

Report for the Ministry of Social Development

Motivational Interviewing within Work and Income: Interim Report – Analysis of Single Case Data from the Lower South Island

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Executive Summary

Research Objectives

Motivational Interviewing (MI) is an evidenced-based collaborative, person-centred approach for building and strengthening motivation for change (Miller & Rollnick, 2013). Fundamental to MI is a way of being or spirit, which is a partnership way of working by showing respect for the client and creating a safe space where clients feel heard and understood (Westra & Aviram, 2013). For the practitioner, it is a shift in focus away from feeling responsible for finding solutions and making the client change to instead, seeing the client as the one who is responsible for any behaviour change. The practitioner's role is to create the environment which is likely to build and strengthen motivation for change, and support the client in behaviour change, should they choose to change. Motivational Interviewing was initially developed in the addictions domain, and its application has rapidly expanded to encompass other health and mental health domains (e.g. Arkowitz et al., 2015), and behaviour change more generally (Miller & Rollnick, 2013).

Motivational Interviewing is likely to be a useful skill for Work and Income staff given that motivation and ambivalence can be important factors in return to work, especially for those with a health condition or disability (Hampson et al., 2015; Larson, 2008; Manthey et al., 2011). There has been some research in this area, however, there are some limitations with this past research that need to be addressed. For example, none of these studies provide data on the fidelity to MI. When practicing MI, it is crucial to know whether clients are getting an acceptable level of MI as this helps to draw accurate conclusions regarding the effectiveness of it. Further, there needs to be confidence that what is provided is actually MI. For example, MI-inconsistent behaviour on behalf of the practitioner has been shown to reduce outcome effectiveness (Apodaca & Longabaugh, 2009).

There are two aspects to training MI – the relational component and the technical component (Miller & Rose, 2009). The relational component (the spirit of MI) involves using empathic listening, and fostering a partnership with, and empowering the client. The technical component of MI involves learning to cultivate change talk and soften sustain talk (talk a client makes about not changing). While learning the relational component of MI often involves building on skills that practitioners may already have, learning the technical component of MI can often be more challenging (Forsberg et al., 2010) and require individual feedback and coaching (Miller & Rollnick, 2012).

The current study involved training Work and Income staff from a variety of roles (i.e., Case Manager, Work Broker and Employment Coordinator) in MI which they then utilised in work-focussed conversations with work-ready clients. It was hypothesised that Work and Income staff when provided with training in MI would increase their MI consistent behaviours within their conversations with work-ready clients, and that their proficiency in MI would increase over time, after initial workshop-based training in MI with ongoing feedback and coaching. Specifically, it was hypothesised that after the initial workshop-based MI training the staff would show increased relational (partnership and empathy) skills; use more reflections and less questions, use more complex reflections (i.e., reflections that capture the meaning of what the client has said; use more affirmations, seek collaboration with the client, and emphasise autonomy (i.e., MI consistent behaviours), and would use less MI inconsistent behaviours of persuading and confronting. Further, that their skills in the technical aspect of MI would develop with ongoing feedback and coaching. It was also hypothesised that the increase in MI skills would lead to increased change talk (i.e., a sign of increased motivation for change) spoken by clients during these conversations.

The study comprised three phases: baseline (pre-MI training); a training phase, and intervention (MI). Sessions were audio-recorded, when clients agreed to this, during all three

phases. The study was conducted in Lower South Island (staff n=5), Christchurch (staff n=5), and Nelson region (staff n=8). Due to external factors (Mosque Shootings and Covid-19) Christchurch and Nelson offices only completed baseline. This report focuses on the data from the lower South Island only.

The lower South Island staff received the MI training and had started the intervention phase when the study was put on hold due to Covid-19 in March 2020. The MI training was provided in three 5-hour workshops which took place fortnightly. After the workshop-based training, all participating staff received ongoing individual feedback and coaching, and attended group coaching every two weeks for two hours to develop their skills to at least a beginning proficiency level. This interim report provides an analysis of the single case data relating to the staff skills and client change talk (a marker of motivation for change).

Main Findings

The outcomes of interest in the current report were: staff skills analysed by Motivational Interviewing Treatment Integrity (MITI 4.2.1) scale (Moyers et al., 2014) and client change talk measured by the Client Language Easy Rating (CLEAR) system (Glynn & Moyers, 2012). The single case analysis results showed that after training all staff showed changes in their MI skills, including technical and relational skills and reflective listening skills. Additionally, there was also an increase in the clients' change talk after MI training.

The results also showed that all staff did not develop MI skills to the same level of proficiency. For example, for the ability to reflect more and ask less questions (i.e., the reflection to question ratio) two staff (who also submitted the least audios for feedback and coaching) were able to make some changes in this, but were not able to develop this skill to proficiency, as achieved by the other staff. However, despite some staff not reaching proficiency levels, there were still increases in client change talk. This suggests that lower

levels of MI proficiency may still be effective within the Work and Income context. Further research is needed to clarify this and ascertain what levels of proficiency may be effective in the Work and Income arena.

Further, whilst there appears to have been a change in all skills for all five staff soon after the MI workshop based training, it appears that some skills were more difficult to attain (i.e., MI technical) or maintain (i.e., avoidance of engaging in MI-inconsistent behaviour, such as persuading) without ongoing feedback and coaching. This is consistent with previous research that suggests that learning the technical component of MI can often be more challenging (de Roten et al., 2013; Forsberg et al., 2010) and that some practitioners can find it difficult to maintain changes in long-standing behaviours (Miller & Rollnick, 2012). For this reason, individual feedback and coaching post-MI workshop training are important components of any MI training and implementation programme (Forsberg et al., 2010; Hall et al., 2016)

Recommendations

In summary, the current study highlights the potential of MI training for Work and Income staff to improve their relational and technical skills in MI. Improved relational skills will improve the working alliance between Work and Income staff. Further, increased MI technical skills means that staff are able to build and strengthen client motivation for change. Given the wealth of literature linking working alliance and increased change talk to treatment outcome and behaviour change, training Work and Income staff in MI is likely to be of benefit, leading to clients seeking training and/or employment, or changing behaviours which are a barrier to training/employment.

With regards to staff training, previous research and the results of the current study show that it is possible to learn the basic (micro-counselling) skills and spirit of MI after

attending workshop-based training. However, ongoing practice coupled with feedback and coaching are necessary in particular to develop the technical skills of MI, and to minimise the slipping back into previous styles of communication. The fluctuations in MI skill over time seen in the current research and in previous research, also emphasises the importance of ongoing feedback and coaching.

The level of training in MI required for staff to achieve and maintain proficiency has significant cost-implications. It also requires organisational support to facilitate effective implementation of MI within Work and Income offices. Possible ways to increase staff engagement in this process (including the regular submission of audios) could include allocating time for practice, encouragement and ongoing support from management, as well as the inclusion of MI skill development, and support within staff performance plans and appraisals (Wilkinson & Britt, 2015). Furthermore, it is recommended that staff willingness and readiness to engage in the MI skill development process (including regular submission of audio-recordings) be assessed before training in MI.

As recommended in the previous report on the group data (Britt et al., 2020), it may also be more cost-efficient to provide different levels of training to different groups of staff within Work and Income based on their roles. The results from the current study suggest that staff can make changes in their skills which positively impact on clients with MI workshop-based training and minimal individual feedback and coaching. Further research is needed to ascertain what level of skilfulness in MI leads to increased client motivation and behaviour change within the Work and Income context, and whether MI does lead to increased motivation for, and/or engagement in, training or employment).

Introduction

Motivational Interviewing (MI) is an evidenced-based collaborative, person-centred approach for building motivation for change that can be learnt without any prior training or counselling background (Miller & Rollnick, 2013). Research suggests MI is likely to be a useful skill for Work and Income staff given that motivation and ambivalence are important factors in willingness to engage in training or return to work (Britt et al., 2018), and even more so for individuals with a health condition or disability (Britt et al., 2018; Hampson et al., 2015).

