three time points were from groups which were a mixture of new and repeat participants, because new patients arrived and previously recruited participants left the rehabilitation ward during the study period. The number of participants reduced at each time point, suggesting possible participant or researcher fatigue. Patient interviewers were not blind to the condition and one

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author (MB) was involved at several stages. The focus was on measuring patients' satisfaction and experience of MI spirit, rather than directly measuring MI skill acquisition amongst staff. Consequently, we cannot be sure whether staff had acquired the skills taught. Although no obvious differences in response to the MI training and supervision between qualified nurses and HCAs were apparent to the trainers, this was not studied directly.

## IMPLICATIONS FOR FUTURE RESEARCH

Sample size estimates for a main study are presented based on changes in MIMSI scores at baseline (M = 30.2, SD = 5.9) and at the end of the intensive supervision period two months post training (M = 32, SD = 6.1). The effect size in this study is .30 and working on the basis of a two-tailed 95% probability and .80 power, 173 individuals would be required per group. If the power is .50 then 86 per group would be required. Some allowance would need to be made for drop-out and our findings suggest 10-15% would be a reasonable figure to account for this.

Similar calculations have been made comparing MIMSI scores at baseline (as above) and six month follow-up (M = 28.3, SD = 8.3). The effect size on this occasion is .27, using .80 power and the same assumptions as above the sample size required would be 211, the equivalent for .50 power would be 104 individuals per group. Once more an allowance should be made for loss to follow up.

## IMPLICATIONS FOR PRACTICE

This study provides preliminary findings which warrant further investigation through a larger study to evaluate the impact of training inpatient rehabilitation nurses in MI on patient experience. We have set out a number of possible sample sizes to derive

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statistically robust conclusions in future studies. In rehabilitation, recruitment of patient participants and data gathering requires time for rapport building and research assistants with lived experience can facilitate this process. Participants may generally prefer to work individually with researchers but offering multiple opportunities for participants to express their views is likely to enrich the information gathered.

Regarding nursing practice, MI may contribute to closing the theory-practice gap in mental health nursing (Kellehear 2014) by providing a framework for developing detailed conversations about the dilemmas faced by rehabilitation nurses. There is a shift for both clinicians and patients inherent in MI spirit towards seeing patients as experts on themselves and clinicians as evoking that expertise, rather than directing the patient towards solutions. Making this shift may be very difficult for nurses when faced with the complex, often disabling mental health needs of rehabilitation patients and the long periods they have spent in institutional settings (Killapsy *et al*. 2013). Nurses may also have established, righting reflex behaviours that a two day training is not enough to change. This suggests that, to be effective, MI skills may need to be part of basic nurse training, alongside discussion of the educational role of nurses and how an MI framework can make this more effective. In this study, almost half the nursing staff were HCAs and their development also requires attention. We suggest that the teaching of MI skills/spirit should be routinely incorporated into continuing professional development provision.

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## CONCLUSION

Nurses are the largest healthcare staff group and provide the majority of fundamental patient care (HEE 2016). There is clear consensus that skilling, reskilling and up-skilling this workforce can drive improvement in the quality and delivery of person-centred care (HEE 2016). Providing nurses with training and support packages around MI spirit skills as part of their continuing development may be one way of enhancing the value placed on the voice of the patient.

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Table 1: Details of the Training and Supervision of Ward Staff:

| MI Training Process | | | | |
|---|---|---|---|---|
| Stage | 1 | 2 | 3 | 4 |
| Completion | 13 days | 5 weeks | 6 weeks | 6 Months |
| Elements | "Train the trainers" | 3 x two day MI Training Sessions | Frequent Supervision Period | Ongoing Supervision |
| | 6 staff attended an advanced MI course | N=60 rehabilitation staff attended<br>Day 1: MI spirit, listening skills and information giving<br>Day 2: change talk and evocation | Twice weekly supervision sessions on each rehabilitation ward | Monthly on each ward |

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Table 2: Criteria for Establishing Feasibility in the Current Study:

| Summary of Feasibility and Acceptability Indicators | |
|---|---|
| Patients | Nurses |
| Recruitment of participants | Recruitment of participants |
| Response to measures - questionnaires and focus groups | Take up and use of supervision groups |

