The effectiveness of a shortened training module on Motivational Interviewing skill acquisition

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Short Head: Modified Motivational Interviewing training

**Abstract**

Motivational Interviewing (MI) is a therapeutic technique that has been increasingly used in health care, and MI training for health care professionals has been progressively more promoted. This study investigated the effectiveness of a modified version of the traditional two-day workshop in Motivational Interviewing. Physical Therapy students completed the training as part of their curriculum and chose to participate in the study on voluntary basis. Comparisons were made between pre and post measures of a number of MI adherent skills used in written and role-play scenarios. Students demonstrated an increase in the use of open-ended questions, and the score of MI Spirit in their role-plays, as well as an increase in their score on the written scenarios. Reflection to Question ratio and the percent of Complex Reflections did not increase in the role-plays following the workshop. This shortened workshop was successful in promoting the use of basic Motivational Interviewing skills.

**Introduction**

 Motivational Interviewing (MI) is a client centered counselling style, which is useful for eliciting behaviour change by helping clients to explore and resolve ambivalence (Miller & Rollnick, 2002). This therapy approach is goal-directed and promotes the client’s ability to decrease ambivalence and initiate change. MI has been effective with such challenging populations as substance abuse, as well as in health care settings including smoking cessation, weight loss and those with diabetes (Martins & McNeil, 2009). Due to the success in other health care environments this approach has promise for applications in rehabilitation medicine where entering or adhering to prescribed treatments might be difficult for some clients (Jack, Mc Lean, Moffett, & Gardiner 2010).

***MI Background***

Motivational Interviewing is an evidence-based approach derived from Miller’s work with problem drinkers in 1983 and was developed further with Rollnick in 1991 to include a set of clinical procedures. In the development of this approach, Miller applied several principles from existing cognitive-behavioural theories, such as Festenger’s cognitive dissonance theory, Bem’s self-perception theory and Rogers’ humanistic approach; however, as of yet, MI is not based on a unified theory (Toward a Theory of MI (Revised 1/03) Retrieved 15 November 2009 from Motivational Interviewing Official Site http://motivationalinterview.org/clinical/principles.html).

***MI Principles***

 There are four principles in Motivational Interviewing that direct and focus clinicians on their role. These are: (1) Express Empathy, (2) Support Self-Efficacy, (3) Roll with Resistance and (4) Develop Discrepancy (Miller & Rollnick, 2002).

 Expressing Empathy is a crucial element in facilitating change in the client. Manifestation of compassion and understanding on the part of the clinician allows the clients to feel comfortable and supported, which in turn permits the clinician to gain a fuller understanding of the client's situation. Supporting Self-Efficacy, the second principle of MI, focuses the clinician on providing support and motivation for the clients. Clinicians encourage clients by indicating that there are many ways of accomplishing change, and by drawing on the client’s own examples of previous successful changes. The essence in Supporting Self-Efficacy is offering clients hope that change is possible. Roll with Resistance, the third MI principle, invites clinicians to avoid challenging the client and using a confrontational conversation style during client interactions. Since it is the clients who develop solutions to the problems identified, and not the clinicians, no power struggles should arise in the interactions. Finally, Develop Discrepancy, the last of the principles, centres on creating incongruities between the client’s current situation and their future goals. This discrepancy then motivates the client to change. The role of the clinician is to perceive inconsistencies in the client and point them out, keeping in mind the above-mentioned principles, especially rolling with resistance (Miller & Rollnick, 2002).

In addition to specific principles, Motivational Interviewing is also based on a set of values and beliefs - the Motivational Interviewing Spirit.

***Philosophy of MI: Spirit***

 Motivational Interviewing distinguishes itself from other therapeutic strategies and techniques by placing emphasis on the spirit, rather than the technique, of the therapy. The spirit of MI should consequently be a collaborative, evocative and an autonomous one (Miller & Rollnick, 2002).

