

Motivational Interviewing Training: A Pilot Study of the Effects on Practitioner and Patient Behaviour

Eileen Britt and Neville M. Blampied

University of Canterbury, New Zealand

Background: While Motivational Interviewing (MI) is effective in reducing client problem behaviours, including health-related behaviours, there is little evidence about how MI training enhances practitioner skills. **Aims:** The current pilot study addressed this lack by training two health practitioners (Diabetes Nurse Educators) in MI, and evaluated the effect of MI training on both practitioner and patient behaviour when MI was delivered in a clinical setting, with patients experiencing difficulties with diabetes self-management. **Methods:** Comparisons were made between the practitioners' skills in a baseline condition (Patient Education; PE) and after training in Motivational Enhancement Therapy (MET), a four-session form of MI. At the same time, the effects of the two interventions on patient in-session behaviour were compared. Practitioner and patient data were obtained from transcripts of all PE and MET sessions, which were independently coded using Motivational Interviewing Skills Code therapist and client behaviour counts. **Results:** Compared with their baseline performance, practitioners, when trained to practice MET, behaved in ways consistent with MI, and this appears to have evoked beneficial in-session behaviour from the patients. **Conclusions:** These results suggest that the MI training was effective.

Keywords: Motivational interviewing, training and supervision, health practitioners.

Background

Motivational Interviewing (MI) has been shown to produce significant change in a range of health behaviours (Hettema, Steele and Miller, 2005; Martins and McNeil, 2009). A recent systematic review of MI training studies (Madson et al., 2009) concluded that although overall results are favourable, only a few of these studies have examined the effect of therapist training on client outcomes, or have included recommended levels of MI training. Best practice in MI training is a combination of a workshop plus supervision, with ongoing coaching, with research suggesting that ongoing supervision or coaching post-training is important to facilitate the continued development of MI skills and the transfer of these skills from training to clinical practice (Madson, Loignon and Lane, 2009).

The current pilot study evaluated the effect of MI training that followed these recommendations. Training comprised a 2-day workshop plus ongoing feedback and supervision regarding both health practitioner and patient behaviour in a clinical setting.

Reprint requests to Dr Eileen Britt, Department of Psychology, University of Canterbury, Private Bag 4800, Christchurch 8104, New Zealand. E-mail: eileen.britt@canterbury.ac.nz An extended version is also available online in the table of contents for this issue: http://journals.cambridge.org/jid_BCP

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Method

Procedure

The data were collected as part of a larger study evaluating the effectiveness of motivational enhancement therapy (MET), a four-session form of MI, in enhancing diabetes self-management. The research comprised two main parts: first, an evaluation of the effectiveness of Patient Education (PE); and second, the effectiveness of MET, for improving diabetes self-management. The practitioners provided PE as per their standard practice, with the timing, duration and number of sessions at their discretion. MET was provided in four sessions (maximum of 40 minutes per session), over eight weeks (i.e. week 1, 2, 4, and 6).

Participants

The study was conducted at an outpatient diabetes service accepting referrals from primary medical practitioners throughout a major metropolitan area and adjacent rural areas. The practitioners were two Diabetes Nurse Educators (DNEs) who were registered nurses experienced in working with diabetes. There were a total of 18 patient participants ($n = 9$ PE, $n = 9$ MET). Patients (aged 16–69 years) referred for further assistance with managing their diabetes (Type 1 or Type 2), and who had been diagnosed with diabetes for at least 12 months, were approached regarding participation in the study. Patients were received as consecutive referrals rather than randomly assigned to intervention. Random assignment was considered ethically inappropriate as this would have required patients assigned to MET to wait a considerable period of time (while the PE participants received treatment and then for the DNEs to receive training in MI) before receiving treatment. Note, however, that while participants were not randomly assigned, there was no researcher bias in their selection in that consecutive referrals were approached regarding participation in the study.

DNE training in MI

MI-training was conducted over 2-days (12 hours) by two trainers experienced in MI training (one of whom was the first author). The training consisted of didactic teaching, modeling, video-taped demonstrations, and role-playing (using everyday clinical experiences) with feedback, consistent with recommendations of Miller and Rollnick (2002).

Design

All intervention sessions by the DNEs delivering both PE and MET were audio-taped. This permitted the analysis of both practitioner and patient data obtained from the same two health practitioners when providing PE and after MI training (MET). In this context, the practice of PE constituted a baseline against which acquisition of MI skills can be compared using single case experimental design. Each MET session was also reviewed by the first author, and feedback (supervised practice) was given to the practitioners, to ensure that the therapeutic procedures were carried out as intended and to enhance their MI practice. This also enabled an evaluation of the effect of ongoing feedback and supervision on the practitioners' MI skills.

