Motivational Interviewing Training: A pilot study of the effects on practitioner and client behaviour within the context of health behaviour change

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Whakatauki – Māori proverb

He aha te mea nui o te ao?
He tāngata! he tāngata! he tāngata!

What is the most important thing in the world?
It is people! It is people! It is people!
Aim

- To evaluate the effect of MI training of health practitioners (nurses) on both practitioner and client behaviour

- Two related studies

Abel Tasman National Park
South Island, NZ
Participants

- Two diabetes nurse educators

- Working in an outpatient diabetes service receiving referrals from primary medical practitioners for patients experiencing difficulties in diabetes management

- Both were registered nurses who volunteered for the study, had worked in diabetes for nine years and had over 20 years nursing experience

- Patients (n=18) aged 21-69 years, with Type 1 or Type 2, diagnosed more than 12 months, who were experiencing difficulty with diabetes self-management
Procedure

- Patients were received as consecutive referrals rather than randomly assigned to intervention.

- Random assignment was considered ethically inappropriate as this would have required patients assigned to MET to wait a considerable period of time (while the PE participants received treatment and then for the DNEs to receive training in MI) before receiving treatment.

- The nurses treated 9 patients as per their standard practice (PE) then received training in MI – 2 day workshop

- Then provided MET (4 sessions over 8 weeks) to a further 9 patients – over 12 months during which they received supervision and feedback on their MI practice
MI Training

- MI training = didactic teaching, modeling, video-taped demonstrations, and role-playing (using everyday clinical experiences) with feedback

- Considerable time was spent in training on the rationale for, and spirit and principles of MI

- Another main focus of the training was on developing reflective listening skills

- Only after they demonstrated increased proficiency in the basic skills of open-ended questions, affirmation, reflections and summarising, that any specific MI strategies were taught
Practitioner and patient data were obtained from transcripts of all baseline (pre-training) and MI sessions

Firstly independently coded using Motivational Interviewing Skills Code practitioner and client behaviour counts - by two post-graduate clinical psychology students, blind to condition

Then, coding of the MI sessions only by a post-graduate clinical psychology student using MISC 2.0 to code change talk
Analysis

- Comparisons were made between the practitioners’ skills in the baseline condition (PE n=9 clients) and after training in MI (n=9 clients) using single case experimental design.

- MISC summary scores were graphed for each practitioner separately for baseline (PE) and for the 12 months post-training (MI).

- The effects of the two interventions on client in session behaviour were also examined.

- Further analysis was conducted on client change talk for the MI sessions only i.e., across the four MET sessions for the 9 MI participants → n=36 sessions.

- Those who had positive outcome (i.e., clinically significant reduction in blood glucose, n=5 called BG change) to those who did not (labelled BG No-Change).
Results

- Study 1, ICCs suggest excellent reliability, with ICCs ranging from .90 to .99 for the therapist behaviour counts, and .99 for the client behaviour counts for Study 1 using the MISC.

- For Study 2, using the MISC 2.0 inter-rater agreement on whether statements should be categorised as either Change or Sustain Talk = fair range i.e., ICC = 0.522.

- When a Language Category was assigned to a statement, the agreement between raters differentiating between the six distinct categories = good i.e., ICC of 0.695.

- Category strength (and frequency) ranged from fair to excellent.
Results: Practitioner behaviour

- [Graphs showing percentage of open questions for Nurse A and Nurse B pre- and post-training for competency and beginning proficiency levels.]

- [Graphs showing ratio of reflections to questions for Nurse A and Nurse B pre- and post-training.]

- [Graphs illustrating changes in practitioner behaviour post-training compared to pre-training, highlighting competency and proficiency levels.]
Results: Practitioner behaviour - Open Questions

- Before training the %OQ used by both practitioners was low, falling well below beginning proficiency levels for MI.

- After MI training, the %OQ used by Nurse A achieved beginning proficiency in most sessions (i.e., 50% as per guidelines stated in the MITI).

- The %OQ used by Nurse B was initially low (mostly below beginning proficiency for the first six sessions) post-training, but increased with coaching and feedback to mostly above beginning proficiency for the last half of the sessions.

- The %OQ, however, reached competence in only one session for both nurses.
Results: Practitioner behaviour – Reflection to question ratio

- Similarly, the R:Q was low pre-training for both practitioners.

- While the R:Q increased for both practitioners post-training, they did not consistently reach beginning proficiency in the initial (at least the first four) sessions post-training.

- Yet, with supervised practice and feedback, the R:Q for Nurse A increased, reaching competency in 25% of MET sessions.

- Nurse B, however, took longer to achieve beginning proficiency, with this criteria being met on all but one session from the ninth MET session onwards, and reaching competence in only the last session.
Results: Practitioner behaviour

% Complex Reflections

Pre-Training (PE)  Post-Training (MET)

Competency
Beginning Proficiency

% MI Adherent Responses

Pre-Training (PE)  Post-Training (MET)

Competency
Beginning Proficiency

Nurse A

Nurse B

Session

Baseline
Post Training

Nurse A

Nurse B

Competency
Beginning Proficiency

Session
Results: Practitioner behaviour – Complex reflections

- The nurses used a reasonable amount of complex reflections pre-training.