Rather than retaining traditional expert/recipient roles, the therapeutic relationship between the client and the counsellor is a collaborative one. The counsellor honours the client’s perspectives and experiences, using exploration and support to guide, instead of push, the client (Miller & Rollnick, 2002). Evocation is the second component of Motional Interviewing spirit. Rather than being driven by instilled fear of consequences resulting from lack of change, MI encourages the clinician to explore the client’s ambivalence and enable the client to mobilize his or her own intrinsic values and goals in order to stimulate change. Motivational Interviewing aims to respect the client’s autonomy by increasing the client’s intrinsic motivation. The spirit of Motivational Interviewing is continuously applied to other MI strategies to help move the client forward in their therapy and promote change talk, the clients’ discussion of the advantages and disadvantages of changing current behaviours.

***Key Strategies for Implementation of Motivational Interviewing***

 There are a variety of therapeutic techniques used in MI interactions. Five core strategies are highlighted (Miller & Rollnick, 2002). These strategies are Open-ended questions (O), Affirmations (A), Reflective listening (R), Summaries (S) and Eliciting change talk (E). The acronym OARS+E is used to identify and teach the techniques. The strategies are used to move the client forward and acknowledge the sustained effort required in order to reach success. The ultimate goal is to elicit change talk in the client (Miller & Rollnick, 2002).

 Open-ended questions – those that cannot be answered by a yes or no or a few word utterances – are used by the clinician to promote forward movement on behalf of the client as well as to encourage the client to explore change. Additionally, the use of open-ended questions allows the client to communicate more frequently than the clinician, and consequently helps build rapport and assists with providing additional understanding of the client’s perspective (Miller & Rollnick, 2002).

 Affirmations include statements of recognition about client strengths and are a crucial part of MI. Affirmations can help empower the client, while placing little emphasis on the client’s failures. Affirmations also provide an additional way of building rapport and reinforcing open exploration (Miller & Rollnick, 2002).

 Reflective listening is a directive approach that involves careful listening to the client while placing further emphasis on the client’s change talk, drawing less attention to non-change talk and once again keeping the momentum moving forward. Reflections should often follow responses to open-ended questions, and like open-ended questions, can be used to encourage personal exploration (Miller & Rollnick, 2002).

 Summaries compliment the previous three strategies by providing the clinician with a way to link together and reinforce what has been discussed. They give the clinician a strategy for highlighting the more salient elements of the discussion and possibly shifting the attention or direction of the intervention, should it be needed (Miller & Rollnick, 2002).

 Together, open-ended questions, reflective listening, affirmations, and summaries, aim to elicit change talk in the client. Change talk contains four general stages – recognizing disadvantages of the status quo, recognizing advantages of change, expressing optimism about change and expressing intention to change. Using OARS to elicit change talk helps the clinician move the client through these stages and to promote intrinsic motivation to change (Miller & Rollnick, 2002). It is thus crucial for a clinician to master these skills in order to be able to successfully practice MI.

***Research Evidence***

Motivational Interviewing has been demonstrated to be a successful technique for modifying problem behaviours, yielding more success than traditional advice giving (Rubak, Sandbaek, Lauritzen & Christensen, 2005). MI originated from substance abuse treatment, and has expanded to a variety of health care settings some of which include: voice therapy (Behrman, 2006), medication adherence (Cooperman, Parsons, Chabon, Berg, & Arnsten, 2007), diabetes (Channon, Huws-Thomas, Rollnick, Hood, Cannings-John & Rogers, 2007), stroke rehabilitation (Watkins, Auton, Deans, Dickinson & Jack, et al., 2007), treatment of depressive symptoms following traumatic brain injury (Bombardier, Bell, Temkin, Fann, Hoffman & Dickmen, 2009), and in physical therapy (Jack et al., 2010). Additionally, MI showed success with clients of different age groups such as teenagers (Channon et al., 2007) and older adult populations (Cummings, Cooper & Cassie, 2009). Furthermore, adaptations of Motivational Interviewing have also shown to be more successful than placebo treatment (Burke, Arkowitz & Menchola, 2003). MI has been used in brief encounters as well as over a number of sessions and has even yielded promising results with treatment delivered over the phone (Bombardier et al., 2009; Rubak et al, 2005). In a systematic review of 72 randomised control trials of the effectiveness of MI in a variety of clinical settings, Rubak et al. found it to be effective regardless of whether or not the client’s concerns were psychological or physiological in nature (2005). Lastly, MI has been effectively administered by a variety of health care professionals including, but not limited to, psychologists, physicians, dentists, nurses, dieticians, physical therapists, and speech language pathologists (Jack et al., 2010; Behrman, 2006; Rubak et al., 2005).