Measures

All PE ($n = 22$) and MET ($n = 36$) audiotapes were transcribed and coded (by two post-graduate clinical psychology students, blind to condition) using the Behaviour Counts (therapist and client) section of the Motivational Interviewing Skill Code – MISC (Miller, 2000). To maintain reliability of coding, the author reviewed the coding of one in six (15%) of transcripts and any discrepancy in coding was discussed with the coder. Intra-class correlations (ICCs) suggest excellent reliability, with ICCs ranging from .90 to .99 for the therapist behaviour counts, and ICCs of .99 for the client behaviour counts. MISC summary scores were graphed for each practitioner separately for baseline (PE) and for the 12 months post-training (during MET) in which they received supervision and feedback, thus enabling visual analysis typical of single subject methodology.

Results

Practitioner behaviour

Before training (baseline) the percent open questions (%OO) used by both practitioners was low, falling well below beginning proficiency levels for MI (Moyers, Martin, Manuel and Miller, 2003). After MI training, the %OO used by Nurse A reached beginning proficiency in most sessions (Figure 1). In contrast, the %OO used by Nurse B was initially low (mostly below beginning proficiency for the first six sessions) post-training, but increased with supervised practice and feedback, such that the %OO was mostly above beginning proficiency for the last half of the sessions. The %OO, however, reached competence in only one session (Nurse A).

Similarly, the ratio of reflections to questions (R:Q) was low pre-training for both practitioners. While the R:Q increased for both practitioners post-training, they did not consistently reach beginning proficiency in the initial (at least the first four) sessions post-training (Figure 1). Yet, with supervised practice and feedback, the R:Q for Nurse A increased, reaching competence in 25% of MET sessions. Nurse B, however, took longer to achieve beginning proficiency, with this criteria being met on all but one session from the ninth MET session onwards, and reaching competence in only the last session.

When the practitioners did use reflections pre-training, these comprised complex reflections as well as simple reflections. The percent complex reflections (%CR) for Nurse B reached at least beginning proficiency level for MI in half of all baseline sessions. Nurse A reached beginning proficiency for the %CR in one-third of baseline sessions. However, both practitioners, for the most part, achieved competence in the %CR immediately post-training (Figure 1), and appear to have maintained this over time, with an upwards trend in the %CR over the course of study.

Pre-training, the percent of MI-adherent (%MIA) responses for both practitioners was below beginning proficiency for MI, with the exception of one session for Nurse A. Both practitioners, however, achieved beginning proficiency for the %MIA responses immediately post-training (Figure 1). Competence, however, was achieved in only one session (session 12 of MET by Nurse B).

Patient behaviour

During MET there was a greater percent of client change talk (%CCT) overall compared to PE. Additionally, when the pattern of %CCT was examined across session time, there tended