- The %CR for Nurse B reached at least at beginning proficiency level for MI in half of all baseline sessions and Nurse A in one third of baseline sessions.

- Both nurses, achieved competence in the %CR immediately post-training, and appear to have maintained this over time, with an upwards trend in the %CR over the course of study.
Results: Practitioner behaviour – MI consistent behaviour

- Pre-training, the %MIA for both nurses was below beginning proficiency for MI, with the exception of one session for Nurse A.

- Both practitioners achieved beginning proficiency for the %MIA immediately post-training.

- Competence, however, was achieved in only one session.

- Taking a closer look at the data revealed a tendency to provide advice without permission and direct.

- Although this decreased after training, it still occurred in the MI sessions.
Results: Patient behaviour

- During MI there was a greater %CCT overall compared to PE (pre-training).

- Additionally, there tended to be greater %CCT in each third of MET compared to PE, with the %CCT highest in the last third of MET.

- In contrast, the %CCT during PE remained fairly consistent across the time.
Results: Patient behaviour – Change Talk in MI

- Only presenting the results for which there was a pattern in change or sustain talk was different for the BG Change participants compared to the BG No-change

- Differences were mostly found across sessions rather than within session

- Also focus on change talk strength for which the most differences were found
Patient Behaviour: Sustain Talk

- Sustain talk was spoken infrequently by both sets of participants,

- However, there was a pattern of decreasing strength of change talk for the BG Change participants compared to the BG No Change participants who had a pattern of increasing strength of change talk.
Patient Behaviour: Desire Talk

- There was a drop in desire talk in the last session for the BG no change participants.
- The strength of desire talk between the two participants sets was statistically different.
Patient Behaviour: Ability Talk

- The strength of ability talk between the 2 participants sets was statistically different

- Note this was not in the direction that might be expected with the BG No Change higher
Patient Behaviour: Ability Talk

- BG Change not only spoke about more strongly about their ability to manage their diabetes at the last session they also spoke this more frequently.

- In contrast, the BG No change ability talk decreased both in strength and frequency in the last session.

- What might be more important, however is the pattern of change, with the BG Change participants becoming more confident in their ability to change by the end of MI.
There was an increase in reason to change talk for the BG change participants in the last session, whereas this dropped for the BG no change participants.
Patient Behaviour: Commitment Talk

- The BG change participants commitment to change was higher than the BG change participants in sessions 2 and 3.
- The BG change participants also spoke commitment talk statistically more frequently than the BG change participants.
The BG Change participants also spoke about their commitment to change with increasing frequency from across the sessions, peaking in session 4.

In contrast there was a decreasing frequency of commitment talk for the BG No-Change participants from session 2 to 4.
Patient Behaviour: Taking Steps

- The BG change participants talk of having taken steps related to their diabetes self-management was stronger than the BG no change participants in sessions 2-4.

- Furthermore, here was a downward trend across the sessions in the strength of taking steps talk for the BG no change participants.
Patient Behaviour: Taking Steps

- There was also a pattern of increasing frequency in taking steps for the BG Change participants from across the sessions, peaking in session 4.

- Whereas there was a decreasing frequency taking steps for the BG No-Change participants from session 2 to 4.
The pattern of change talk strength within session did not tend to differ for the participant sets.

There was a pattern of increasing strength of change talk across sessions – for all the change talk categories, except Need.

Need talk was stronger for the BG Change participants from session 1-3 but then dropped off in session 4, whereas there was an increase in Need talk for the BG No change participants in Session 4.

Perhaps reflecting that the BG Change participants had already started making changes in their diabetes self-management.

Whereas the BG change participants seeing the end of treatment approaching experienced an increased need to change.
Conclusions

- The findings echo previous research showing the importance of commitment talk for behaviour change.

- There is also research suggesting reasons and ability talk are also important for behaviour change.

- This includes another across session study (rather than just within session) by Campbell et al. (2010).

- Although Desire strength has not often been found to be a significant predictor of outcome (Amrhein et al., 2003, Campbell, 2007, Baer et al., 2008).
Conclusions

- Caution this research comprised a small number of patients and only two nurses, both of whom volunteered for the research.

- The question if similar results would be obtained from a larger sample of practitioners and patients.

- Also, since the nurses behaviour only reached beginning proficiency on most of the practitioner behaviour counts, another question is what level of practitioner skill (and therefore training) is necessary to produce in-session patient change and change in the target behaviour?
Questions?

Ma te whakatau, ka ora ai

Once you know (can read) the signs, healing can begin

Christchurch, South Island, NZ
(destroyed by series of earthquakes 2011)