There are two aspects to learning MI, the relational component and the technical component. The relational component relates to the practitioner developing a relationship based on engagement and empathy with clients which is referred to as the ‘Spirit’ of MI (Miller & Rollnick, 2012). This involves the practitioner behaving in ways that fosters partnership with the client, honours the client’s knowledge and experience; conveys acceptance of the client’s worth and autonomy, and shows compassion for the client; and has the belief that the potential for change already lies within the client. For the practitioner this means a shift away from feeling responsible for finding solutions and making the client change to seeing that the client is the one who is responsible for any behaviour change. This is referred to as the righting reflex—the compassionate desire of the practitioner to make things right for the client—which can lead to practitioner’s feeling disillusioned when clients do not change and may lead to staff burnout (Miller & Rollnick, 2012). Instead in MI, the practitioner’s role is to create the environment which is likely to build and strengthen motivation for change, and support the client in behaviour change, should the client choose to change. The technical component of MI involves the practitioner learning skills to cultivate change talk (talk that clients make about making change e.g., seeking training and/or employment) and soften sustain talk (talk that clients make about not changing). Thus, in practicing MI, and to increase the changes of increased motivation and client behaviour change, practitioners need to demonstrate both the relational

and technical component of MI. While learning the relational component of MI often involves building on skills that practitioners may already have, learning the technical component of MI can often be more challenging (Forsberg et al., 2010).

Previous research suggests that workshop training develops MI skills, but that newly acquired skills tend to erode soon after training unless there are ongoing supports and post-training supervision or coaching (Madson et al., 2013; Martino et al., 2008; Schwalbe et al., 2014; Walters et al., 2005). Miller and Rollnick (2012) suggest that feedback and coaching based on observed practice, preferably of in-session audio-recordings, are essential to learning MI in a way that it can be implemented within the work-setting. Further, previous research shows that ongoing training supported by coaching and feedback is the most effective method to achieve proficiency in MI (Hall et al., 2016), with many individual competencies requiring upwards of a year to acquire (Doherty et al., 2000; Forsberg et al., 2010). For example, a New Zealand study (Soleymani, 2019) found that ongoing feedback and coaching after MI workshop training was effective in improving practitioners' skills in eliciting change talk.

Therefore, the addition of coaching and feedback post-workshop plays an important role in the development and sustainability of MI skills after initial MI training. When feedback and coaching post-workshop training is not provided, trainees did not reach proficiency in MI (Miller et al., 2004; Schoener et al., 2006). Workshop training is sufficient to provide foundational exposure to MI and assists basic skill development, but is insufficient to produce proficiency for practitioners to enable them to consistently implement MI in their practice (Forsberg et al., 2010).

The current research seeks to evaluate the effectiveness of MI within the Work and Income context, using a multilevel mixed method including a pre-and post-test design. The research will add to the emerging body of knowledge in the area of MI and return to work/employment, and is the first study of its kind in New Zealand. A preliminary analysis of

group data from the Lower South Island (Britt et al., 2020) found that after MI training, staff engaged with their clients in a way that was consistent with MI and that this was statistically different from pre-training during which no staff met the threshold for proficiency in MI. The current report is of the single-case analysis of preliminary data (pre-training, training, and post-MI training up to when the study was put on-hold in March 2020 due to Covid-19) from the Lower South Island.

The aim of this report is to explore the pattern of MI skill development of staff from pre-training/baseline through the post-workshop coaching and feedback phase. It was hypothesised, based on the results of previous research, that Work and Income staff when provided with training in MI would increase their MI consistent behaviours (also known as MI-adherent behaviours) within their conversations with work-ready clients, and that their proficiency in MI would increase over time, with ongoing feedback and coaching after initial workshop-based training in MI. Specifically, it was hypothesised that after the initial workshop-based MI training, the staff would show increased relational (partnership and empathy) skills; use more reflections and less questions, use more complex reflections (i.e., reflections that capture the meaning of what the client has said); use more affirmations, seek collaboration with the client, and emphasise autonomy (i.e., MI consistent behaviours), and would use less MI in-consistent behaviour (also known as MI non-adherent behaviour) of persuading and confronting. Further, it was hypothesised that the staff's skills in the technical aspect of MI would develop with ongoing feedback and coaching, and that the increase in MI technical skills would be associated with increased change talk (i.e., a sign of increased motivation for change) spoken by clients.

Method

Procedure

Following ethical approval with the Human Ethics Committee, University of Canterbury, and Ministry of Social Development approval, the researchers met with the service managers, Case Managers, Work Brokers and Employment Coordinators from Work and Income offices from the lower South Island. At this meeting, the general purpose and process of the study was explained. Staff who were interested in participating in the study signed the consent form and sent it to the researchers. A total of six staff consented to participate in the study, but one subsequently withdrew in the early stages of the training. The five who participated in the study had a variety of roles within Work and Income (i.e., Case Manager, Work Broker and Employment Coordinator), with a range of Work and Income experience (approximately 2 years to 30 years, mean 16 years).

The study comprised three phases: baseline (pre-MI training); a training phase, and intervention.

Baseline (Pre-Training)

Work-ready clients of each participating staff member were asked if they are willing to participate (n=54) in the baseline phase of the study. This involved audio-recording of the staff members' usual (pre-training) work-focussed conversations with work-ready clients. Baseline stage consisted of 19 audio-recorded sessions between March 2019 and Feb 2020 from the five staff. These baseline sessions were then coded using the Motivational Interviewing Treatment Integrity (MITI 4.2.1) scale (Moyers et al., 2014) and Client Language Easy Rating (CLEAR) system (Glynn & Moyers, 2012).

Training

Staff participants in the Lower South Island received three 5-hour MI training sessions held fortnightly. The training was facilitated by an Associate Professor Eileen Britt, who is an experienced MI trainer and a member of the Motivational Interviewing Network of Trainers (MINT), an international collective of MI trainers which promotes excellence in MI training, research, implementation and practice. The aim of the workshop training was for participants to learn the basic style of MI and how to continue learning it in practice. The workshop included introducing staff to the spirit of MI; the righting reflex (the compassionate tendency for people in helping roles to want to put things right and focus on solutions rather than first building motivation for change); the four processes of MI; core skills; and how to evoke and respond to change talk. The workshops comprised video-recorded demonstrations, didactic teaching, modelling, and practice exercises with feedback. Multiple opportunities were provided throughout the workshop for participants to practice and receive feedback on MI skills.

After the workshop training, staff continued practicing their MI skills and recorded their conversation with work-focused clients during the training phase. Sessions were audio-recorded when clients gave their permission for this, and were coded using MITI 4.2.1 (Moyers et al., 2014), and staff were provided with individual feedback and coaching to further develop their MI skills. These sessions were also later coded using the CLEAR (Glynn & Moyers, 2012).

Additionally, group coaching sessions were held every two weeks. These coaching sessions used a learning community format (Miller & Moyers, 2014). This involved the group (the 5 staff and trainer) listening to a 10 minute randomly chosen selection from two audio-recordings, after which the staff member received feedback from the other staff and the trainer using a structured format. Except in two cases, all six coaching sessions were facilitated by the

workshop trainer. The other two sessions were facilitated by the third researcher who is also a member of MINT. Coaching sessions began two weeks after the completion of training and continued biweekly. A total of six coaching sessions were provided during the training phase. By the end of this phase (16 weeks) staff had submitted 16 recordings for feedback and coaching. Coaching sessions also continued to be held when staff had started recruitment for the intervention phase of the study.

Intervention

Staff began recruiting work-focused clients as participants for the intervention phase after 16 weeks of individual feedback and coaching. All sessions were audio-recorded and coded using the MITI 4.2.1 (Moyers et al., 2014) during the intervention phase, and feedback and coaching continued to be provided. These sessions were also later coded using the CLEAR (Glynn & Moyers, 2012).

The MI intervention was planned to comprise up to four 20-40 minute individual MI conversations with each client, once every two weeks for eight weeks. The proposal to hold four sessions was based on the results of Britt et al. (2018) which found that majority of participants showed increased motivation for employment within four sessions and research that shows, while one MI session can be more effective, more than one session tends to have greater effects (Lundahl et al., 2010). However, the research was put on hold due to Covid-19, with only the first session having been held with all intervention clients. A total of eight audio-recordings had been made at this point by four of the staff.

Measures

All sessions (baseline, training and intervention) were coded using MITI 4.2.1 scale as a measure of each individual staff members' skills in MI, and the CLEAR (Glynn & Moyers, 2012) to evaluate the occurrence of change within sessions. This provided an additional

measure of the staff skills of cultivating change talk and softening change talk (i.e., the technical aspect of MI).