Motivational Interviewing allows clinicians to increase change talk and move clients further along the readiness to change scale, similar to the Transtheoretical Model (TTM) of change (Prochaska & DiClemente, 1984; Prochaska, Butterworth, Redding, Burden, Perrin, et al., 2008). Depending on the individual circumstance of the clients, this could mean recognizing a need for a rehabilitation program, entering one and/or following through with the clinician’s recommendations (Rüsch & Corrigan, 2002; Swanson, Pantalon & Cohen, 1999). Due to its success in a variety of health care settings (Martins & McNeil, 2009; Rubak et al., 2005), the education of health care professionals in the use of MI can yield promising results in promotion of health care.

***Teaching of MI Skills***

 Acquisition of Motivational Interviewing skills "is a process, not a curriculum" (Miller & Rollnick, 2002, p. 192). MI competencies can be learned through a number of options, some of which include formally facilitated workshops and seminars which are typically two days long (Rosengren, 2009). Extensive practice using simulated patients, role-plays, analyses of recorded and transcribed client-clinician interactions and peer consultations prove more successful in attaining MI skills than only attending the workshops (Söderlund, Nilsen, & Kristensson, 2008). Moreover, the addition of feedback and coaching into the workshop format aids in maintenance of MI skills (Miller, Yahne, Moyers, Marinez & Pirritano, 2004, Rosengren, 2009). However, even brief training (3 hours) resulted in statistically significant changes in practice behaviour (Miller et al., 2004), which may or may not translate to actual change in client behaviour (Miller & Mount, 2001).

 In consideration of research findings regarding the efficacy of learning Motivational Interviewing Skills, Rosengren (2009) recommends that MI training include the eight MI skills devised by Miller and Moyers (2006). These include: (1) Conveying the Spirit of MI, (2) Teaching OARS, (3) Recognizing and Reinforcing Change Talk, (4) Eliciting and Strengthening Change Talk, (5) Rolling with Resistance, (6) Developing Change Talk, (7) Consolidating Client Commitment, and (8) Switching between MI and other counselling methods. Furthermore, Rosengren (2009) advocates that, in the preliminary component of MI training, reading of written material and watching MI practice videos may be important in preparing clinicians for further acquisition of MI skills. In terms of the length of training, a two-day workshop is recommended (Rosengren, 2009). It is also suggested that the workshops consist of didactic and practical components. In order for clinicians to increase their MI skill proficiency, Rosengren (2009) suggests follow-up training encompassing additional skill practice, as well as feedback and coaching for a duration of at least three months. Methods for the follow-up training are varied, some of which include distance learning and taped and real-time observations. Also, Rosengren (2009) makes a distinction between skill proficiency and maintenance, and proposes that additional institutional support in providing coaching and feedback opportunities may be an important component of maintaining MI skills.

 Although a two-day workshop is recommended for training clinicians in Motivational Interviewing techniques, this may not always be an option for working clinicians and students. This project evaluated the efficiency of Motivational Interviewing training distributed over a shorter time frame. It provides insight into the acquisition of these skills in physical therapy students.

**Methods**

This study investigated a Motivational Interviewing Module in the Department of Physical Therapy in the Faculty of Rehabilitation Medicine, University of Alberta. The module was taught within the time constraints of the busy educational curriculum in this professional program, which does not permit 2 days of intensive instruction.

***Participants***

Participants were drawn from students in the second year of the Physical Therapy program, who received an instructional module on Motivational Interviewing as part of their Professional Issues course. Although the course content was required, participation in the research project was voluntary. A total of 44 students, out of a possible 77, participated in the study; 31 were female and 13 were male. The age of the participants ranged between 22 and 37 years with an average of 25.1 years.

***Materials***

The Helpful Response Questionnaire (Miller, Hedrick & Orlofsky, 1991) was modified to create an opportunity for the participants to produce written responses to clinical scenarios presented in paragraph form. The resulting questionnaire, Modified Helping Response Questionnaire (MHRQ), is shared in Appendix A. The responses were analyzed to evaluate the use of verbal skills consistent with MI techniques. Each response was scored on a scale of 1 to 5, based on the following criteria: MI non-adherent (MIN) statements (including directing, confronting, and giving advice without first asking for permission), MIA adherent (MIA) statements (including open-ended questions, simple and complex reflections, as well as statements promoting affirmation and support), and MI neutral statements (including close-ended questions and statements giving general information). Explanation of the scoring protocol is outlined in table 1.