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Table 3: Demographic Variables for Participants and Non-Participants (Patients):

| Variable: | **Participants (*N*=34)** | | **Non-Participants (*N*=23)** | | *p* |
|---|---|---|---|---|---|
| | *Numbers* | *%* | *Numbers* | *%* | |
| **Gender** | | | | | |
| Male | 23 | 68 | 15 | 65 | |
| Female | 11 | 32 | 8 | 35 | .85 |
| **Ethnicity**** | | | | | |
| White British | 19 | 55 | 16 | 70 | |
| Black British | 6 | 18 | 4 | 17 | |
| Asian British | 3 | 9 | 0 | 0 | |
| White Other | 6 | 18 | 3 | 13 | .38 |
| | *Mean (yrs)* | *SD* | *Mean (yrs)* | *SD* | |
| Age# | 40.0 | 12.4 | 49.0 | 15.1. | .02* |
| Time Since First Contact with Mental Health Services# | 17.6 | 11.4 | 26.0 | 16.3 | .06 |
| Length of time in hospital (Pre-Rehabilitation)# | 1.4 | 3.8 | 3.4 | 7.4 | .25 |
| Length of time in Rehabilitation# | 1.1 | 1.4 | 1.1 | 1.3 | .44 |

**Health and Social Care Information Centre (HSCIC) ethnicity categories
* $p < .05$
# Two tailed Mann Whitney U tests, all others were Chi-Squared or Fishers Exact Tests.

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Table 4: Changes in Patient Evaluation Scores Over Study Period:

| | Pre-Training (n=21) | | Post Training (n=19) | | Follow-Up (n=15) | |
|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Mean | SD |
| GMI | 13.5 | 3.0 | 14.2 | 3.7 | 13.7 | 3.9 |
| MIMSI | 30.2 | 5.9 | 32.1 | 6.1 | 28.3 | 8.3 |
| VOICE | 72.1 | 20.4 | 81.8 | 14.4 | 72.5 | 20.3 |

The following number of participants provided data at one time point only: Pre-training (N= 8), Post Training (N=9), Follow-up (N=6).

4 individuals provided data at each timepoint.

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**Table 5: Number of MI Spirit Consistent Comments:**

| Time period | Number of Focus Groups | Number of MI Consistent Comments | Mean Number of MI Consistent Comments per Meeting |
|---|---|---|---|
| Pre-training | 3 | 22 | 7.3 |
| Post-training | 2 | 19 | 11.0 |
| Follow Up | 2 | 17 | 8.5 |

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**Table 6: Themes from Notes of Supervision Sessions:**

| Themes | Illustrative Quotes |
|---|---|
| MI to help engagement and communication: | "*Using OARS (Open questions, Affirmations, Reflections, Summaries) is helpful engaging clients who are quiet or unwilling to be on the unit"*.<br><br>"*It's good using MI with the Recovery Star, especially planning*"<br><br>"*It's letting the other person do most of the talking and thinking*" |
| Shifting practice towards a more collaborative style: | *"It's more powerful if someone draws their own conclusion rather than being told by staff" and "it should be the person's not our agenda"* |
| Working within potentially competing demands:<br><br>(Prominent examples were implementing smoke free wards and meeting the demands of hospital infection control policies) | "*It seems like a tick box exercise, getting people up etc."*<br><br>"*Offering choice is important but it is difficult on a rehabilitation unit where we have to stick to certain rules".* |
| Severe neglect of personal hygiene presented by many patients was a prominent concern: | *"It reflects badly on us if patients don't look clean."*<br><br>*"The manager comes*<br><br>*round and checks*<br><br>*how many patients are lying in bed"* |

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| | |
|---|---|
| Difficulty developing new skills: | you feel self-conscious changing your practice" |
| Some disappointment with the results: | "MI doesn't work in 95% of patients" |
| Shared understanding within team and identification of unacceptable/poor communication: | *"The practice of skills was helpful. It somehow pulls the team together to have shared goals in using MI - common message for service users".*<br><br>*"It's speaking respectfully not authoritatively"* |

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Figure 1 Mean GMI Scores:


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