MITI4.2.1

Coding the MITI 4.2.1 involves global ratings of the relational component (partnership and empathy) and the technical component (cultivating change talk and softening sustain talk) of MI. Partnership conveys that expertise and wisdom about change resides mostly within the client. Empathy involves the practitioner conveying an understanding or making an effort in grasping the client's perspective and experience. Cultivating change talk measures the client's own language in favour of change and confidence for making that change. Softening sustain talk measures avoidance of focusing on the reasons against changing or on maintaining the status quo. Each global scale is measured on a 5-point Likert scale (1=low, 5=high). The MITI 4.2.1 also includes behaviour counts of giving information, questions, simple reflections, complex reflections, affirmations, seeking collaboration, and emphasising autonomy (MI-adherent behaviours - MIA), and confront, persuade, and persuade with permission (MI non-adherent behaviours - MINA).

The following MITI summary scores are calculated from the behaviour counts: ratio of reflections to questions, which is the ratio of the number of reflective responses to the total number of questions asked (R:Q); percent complex reflections (%CR) which is a ratio in which the numerator is the number of complex reflections, and the denominator is the total number of reflections; and the relational score which is the mean of the partnership and empathy ratings; and the technical score, which is the mean of the cultivating change talk and softening sustain talk ratings. These summary scores and the frequency of MIA and MINA behaviours were graphed for each staff member over time (i.e., from baseline, to post-MI workshop training, through the coaching phase and during intervention).

The MITI 4.2.1 proposes two levels of competence - “fair” and “good” (Moyers et al., 2005) (Table 1). Summary scores from the MITI have correlated with client outcomes in the expected direction (McCambridge et al., 2011; Moyers et al., 2016; Woodin et al., 2012). The inter-rater reliability for all items in the MITI is in the good to excellent range (0.65 to 0.98) (Moyers et al., 2016). The MITI 4.2.1 coding in the current study was completed by Eileen Britt and Mark Wallace-Bell who have had training in coding using the MITI 4.2.1 and are experienced in MITI 4.2.1 coding.

Table 1

Clinical Basic Proficiency Thresholds for MITI 4.2.1

	Fair	Good
Relational	3.5	4
Technical	3	4
%CR	40%	50%
R:Q	1:1	2:1

CLEAR

The CLEAR coding was completed by Mark Wallace-Bell who is experienced in coding with the CLEAR. The purpose of the CLEAR is to classify and quantify client language that is either change talk (CT) or counter-change talk (CCT), otherwise known as sustain talk. As such, the CLEAR focuses upon the type of in-session client language (change talk) that is positively correlated with future change. The score on the CLEAR is calculated as change talk frequency over the sum of change talk frequency plus counter-change talk frequency ($\% \text{ CT} = \text{CT} / [\text{CT} + \text{CCT}]$).

Coding on the CLEAR requires that there is a topic of the conversation and a target behaviour for change. In this case, the target behaviour is training and/or employment, or behaviour associated with engaging in training and/or employment (e.g., writing a CV, stopping marijuana use).

Client language which is neutral or non-change language, does not receive a code. This includes: questions (e.g., ‘what do you think I should do?’); reporting of factual information; conversation unrelated to the current target behaviour; talking about events in the distant past (defined as more than a week ago); and talking about someone else’s intentions to change/not change. There are different types of change talk and counter-change talk and each different CT or CCT statement counts as one instance of CT or CCT. Subcategories of CT and CCT are: reason - a statement indicating a rational for making the change (CT) or not making a change (CCT); desire - a statement indicating willingness and wish to change (CT) or not change (CCT); need – a statement indicating a need or the importance of changing (CT) or not changing (CCT); ability – a statement that the client feels able or confident that they can change (CT) or not able or unconfident about change (CCT); commitment – a statement that client will change or an idea about how to change (CT), or that the client will not change or an idea for how to stay the same/not change (CCT); taking steps – a statement that the client is already making changes (CT) or that the clients is taking steps to maintain the status quo (CCT), within the recent past (within approximately the last week), or other – any other statement about changing the target behaviour such as hypothetical situations that would convince the client to change (e.g., ‘If I could find a place closer to town, it would be easier to get a job’) or problem recognition (e.g., ‘I think my marijuana use is a problem’), or any other statement about not changing that does not fit into the other categories such as minimisation of problems (e.g., ‘being on the benefit isn’t that big a deal for me’) and hypothetical statements about not changing (e.g., ‘If I had the money, I’d go out and buy some dope right now’).

The %CCT was graphed for each staff member over time (i.e., from baseline, to post-MI workshop training, through the coaching phase and during intervention).

Data Analysis

Data analysis comprised visual analysis of multiple-baseline across participants' single-case experimental design graphs. Single case experimental design allows the evaluation of real time changes in multiple domains of behaviour as a response to an intervention of interest, in this case MI training plus feedback and coaching across multiple time points (Bentley et al., 2019). Each participant acts as their own data series or "study", including as their own control due to the collection of baseline data (Kazdin, 2019). Each participants' data can then be both individually examined and compared to the other participants (Kratochwill & Levin, 2010).

Each staff member's summary scores on the MITI 4.1.2 were graphed over time from baseline through the post-MI training coaching and feedback phase and into the intervention phase. Additionally, the change talk of clients within these session was also graphed for each staff member over time. These graphs were examined to explore patterns of the staff skill development across time.