**[Insert Table 1 about here]**

The Motivational Interviewing Treatment Integrity 3.1.1 (MITI 3.1.1) tool (Moyers, Martin, Manuel, Miller & Ernst, 2010) was used to evaluate the video-recorded simulated client-clinician interactions by providing both qualitative and quantitative measures of MI associated skills. MITI 3.1.1 is designed to measure the treatment integrity of Motivational Interviewing in clinical trials as well as a means of providing feedback to clinicians regarding ways to improve the use of MI skills in their practice. Four role-play scenarios were designed by instructors from the departments of Physical Therapy and Speech Pathology and Audiology at the University of Alberta. The scenarios included a brief description of a clinical problem and provided a short script in which the simulated client described their current situation but did not explicitly ask the clinician for help (see Appendix B for a sample scenario). The role-plays were analysed as per the MITI 3.1.1 guidelines in order to obtain behavioural counts of specific interviewer skills. Open-ended questions, close-ended questions, complex reflections and simple reflections were tallied from video role-plays. Reflection to question ratio (simple and complex reflection compared to open and close ended questions), percent complex reflections (complex reflections divided by complex plus simple reflections), and percent open-ended question (open-ended questions divided by total questions) were calculated based on these tallies. MITI 3.1.1 was also used to evaluate the clinicians’ overall MI spirit by providing a global rating score of 1 to 5 for Evocation, Collaboration, and Autonomy.

***Procedures***

Students received an instructional module on Motivational Interviewing as part of the curriculum. The MI module was taught by a faculty member in the Faculty of Rehabilitation Medicine, who teaches coursework in counselling and has taught MI in other departments. The instructor has received MI training through the Motivational Interviewing Network of Trainers (MINT). The MI module was designed on a learning cycle of initial assessment/reflection, information sharing, discussion, practice, application and final assessment/reflection. Each component is outlined below.

To facilitate initial assessment/reflection, students provided written responses to the Modified Helping Response Questionnaire and video recorded a role-play with another student (see Appendices A and B for examples) prior to receiving instruction on Motivational Interviewing. A role-play was selected as previous research has indicated that role-plays are as effective and applicable as simulated patients in practicing MI behaviours (Lane, Hood & Rollnick, 2008). The questionnaire and role-play provided opportunities for students to demonstrate the techniques they would use when interacting with a client in a problem-focused discussion. Students analyzed their written responses to the questionnaire and the skills demonstrated in their role-play as part of the course requirement.

Students received approximately 3.5 hours of classroom instruction on various aspects of MI. During this time, opportunities for information sharing, discussion, and practice were provided. The spirit, principles and techniques were presented.  In order to further practice and apply these skills, students were provided with 8 – 10 lab assignments focusing on specific MI techniques. They had to choose 5 tasks/assignments to practice the skills taught and apply them to simulated clinical cases.  The tasks chosen were based on skills they identified for practice from their initial assessment/reflection.

For final assessment/reflection, students repeated the initial questionnaire and redid the video role-play with a different scenario.  The students then evaluated their pre and post results according to guidelines provided and submitted them for grading. Once the course grades were submitted, the researchers analyzed the MHRQ by coding each utterance as per the Helping Response Questionnaire guidelines. In order to facilitate point-to-point reliability the role-plays were analyzed by glossing (writing down the first few words of each volley) the beginning of each volley of utterances. The researchers were blind to whether or not the data that they reviewed was from the pre or post condition.

***Reliability***

 Two researchers concurrently scored the Modified Helping Responses Questionnaires and the video role-plays, thus obtaining 100% agreement in the scores. Twenty percent of questionnaires were chosen at random and analyzed by the principle research investigator, resulting in point-to-point agreement of 87%. In a similar fashion, 20% of video role-play transcripts were chosen at random and analyzed, resulting in a 75% point to point agreement between the researchers and the principle investigator, a 79% agreement between reflections and questions, and an 84% agreement for global ratings.