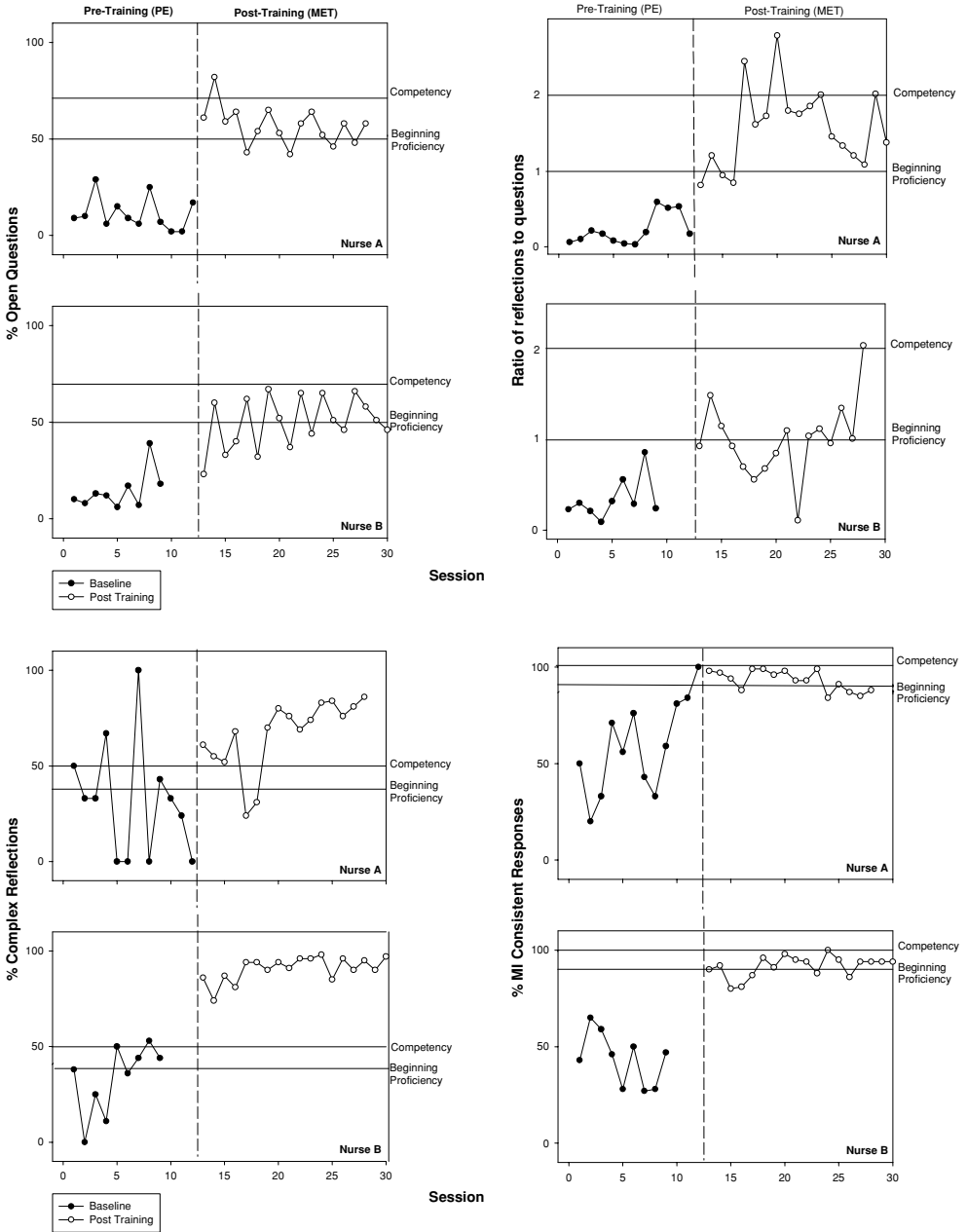


Figure 1. Practitioner behaviour summary scores during baseline (PE) and post-training (MET)

to be greater %CCT in each third of MET compared to PE, with the %CCT highest in the last third of MET. In contrast, the %CCT during PE remained fairly constant across the time.

Discussion

Post-MI training the practitioners used a greater percent of open questions, complex reflections, and MI-adherent responses compared to baseline such that the R:Q and the %OQ satisfied criteria for beginning proficiency, and the %CR and %MIA responses reached criteria for competent MI. In contrast, the practitioners' behaviour during baseline did not reach beginning proficiency on any of these measures (apart from the %CR). It appears, however, that supervised practice with feedback, in addition to the 2-days training, was necessary to achieve this level of skill. It should also be noted that while the practitioners exhibited beginning proficiency with training plus supervised practice and feedback on all of the MISC practitioner behaviour counts, they struggled to achieve competency on some skills (%OQ and %MIA responses).

Despite only reaching criteria for beginning proficiency in MI, the changes in the practitioners' behaviour appear to have led to changes in the patients' in-session behaviour (increased change talk) consistent with emergent MI theory (Miller and Rollnick, 2002). Additionally, change talk increased in frequency within the MET sessions, such that the greatest amount of change talk occurred within the last third of MET sessions. This latter finding is particularly significant as Amrhein, Miller, Yahne, Palmer and Fulcher (2003) found that client speech toward the end of session was the strongest predictor of behaviour change.

A limitation of the current study is that only two practitioners were used to evaluate the effect of MI training. More than two replications would have been desirable and would have added to the confidence that can be placed on the results and their generalizability. Additionally, the results of the current study should be treated with caution as the health practitioners were self-selected as they volunteered to be involved in the research. The same results may not be achieved with health professionals who are less motivated to learn new skills and apply these in their clinical practice.

Another limitation is that only 56% of patients approached regarding participation in the study agreed to do so and completed the study. Once recruited into the study, however, drop-out rates were low compared to similar studies. Additionally, differences observed between the PE and MET participants' behaviour may also have been a function of differences between the two groups rather than purely a function of the different interventions. Furthermore, only the behavioural counts of the MISC were used, with no measure of the overall "spirit" of MI (Miller and Rollnick, 2002). Some aspects of MI spirit are measured by the behaviour counts (i.e., %MIA responses), however, and it appears from these that post-training the practitioners were, at least in some aspects, behaving in ways consistent with the spirit of MI.

Despite these limitations, there were a number of strengths to the current study, including the analysis of practitioners' behaviour over time, in multiple sessions with actual patients, with health practitioners providing the MI intervention in a clinical setting, rather than using either simulated client actors or self-selected examples of the practitioners' best performance of MI with actual clients as in previous studies. Furthermore, in the current study the coders were blind to the intervention they were coding, whereas some previous MI training studies have been criticized for having the potential for bias as coders were not blind to intervention type (Moyers, Miller and Hendrickson, 2005).

The current study also provides evidence that not only did the practitioners change their behaviour consistent with the practice of MI, but that with supervised practice they also maintained this change up to 12 months after the initial MI training. It is not known, however, whether the practitioners continued to use MI in routine practice beyond the period of supervised practice.

In summary, the current pilot study provides evidence that health practitioners who wished to learn MI, when provided with 12 hours of MI workshop training plus ongoing supervised practice, were able to acquire MI skills (up to at least beginning proficiency) and transfer these skills to a real life clinical setting with actual patients for up to 12 months after the initial MI training. Furthermore, when the practitioners utilized MI, patients experiencing difficulties with health behaviour change behaved in ways (i.e. engaged in more change talk) that were consistent with emergent MI theory.

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