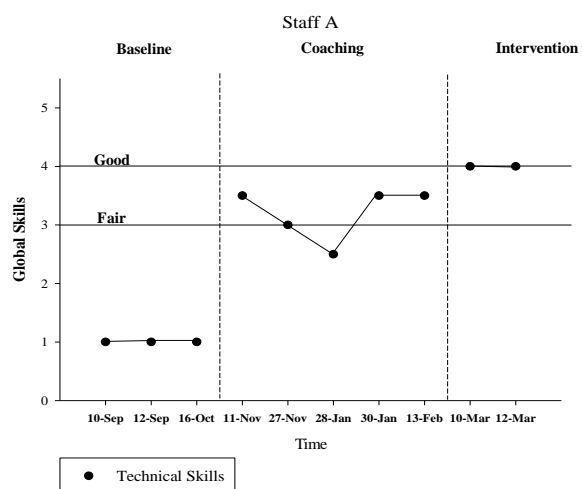
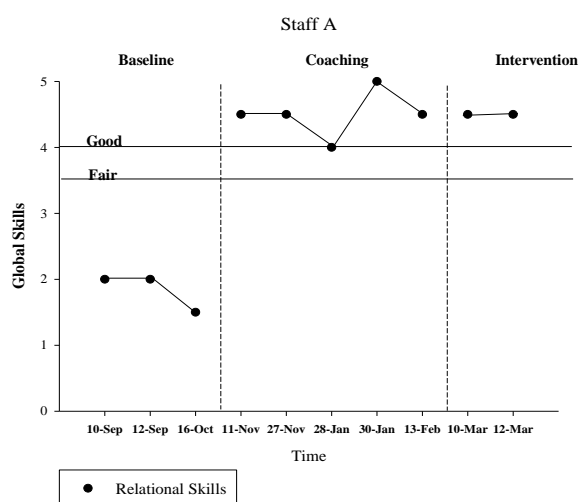
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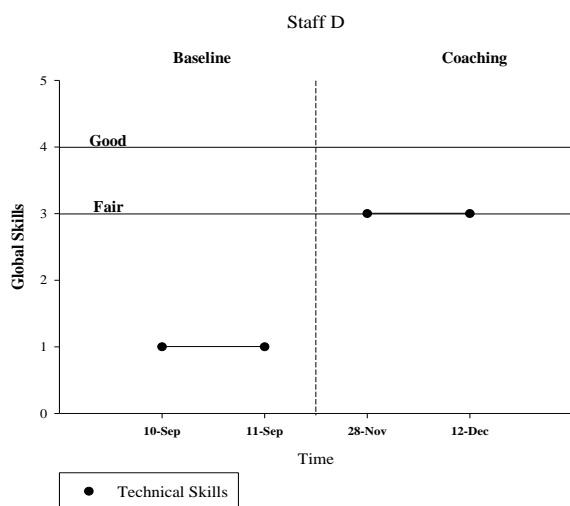
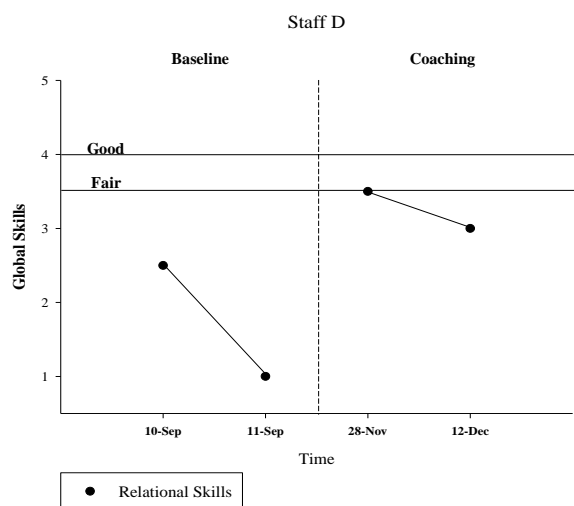
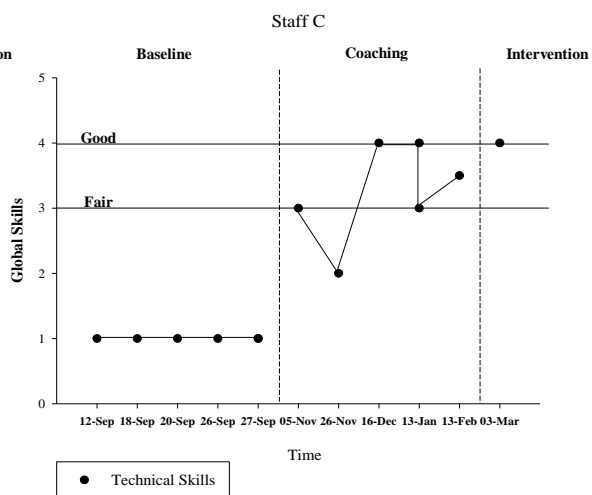
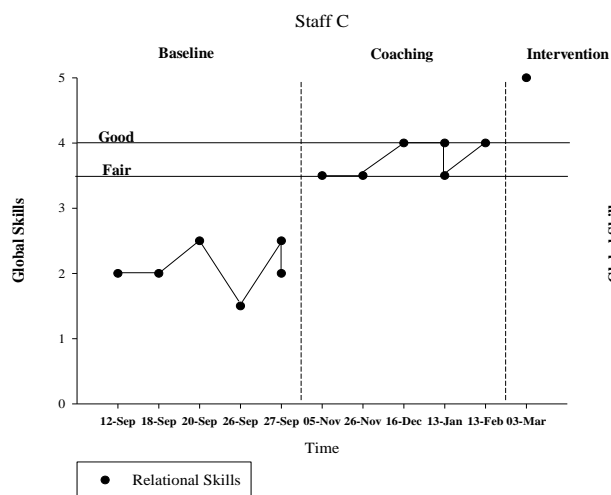
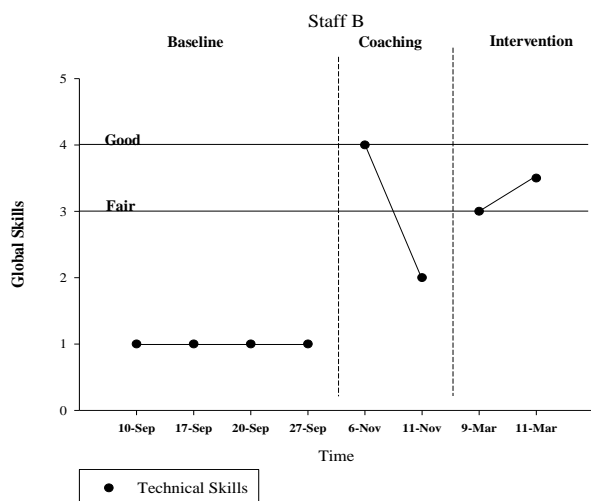
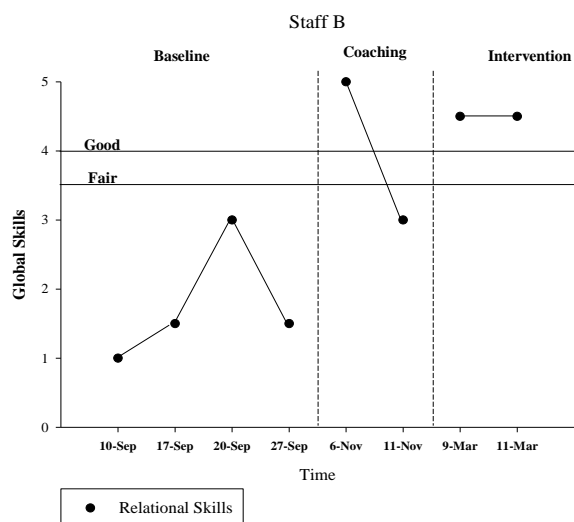
Relational Skills

Before training (baseline) the relational skills (empathy and partnership), as measured by the MITI 4.2.1 of all five staff were low, falling below the fair level of proficiency (Figure 1). After MI training, four of the five staff achieved a fair or good level of proficiency at some point.

The staff who submitted the most audio-recordings for feedback and coaching during the training phase (i.e., Staff A and Staff C) reached a fair or good level of proficiency on all the audios they submitted post-training. Staff A's relational skills became consistently strong (i.e., at the good level of proficiency) over time (i.e., in the intervention phases). Staff C's

relational skills also showed further improvement over time with feedback and coaching, with the one audio submitted during intervention receiving the highest possible relational score. Staff B only submitted two audios in the training phase of which one met a fair level of proficiency. However, both audios submitted in the intervention phase met a good level of proficiency. This suggests that Staff B benefited in terms of improved relational skills from the feedback and coaching which followed the initial workshop-based training. Staff D only submitted two audios at baseline and during training, of which one audio during training reached a fair level of proficiency. Similarly, Staff E only submitted one audio during the training phase and two during intervention, and did not reach a proficiency level on any of these audios. However, Staff E's relational skills were still higher in the training and intervention phases than at baseline and there was an upward trend in their relational skills suggesting that their relational skills were improving over time. Thus it appears that all staff had stronger relational skills after the MI workshop-based training and that their relational skills become stronger and/or more consistent with ongoing feedback and coaching. Staff who submitted less audios for feedback while still showing improvement in their relational skills, showed less improvement than staff who submitted more audios.





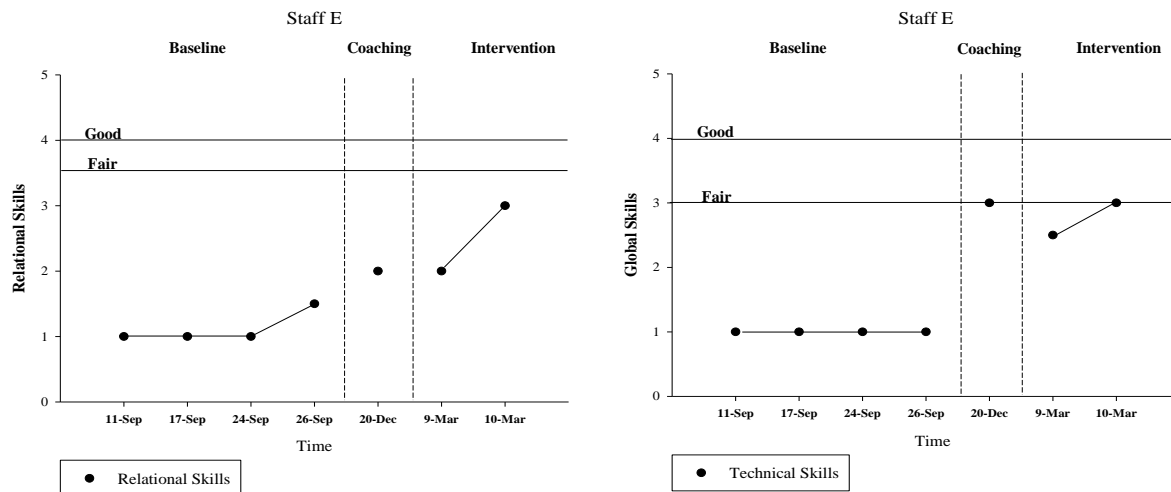


Figure 1. MITI4.2.1 Relational and Technical Skills per Staff Member over Time

Technical Skills

Before training (baseline) the MI technical skills (cultivating change talk and softening sustain talk) of all five staff were low, with all staff receiving the lowest possible score on every baseline audio (Figure 1). This suggests that they were paying little attention to change talk that was occurring naturally in the conversation, and were responding to sustain talk (talk about not changing) in a way that was likely to strengthen it. After MI training, all staff showed a marked increase in their MI technical skills, with all five staff achieving a fair or good level of proficiency at some point.