**Results**

PASW (Predictive Analytics SoftWare 18.0) was used to compute statistical analysis of the data collected in this study. Scores from the Modified Helping Response Questionnaire were analyzed using a paired sample t-test. The participants achieved a significantly higher score post training (x̄ = 12.02) compared to pre training (x̄ = 7.77; t = -7.910; df = 43; *p <* 0.001).

The counts of MI skills obtained from the analysis of the role-play data were analyzed via paired sample t-tests. The rating of *Spirit* was evaluated using a Wilcoxon Signed Ranks Test and the mean rating post training (x̄ = 9.81) was significantly higher than prior to training (x̄ = 7.71; Z = -2.983; *p =* 0.003). The mean percentage of open questions used post training (x̄ = 37%) was also significantly higher than prior to training (x̄ = 25%; t = 2.305; df = 40; *p =* 0.026).

The training did not result in a significant increase in ratio of reflections to questions from pre (x̄ = 0.73) to post training (x̄ = 0.69; t = -0.324; df = 40; *p* =0.747). The percentage of complex reflections used did not significantly increase from pre (x̄ = 41%) to post training (x̄ = 51%; t = 1.381; df = 40; *p* = 0.175).

The participants in this study were able to select from the four scenarios provided in their initial role-play. The final role-play required them to select a different scenario from their initial role-play. To see whether certain scenarios elicited scores that were significantly different, an analysis of variance was completed, comparing the scenarios and each of the measures. The scenario used during the role-play did not have a significant effect on any of the ratings prior to training (*p* > 0.378). The scenario used after training did have a significant interaction with the percentage of complex reflections used (F = 4.994, df = 3, p = 0.005) with scenario 3 yielding significantly more reflections than the other scenarios. This was not observed for any of the other measures (*p* > 0.195)*.*

**Discussion**

This project was designed to evaluate the effects of a condensed Motivational Interviewing training module on the behaviour of student clinicians in written and role-play helping scenarios.

Clinical implications of the results can be interpreted by considering how closely the student scores aligned with recommended values for clinical practice. The MITI 3.1.1 provides recommended beginning proficiency and competency levels for many of the resulting scores, including: Global Spirit Ratings (10.5 for proficiency and 12 for competency), Reflection to Question Ratio (1 and 2 respectively), Percent Open Questions (50% and 70% respectively), Percent Complex Reflections (40% and 50% respectively) and lastly Percent MI-Adherent (90% and 100% respectively) (Moyer, et al., 2009).

The results of the analysis indicate that mean spirit rating post training (an average 3.4) approached the MITI 3.1.1 recommended proficiency level. The values for percent complex reflections indicated that, prior to the training (a mean score of 41%), participants were already demonstrating the recommended proficiency levels. The performance post training indicated competency levels at 51% complex reflections. The scores for reflection to question ratio and percent open questions showed neither the pre or post training values (pre: 0.73, post: 0.69; pre: 25%, post: 37% respectively) to be comparable to the beginning proficiency levels recommended by the MITI 3.1.1.

The teaching module proved to be successful in increasing the student’s scores on the Modified Helping Response Questionnaires. An average score of 7.77 prior to training suggested that students were using few, if any complex reflections or included MI non-adherent statements. The post-training mean of 12.0 indicated a reduction in MIN-adherent skills and a corresponding increase in complex reflections and MI adherent skills. In order to achieve the mean score of 12 over 3 scenarios on the MHRQ, the students had to use at least two complex reflections in three of their responses. For example in their initial response a student wrote: “You are not stupid, and you do not need friends who make fun of you. Don’t you think you would feel better about yourself if you focused more on studying...”, this response includes confrontations and directing, and fails to use any MI adherent strategies, thus giving the participant a score of zero. In their final response the same participant wrote “So what I’m hearing is that you are having trouble in some of your classes, you don’t have as many strong friendships as you would like and that you are very frustrated...” using complex reflections and giving them a score of 5. This overall reduction in responses that are considered MI non-adherent and the associated increase in use of reflections produces interactions that would be notably different, if applied in a clinical setting.