Staff A and C who submitted the most audio-recordings for feedback and coaching after the workshop training, had consistent improvements in their MI technical skills. Both achieved a fair or good level of proficiency on all but one audio (the third training audio for Staff A and the second training audio for Staff C). Further, there was an upward trend in their technical skills over the training phase, and both demonstrated a good level of proficiency (with highest possible score) during intervention. Staff B reached to a fair or good level of proficiency for three of the audios submitted after the workshop training. On the two audios submitted during

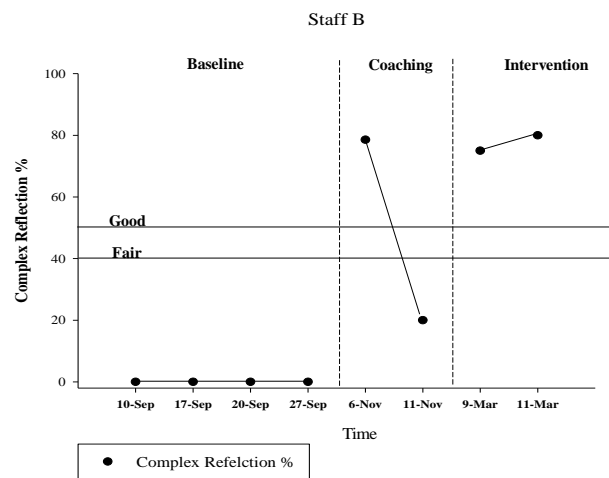
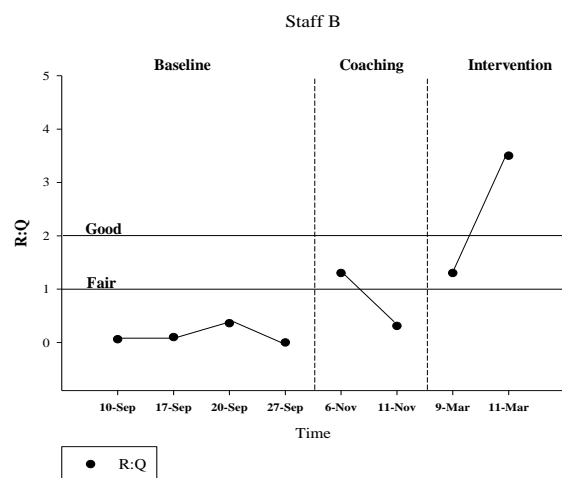
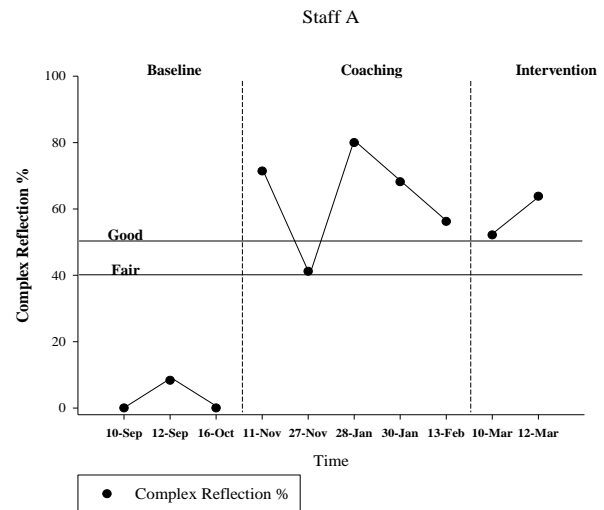
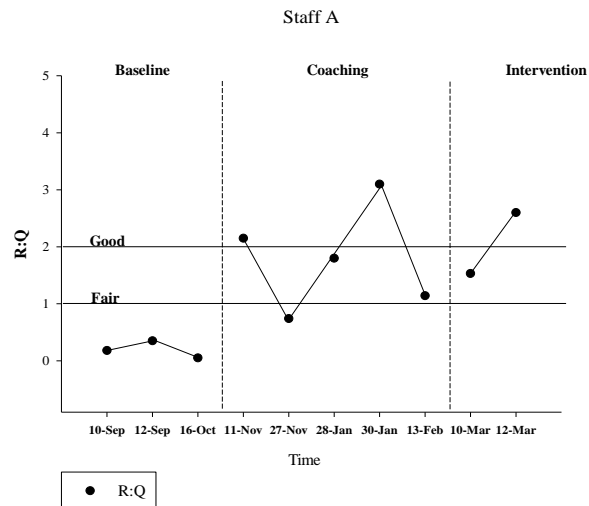
the coaching phase, Staff B demonstrated a good level of proficiency for one of them and for the two audios submitted during intervention, the MI technical skills were rated as a fair level of proficiency, and therefore Staff B did not show the same upward trend in MI technical skills over the coaching phase and into intervention. Similarly, Staff D and E who submitted fewer audios for feedback and coaching post-MI workshop training (i.e., 2 and 3 audio-recordings respectively), while still showing improvement in their MI technical skills to a fair level of proficiency on all but one audio (the first intervention audio for Staff E), their level of skills development did not show the upward trend during the coaching phase and into intervention, and the level of proficiency they reached in the MI technical skills was less than that achieved by the other staff.

Reflective Listening Skills

Reflection to Question Ratio

The ratio of reflections to questions (R:Q) was low pre-training for all five staff, with the staff's typically response being a question and providing few reflections (Figure 2). Post-MI workshop training for three staff (A, B and C) there was an increase in their use of reflections such that their R:Q reached either a fair or good level of proficiency at some point during the coaching phase, and all three reaching at least a fair level of proficiency on all of the intervention audios. For Staff A this change was seen from the first audio in the coaching phase, whereas for Staff B and C there was some variability during the coaching phase. However, for all three of these staff there was an upward trend in their R:Q over the coaching phase and into intervention, with both Staff A and B reaching a good level of proficiency in the intervention phase. However, Staff D and E, while increasing the frequency of their use of reflections from baseline, still did not meet the threshold for even a fair level of competency in the R:Q at any stage. Again it should be noted that Staff D and E submitted few audios for

feedback and coaching during the coaching phase, and unlike the other three staff, their R:Q did not increase to a fair level of competency immediately after the MI workshop training. This suggests that they had greater difficulty at developing their reflective listening skills compared to the other staff.