The current method of instruction was effective in modifying behaviour in a structured, written clinical simulation. It also demonstrated that the participants were able to use reflections in a written task. This suggests that 3.5 hours of instruction compared to the standard, 2 day recommended time is sufficient to produce measurable changes in written responses to clinical scenarios. This result is comparable to that seen in other studies evaluating longer forms of the workshop as well as other shorter workshops (Madson, Loignon, & Lane, 2009). For instance, in their condensed workshop, Miller and Mount (2001) found large improvements on pen and paper tasks, with modest improvement on clinical observations.

The evaluation of the pre and post instruction role-play videos also indicates a change in the use of MI adherent skills. The increased score for the global rating of MI Spirit suggests that the participants were more able to use a communicative style that corresponds to MI principles. In order to achieve a high score, participants had engaged in verbal behaviours that promote collaboration and autonomy, as well as use an evocative communication style. This finding is particularly supportive of the effectiveness of this teaching module as it indicates a change in the overall communication approach of the participants (a more subjective rating of MI skills). This change goes beyond learning and utilizing specific MI skills (more objective ratings of MI skills) but includes applying these skills in order to promote change talk from the client. This data suggests that the current method of instruction is sufficient in promoting the use of the MI spirit.

 The teaching module proved effective in increasing the student clinicians’ use of open-ended questions. This change however, was not enough to bring them to the recommended value for beginning proficiency. The MITI 3.1.1 guidelines for beginning proficiency in the use of open-ended questions is 50%, and even post training the participants demonstrated only 37% use of open-ended questions. This implies that the students need more practice and/or time to use a larger amount of open-ended questions compared to close-ended questions in clinical settings. The increasing values from pre to post are encouraging though, as these skills are developing.

By contrast, increases in the use of reflective statements (as measured by the reflection to question ratio) were not statistically significant. This suggests that the use of reflections either requires more time to acquire than questions, or is a more challenging skill to master. This is not surprising, as a question/answer interaction between the client and clinician is a common component of health care interactions. However, this type of interaction indicates an expert/recipient relationship which is not consistent with MI principles. The lack of change in use of Reflections and the fact that the Reflection to Question ratio remained below beginning proficiency level indicates that additional attention to this skills is needed in future educational offerings. Further studies should investigate if an increased proportion of time devoted to the learning and use of reflective statements would result in better acquisition of this skill.

 The difference observed between responses on the Modified Helping Responses Questionnaire (MHRQ) and the video role-plays highlights the variability cognitive demands placed on the student clinicians between the two tasks. While the MHRQ allowed students unlimited time to provide a response, the video role-plays required the participants to respond to the client immediately, leaving little time to think. This difference might explain why the use of reflections increased in the MHRQ (as demonstrated by a mean score of 12, i.e. requiring consistent use of reflections) but not in the video role-plays.

Due to the nature of the video role-play assignment, the amount of preparation that students chose to commit to varied from student to student and could not be controlled. For instance, some students had a script prepared prior to their role-play, while others did not use any supports during their role-play. The MHRQ, on the other hand, required all students to engage in at least some preparation time while they were completing the questionnaire. As demonstrated by the difference in the amount of reflections used between the MHRQ and the video role-play, it can be assumed that greater preparation time yields a higher use of MI adherent skills. This is not surprising, as there is a learning curve between being familiar with a skill and using that skill spontaneously in day-to-day clinical interactions (Madson et al., 2009). Should further studies want to control for the potential effect of preparation time on the students’ performance, the students could be given a set amount of time to familiarize themselves with the scenario prior to recording the role-play.

 The results of this study suggest that a brief MI workshop is effective in promoting the use of desired Motivational Interviewing strategies in structured situations. However, this study did not address whether and to what extent these skills are maintained over time. Previous research suggests that, while workshop formats are helpful in facilitating the use of MI skills, they rarely facilitate maintenance over time (Madson et al., 2009). Consequently, further research into maintenance effects of this workshop is necessary in order to evaluate long-term benefits of the instruction. In their systematic review of 28 studies, Madson et al. highlight the need for further research on optimal methods of transferring MI training into day-to-day practice, or maintenance (2009). In order to facilitate maintenance of MI skills it is recommended that both formal (additional instructor led workshops) and informal (skill application in clinical practice) sources of practice are applied following the initial training (Söderlund, Madson, Rubak, & Nilsen, 2010).

This modified workshop would be beneficial to health care professionals as, like students, their busy schedules might not allow for an extensive workshop. In order to further validate the effectiveness of this teaching module, further studies on efficacy in other Rehabilitation Medicine training programs, as well as working professionals are necessary (Madson et al., 2009).