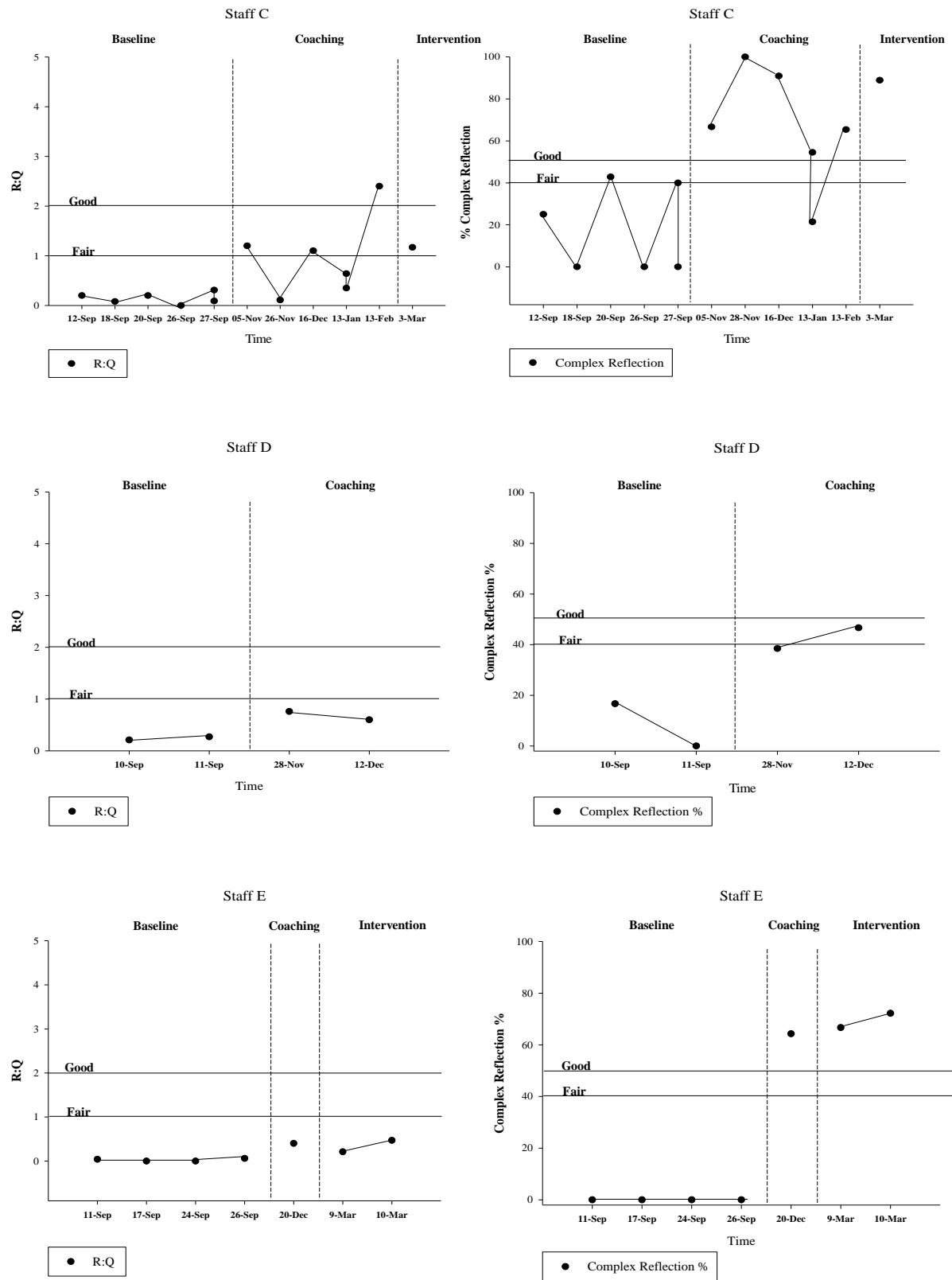


Figure 2. MITI4.2.1 Reflection to Question Ratio per Staff Member over Time

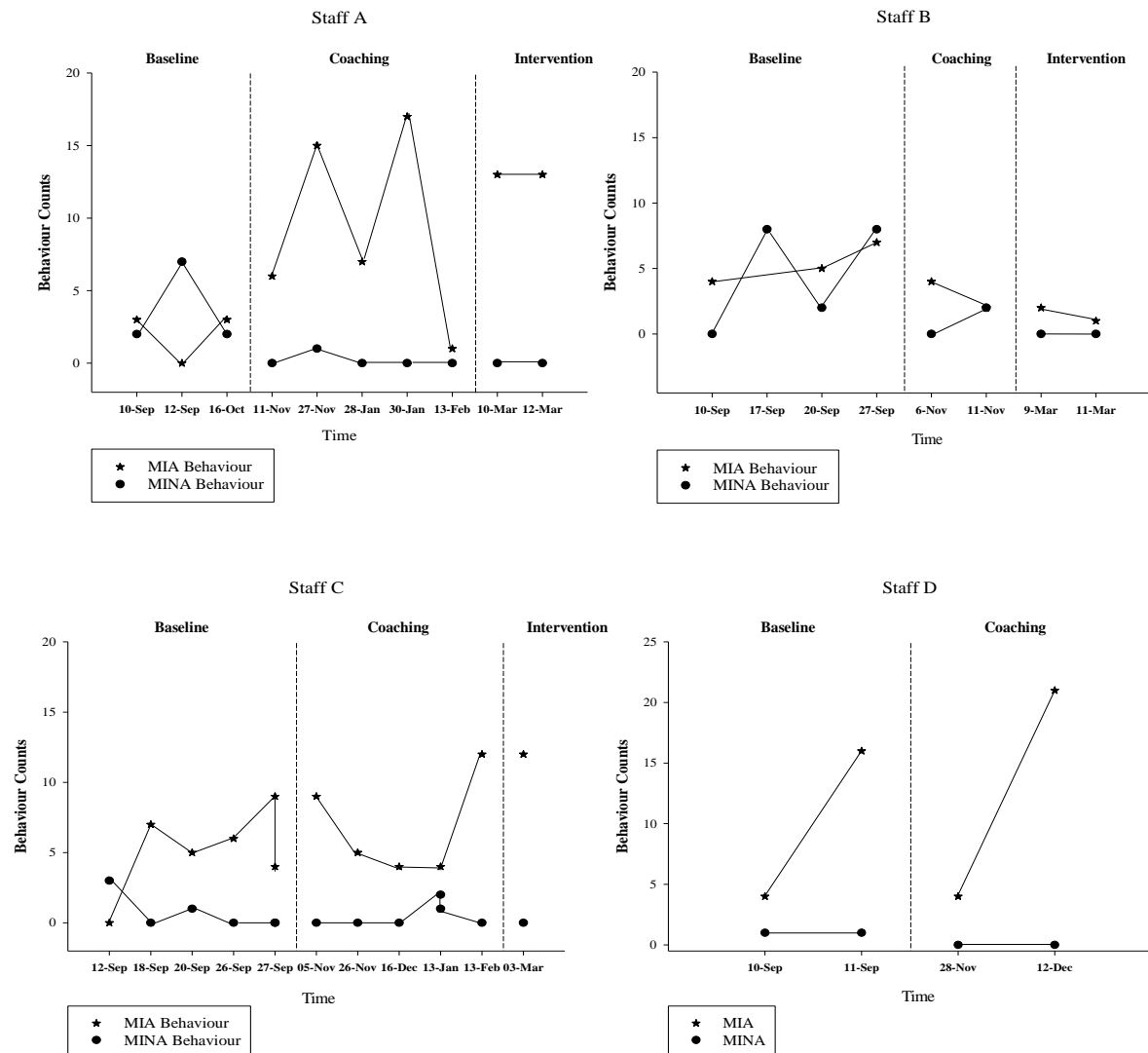
Percent Complex Reflections

Similar to the use of reflections (R:Q), at baseline most used very few complex reflections (%CR) which demonstrate deeper understanding of what the client has said (Figure 2). The exception to this was Staff C who met a fair level of proficiency for the %CR twice during baseline. In contrast, all staff met either a fair or good level of proficiency for the %CR after the workshop-based MI training. For all staff, except Staff D, the first audio submitted post-workshop based MI training reached a good level of proficiency. However, there was variability in the %CR over time, with only Staff A and E achieving either a fair or good level of proficiency consistently during the coaching phase and during intervention. Note too that for Staff D and E who in the coaching phase and during intervention were still using reflections infrequently compared to questions (i.e., R:Q was less than 1, Figure 2) they still reached competency level in the CR%. This suggests that although they were asking more questions than they were reflecting, the reflections they did make were deeper reflections.

MI Non-adherent and MI Adherent Behaviours

The use of MI non-adherent (MINA) behaviours (persuading, confronting) for all staff was higher during baseline compared to post-MI workshop training (Figure 3). All staff, except Staff D, used MINA behaviours during most of their baseline audios. In contrast, after the MI workshop training, Staff D and E ceased the use of MINA behaviour during the coaching and intervention phases. Staff A and B followed a similar pattern except for one audio each during the coaching phases, but did not use MINA behaviours during intervention. The staff also more often engaged in MI-consistent behaviours (affirmations, seeking collaboration, and emphasising autonomy) likely to facilitate a more positive relationship with the client. For Staff C, it appears that ceasing MINA behaviour was more difficult, even with coaching and

feedback, although they did not use it frequently (i.e., in 2 audios each during the baseline and coaching phases).