 It is important to note that, although the researchers were blind to the pre/post conditions of the participants, further studies in this area would benefit from more extensive control over their design. For example, as this module was part of a class curriculum, only a subset of the students self selected to participate in the study after the module was completed. Therefore, the scenarios used by the students were not counterbalanced with equal numbers of participants role-playing each scenario. Future studies could control this by randomly assigning the scenario to each participant.

It should be noted that scenario 3 was picked the least for role-plays by the students in both the pre and the post conditions. This could be a result of limited knowledge with respect to the topic presented in the scenario or other unknown factors. Surprisingly, this particular scenario yielded significantly more reflections than other scenarios. This could be attributed to a number of factors. For instance, the students that felt confident in their counselling skills could have picked this perceivably more challenging scenario. On the other hand, this scenario could have been more facilitative in eliciting reflections as a result of the topic at hand.

**CONCLUSION**

The results of this study suggest that a condensed workshop is effective in promoting the use of MI adherent skills, particularly open-ended questions, as well as the use of MI spirit. This workshop promoted the use of reflections when the participants had time to prepare their response (such as in the Modified Helping Response Questionnaire) however, the workshop was ineffective in increasing the number of reflections used when students had a limited time to prepare their response (such as in the video role-play). It is recommended that the benefits of this workshop be further explored within other populations, such as the Speech Language Pathology and the Occupational Therapy programs, as well as working health care professionals.

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Table 1.

*Scoring protocol for the Modified Helping Response Questionnaire.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Score** | **MI Adherent** |  | **MI Non-adherent** |
| **0** | No MIA or open question (OQ) | AND | MIN  |
| **1** | MIA or open question (OQ) | AND | MIN  |
| **2** | ReflectionOR Neutral – closed questions or giving information | AND | MINNO MIN |
| **3** | Simple reflection and/or other MIA/OQ |  | NO MIN |
| **4** | Complex reflection |  | NO MIN |
| **5** | Complex Reflection and other MIA/OQ |  | NO MIN |

**Appendix A**

***Modified Helping Responses Questionnaire Scenarios***

For each of the paragraphs below, imagine that a client or family member is talking to you and explaining a problem that he or she is having. You want to help by saying the right thing. Think about each paragraph as if you were really in the situation, with that person talking to you. In each case write the next thing that you would say. Write only one or two sentences for each situation (Scenarios adapted from McCririck, n.d.).

***Scenario #1***

During a session a 15 year old female client says to you: “I am really mixed up. I hate going to school. I am stupid. I am failing all of my classes. I don’t really have any friends. There are some girls who talk to me sometimes, but they usually just make fun of me. I just can’t do it anymore. I just want to drop out of school!”

***Scenario #2***

During a session a client’s spouse says to you: “I am feeling really overwhelmed. As the sole caregiver I am trying to do the best I can, but it is just not enough. By the end of the day I am exhausted, and I often don’t have a chance to work on your suggestions with my wife. My wife is so important to me, and I feel like I am letting her down. As much as I try, I just can’t do it all.”

***Scenario #3***

During a session a mother says to you, “Last night, my son had a huge temper tantrum. He was throwing his toys around the room, screaming at the top of his lungs, and when I came close to him he started swinging at me. He broke his toy truck and a mirror too! It was like he was crazy. I just don’t know what to do!

**Appendix B**

***Sample Role-Play Scenario***

Jeremy is a 23-year-old university student and highly competitive long distance runner. He was diagnosed with a stress fracture of 2nd metatarsal in his right foot as a result of infrequent rest days, and continuing to train despite foot pain. His physical therapist has recommended rest from running for 6-8 weeks or until healing is evident on x-ray. Swimming and cycling were recommended as alternative physical activity, to maintain conditioning. The PT has shared the benefits of the rest period and the potential consequences of continuing to train with the stress fracture. At a follow-up visit Jeremy says the following;

“I am feeling about the same as the last time I was here. I have been doing some swimming and cycling but it just can’t match the training benefits I get from running. I have cut down on how much I run, am using better shoes, and am staying away from uneven surfaces. I know my body pretty well, and can tell that this is what I need right now.”