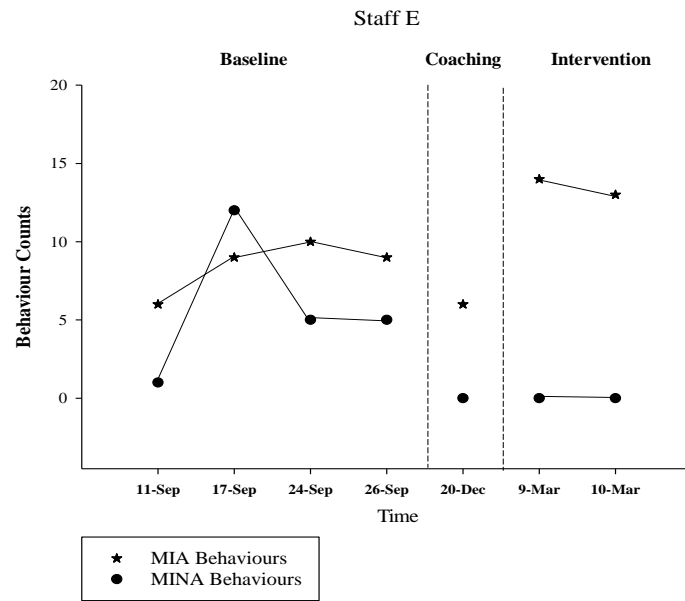


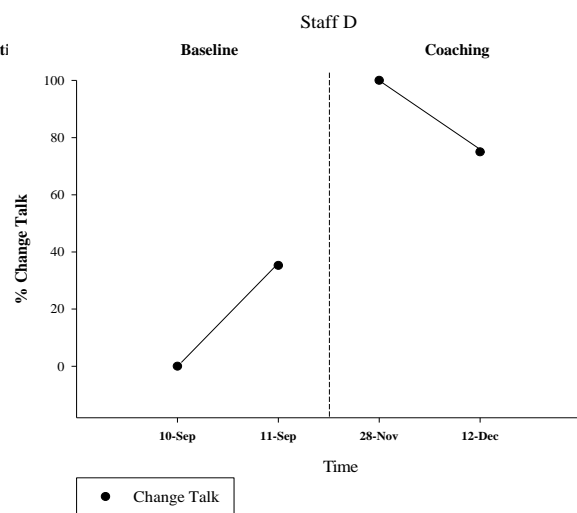
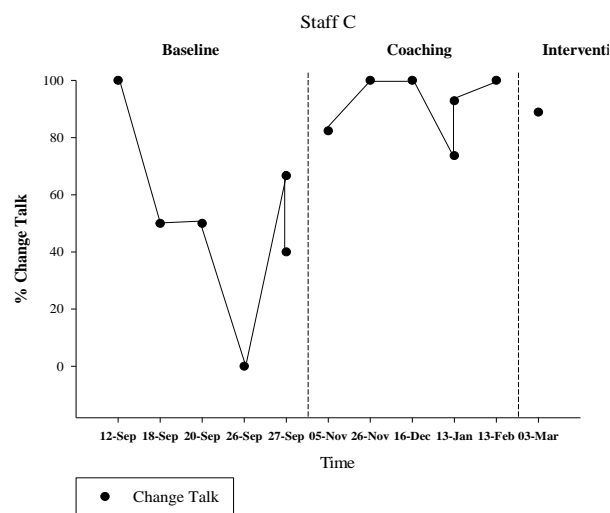
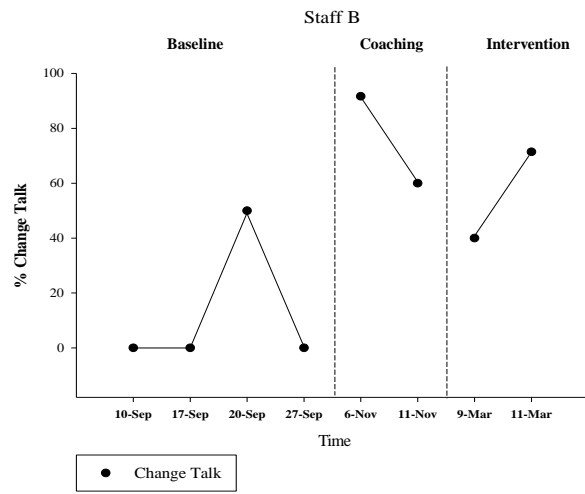
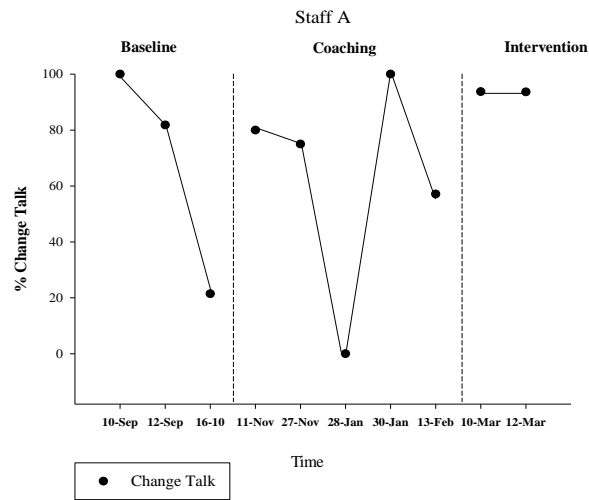
Figure 3. MITI4.2.1 MI-Non-adherent and MI-Adherent Behaviour per Staff Member over Time

All staff used of MI-adherent (MIA) behaviour (affirmations, seeking collaboration, emphasising personal control and choice) during baseline and throughout the coaching phase and during intervention (Figure 3). After the MI workshop training there was no consistent pattern of change in the use of MIA behaviours. For Staff A and D there was little change in the pattern of MIA behaviours across time. For Staff B there was a trend of a decreasing use of MIA behaviours during the coaching phase, whereas for Staff C and E there was a trend of an increase in MIA behaviour towards the end of the coaching phase and/or during intervention.

Client Change Talk

There was a pattern of variable change talk (%CCT) in baseline, ranging from 0-100%, for the sessions with Staff A, C, and D (Figure 4). Additionally, baseline sessions with Staff B tended to have a low %CCT, with three of the four baseline sessions having no change talk. Compared with the other staff, the baseline sessions with Staff E had higher %CCT talk (i.e.,

55-100%). After the workshop training there was a greater %CCT for Staff A, B, C, and D, and for Staff E the %CCT became more consistently high (i.e., 70-100%).



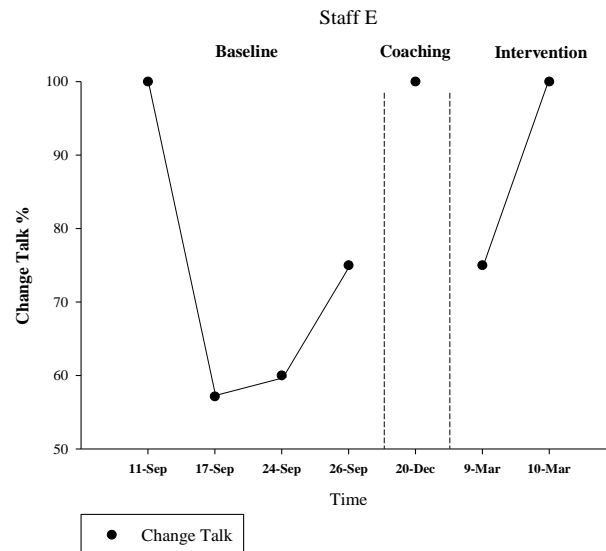


Figure 4. CLEAR Percent Change Talk in Sessions for Each Staff Member over Time

Conclusions

In summary, after MI training almost all staff achieved at least a fair level of competency in their MI skills, including technical and relational skills, reflection to question ratio and the percent of complex reflection. This was in contrast to baseline/pre-training where no staff met the threshold for proficiency in MI on any of the skills. There was also an increase in the clients' change talk after MI training. Further, this was associated with more in session change talk by clients.

Pre-training (baseline) the staff's conversations with work-ready clients were characterised by low partnership and empathy (MI relational skills), with no attention to change talk and attention instead being focused on sustain talk (i.e., the MI technical skills were low). Further the conversations mostly consisted of the staff asking a lot of questions, with few reflections, and any reflections that were given tended to be more simple reflections, rather than complex reflections which convey a deeper understanding of the client. Additionally, the sessions included both MI-inconsistent behaviours (persuading and confronting) as well as MI-

consistent behaviours (affirming, seeking collaboration, emphasising autonomy). Although analysis of the group data from this same cohort (Britt et al., 2020) found that the frequency of MI-consistent behaviour ($\bar{x} = 5.94$) was greater than the MI-consistent behaviour (i.e., $\bar{x} = 3.31$).

The current study found after MI training all staff showed changes in their MI skills, including MI technical and relational skills and reflective listening. Further, for some staff the level of skill development reached at proficiency in MI. Thus, it appears that after MI training there was clinical significant changes in staff's MI skills, as well as the statistically significant changes found in the group analysis (Britt et al., 2020).

Post-MI workshop training there was an increase in both MI relational (partnership and empathy) and technical skills (cultivating change talk and softening sustain talk) across all staff. The improvement in the staff's technical skills was most marked, with all staff reaching a fair or good level of proficiency across most post-training audios (i.e., coaching and intervention phases) and on all of the last audios they submitted.

Further, those staff (Staff A and C) who submitted more audios during coaching and feedback, had showed further increases in both the relational and technical skills over time to a good level of proficiency (as measured by the MITI 4.2.1). This suggests that the more staff engaged in the feedback and coaching, the greater their relational and technical skill development. In contrast, two staff (Staff D and E) only achieved a fair level of competency in the relational and technical skills and did not do so consistently in the coaching phase and during intervention. Both of these staff only submitted one (Staff E) or two (Staff D) audios during the coaching and therefore received less coaching and feedback on their practices compared to Staff A and C.

Post-MI training, all staff also showed increased reflective listening skills as measured by the reflection to question ratio (R:Q) and the percent complex reflections (%CR). Post-MI

training, three staff (Staff A, B, and C) had an increase in their R:Q to a fair or good level of proficiency as measured by the MITI 4.2.1 on most of their audios, and consistently for their last two audios. All three of these staff appear to have been able to increase their use of reflections and decrease their use of questions soon after the MI workshop training (as evidenced by their R:Q on their first audios submitted post-training) and there was an upward trend in their R:Q over the coaching phase and into intervention. For two of these staff (Staff B and C), their R:Q fluctuated over the coaching period, providing further support for the importance of the ongoing feedback and coaching. Staff A was able to consistently meet at least a fair or good level of proficiency for the R:Q, with the exception of one audio through the coaching phase, and still showed an upward trend over this period, suggesting that they were able to make significant changes in their reflection listening post the MI workshop training, and also benefitted from further feedback and coaching. For the other two staff (Staff D and E), while still having an increase in their R:Q after training, this increase did not reach proficiency level in any audios. These are the same staff mentioned above who showed least change on the relational and technical skills and submitted the least audios for feedback and coaching.

Post-training all staff showed an increase in the ability to use complex reflections, with their %CR in the coaching phase and at intervention mostly reaching a fair or good level of proficiency as measured by the MITI 4.2.1. All staff were able to demonstrate at least a fair level of proficiency in the %CR from their first audio post-MI workshop training, with the exception of Staff D whose %CR on their first post-MI training audio was very near the fair level. However, there was some variability in their ability to use complex reflections over time with two staff (Staff B and C) not meeting a fair level of proficiency on one audio each, despite having received feedback and coaching. This further suggests the importance of ongoing coaching and feedback to maintain skills acquired from MI workshop training, consistent with

previous research that has found the ongoing coaching and feedback is important for the sustainability of MI skills (Hall et al., 2016; Miller et al., 2004; Schoener et al., 2006).

As hypothesised, there was also a decrease in the frequency of MI-inconsistent behaviours (persuading and confronting) after the MI workshop training. It should also be noted that while these behaviours were virtually eliminated for all staff, three staff (Staff A, B, and C) still had the occasional use (in two audios for Staff C, and on one audio each for staff A and B) of an MI-inconsistent behaviour during the coaching phase. This suggests that whilst the staff were able to change this behaviour, there was still a risk of them reverting to this even after workshop training and coaching and feedback. This again supports the importance of ongoing coaching and feedback to maintain MI skills.

All staff used MI-consistent skills (affirmations, seeking collaboration, and emphasising autonomy during baseline. Given the low level of their relational and reflective listening skills, it was probably these MI-consistent skills which the staff relied on to maintain a positive relationship with their clients. Following MI workshop training there was a variability in response by staff in their use of MI-consistent behaviours, with some staff showing an increase (Staff A and E) and one showing a decrease (Staff B) in these behaviours, and others showing little overall change (Staff C and D) from baseline. There are a number of possible explanations for this. First, there was already a reasonably frequent use of these skills at baseline. Secondly, for Staff B who had a decrease in the use of these skills, it may be that they no longer felt such a stronger need to use these skills as their relational and reflective listening skills increased.

It should be noted that Staff B also only submitted two audios during the coaching phase, similar to Staff D and E. Yet, Staff B achieved greater changes in the relational, technical and reflective listening skills than the two other staff who submitted a similar low number of audios, suggesting that Staff B may have been more responsive to the MI training, even with a

low level of feedback and coaching. Previous research has also noted that some individuals may be more responsive to MI training than others (Miller & Rollnick, 2012).

It is unclear why some staff submitted more audios than others. Previous research (Baer et al., 2004; Dear & Britt, 2014; Soleymani, 2019; Wilkinson & Britt, 2015) has also reported low rates of audio submission for feedback and coaching. Possible ways to increase staff engagement in submitting audios could include allocating time for practice, encouragement and ongoing support from management, as well as the inclusion of MI skill development and support within staff performance plans and appraisals (Wilkinson & Britt, 2015). Furthermore, it is recommended that staff willingness and readiness to engage in the MI skill development process be assessed before training in MI.

As mentioned earlier, in addition to changes in the staff behaviour consistent with MI, there were also changes in the clients' in-session behaviour (i.e., an increase in change talk) consistent with the theory of MI (Miller & Rose, 2009) and previous research. The link between MI skilfulness and change talk is well supported by research (e.g. Gaume et al., 2010), as is the link between change talk and client change (Amrhein et al., 2003; Apodaca & Longabaugh, 2009; Copeland et al., 2015; Karver et al., 2006; Morgenstern et al., 2012; Moyers et al., 2009; Shirk & Karver, 2003). The process of MI involves the practitioner guiding the conversation so that the client speaks change talk and elaborates further on their change talk. This increases motivation by allowing the client to engage more fully with their own incentives for change (Westra & Aviram, 2013), which in turn increases the likelihood of actual behaviour change (Miller & Rollnick, 2012; Miller & Rose, 2009).

It is interesting to note that during baseline there was still change talk occurring naturally in these work-focused conversations, but the Work and Income staff did not attend to this. Instead they tended to attend to the sustain talk and talk about not engagement in training or employment, which is likely to make the client less likely to engage in behaviour change.

Therefore, there appears to have been a missed opportunity to build and strengthen these clients' motivation for behaviour change. In contrast, after the MI workshop training all staff shifted their attention in their conversations with work ready clients so that they focused more on change talk and less on sustain talk, with a corresponding pattern of increased client change talk.

The staff (Staff A and C) who were able demonstrate the shift to a focus on change talk and only give minimal attention to sustain talk (i.e., the technical skills of MI) to a good level of proficiency were the staff who submitted the most audios during the coaching period and so received the most feedback and coaching. This is consistent with the hypothesis and previous research which suggests that the technical component of MI is more difficult to learn and that it takes ongoing feedback and coaching to develop these skills. Thus, the results of the current study are consistent with previous research which has shown the importance of coaching and feedback post-MI training to build on skills developed during the MI-workshop training (Forsberg et al., 2010; Martino et al., 2011; Miller et al., 2010; Schwalbe et al., 2014). These findings are also consistent with the broader literature on training methods for psychosocial treatments indicating that, regardless of the intervention, the adoption of skills is rarely maintained by practitioners without extended feedback and coaching through follow-up consultation or supervision (Bennett et al., 2007). Indeed, consistent with a competency based learning approach (Bohman et al., 2013), proficiency in MI can be achieved only when competency is benchmarked and monitored, and training is ongoing until proficiency is achieved.

It should also be noted that the MITI 4.2.1 competency thresholds were not empirically derived and instead the competency levels are based on expert opinion. It is unclear what level of proficiency in MI is required to facilitate increased client motivation and behaviour change. There is research (e.g. Britt, 2008) that has reported on client behaviour change when

practitioners also had not reached proficiency levels on the MITI. That there appears to have been increased client change talk for the Work and Income staff who did not reach all the MITI 4.2.1 proficiency levels, suggests that this may also be the case. Further research is required to clarify this and provide guidance as to what levels of proficiency may be needed to facilitate behaviour change in the Work and Income context. What we do know from previous research is the importance of the spirit of MI, and that this alone can facilitate behaviour change (Moyers & Miller, 2013).

As recommended in the previous report on the group data (Britt et al., 2020), it may also be more cost-efficient to provide different levels of training to different groups of staff within Work and Income based on their roles. The results from the current study suggest that staff can make changes in their skills which positively impact on clients with MI workshop-based training and minimal individual feedback and coaching. It may be that a key change for some staff is a shift to a way of working and relating to clients that is more aligned with the spirit of MI. That is, a shift to a partnership way of working, which shows respect for the client, where clients feel heard and understood, and where the staff no longer feels responsible for making the client change. Further research is needed to ascertain what MI skills are essential and what level of skilfulness in MI is required to be effective within the Work and Income context. Additionally, it is recommended that further research be undertaken exploring the MI within the Work and Income context which also evaluates client level outcomes beyond increased change talk (i.e., whether MI does lead to increased motivation for, and/or engagement in, training or employment).

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