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Meta-analysis of the effects of MI training on clinicians' behavior.

De Roten Y., Zimmermann G., Ortega D. et al.

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The first analysis to amalgamate findings on training clinicians in motivational interviewing finds training does develop competence, especially when reinforced by supervision or coaching based on feedback on trainees' actual performance. For some trainees there may be no need for initial training to be face-to-face; books and videos may do as well.

SUMMARY Almost certainly the most influential approach in substance use counselling in Britain, motivational interviewing was first formally documented in 1983 when Bill Miller noted that many clients resist treatment because they reject stigmatisation as an 'addict' or 'alcoholic' and the loss of control implied by being a patient. Dr Miller developed an approach which explicitly avoided these and other deterrent interactions. Instead he relied on amplifying aspects of the client's ambivalence towards their substance use to nudge them in a seemingly non-directive manner towards finding their own reasons to change in a positive direction.

Evidence suggests motivational interviewing produces better substance use outcomes than no treatment, and equivalent or potentially better outcomes than other recognised treatments, but typically in a shorter time. Training is a key way clinicians can gain new skills in such evidence-based interventions, constituting an important step in their dissemination and implementation in routine practice.

The featured study was the first to statistically synthesise (in a meta-analysis) research relevant to the impact of different types of training in motivational interviewing on clinicians' behaviours in a variety of health care contexts. As well as studies intended to assess training methods, it included studies of the impact of motivational interviewing itself, if as a by-product these shed light on the impact of the training offered by the studies.

To be included in the analysis, studies had to have been completed between 1990 and 2010, trained at least one group of clinicians in motivational interviewing or the allied motivational enhancement therapy, and assessed the results by at least one measure which was not simply the trainees' own assessments. Some studies randomly assigned clinicians to the training or to an untrained or differently trained comparison or control group; others afforded only before-versus-after assessments of how much trained clinicians had improved.

In all 20 such studies were found, of which nine focused on substance use problems, including smoking. Generally training was delivered in a two-day workshop lasting 12 to 16 hours. Because of significant variations between the impacts observed in the studies, their results were amalgamated on the assumption that these variations were not simply random fluctuations, but reflected real differences in the impact of the training. Participants included mental health practitioners, dieticians, HIV/AIDS counsellors, community-based clinicians, health care professionals, dental students, paediatric residents, medical students, substance abuse practitioners, case managers, and probation officers.

Main findings

Across the 13 studies which had no comparison or control group, immediately after the training the researchers observed moderate to major improvements in proficiency in motivational interviewing. These improvements included using specific techniques and embodying the spirit of the approach. Across the relevant seven studies, assessments up to four months later showed improvements had largely been sustained. There were no significant differences in the impact of training when the focus of the study was substance use and when it was not.

The analysts tested whether some of the differences in the results of the studies could be due to differences in the content and duration of training, in particular, whether offering individual trainees feedback on how well they were implementing the approach (eg, through coaching or supervision) improved their performance. Though with or without feedback trainees improved, feedback did on average raise performance, and across these studies the impact of the training/feedback package was consistent.

Among the seven trials which had randomly allocated clinicians to a comparison or control group, competence did improve after training versus no training/self-training, except in respect of embodying the 'spirit' of the approach – the overall degree to which the clinician adopted the principles and style of motivational interviewing.

The analysts decided to test whether difference between the results of the studies might be due to the different comparison conditions. When the comparator was no training at all, training had a very large and statistically significant impact. But when face-to-face training by a trainer was compared with self-training using books or videos, there was no evidence that one was preferable to the other. Trainees in studies where they averaged under 40 years of age gained as much from the training as studies with older trainees. However – and unlike across the 13 studies without a comparison or control group – other professionals gained significantly more from the training by a trainer than did mental health professionals, as did more experienced trainees who had on average been working with the problem being addressed for over five years. As in the non-controlled studies, improvements in motivational interviewing competence were sustained for at least several months after training. There was some indication that the seven controlled trials might have been a biased selection of all those conducted but perhaps never formally published.

The authors' conclusions

Taken as a whole, this analysis supports the general conclusion that training clinicians to practice motivational interviewing produces moderate improvements in proficiency, which are largely maintained for at least the next few months. Offering initial training on a self-help basis can be just as effective (and more cost-effective) as doing it face-to-face. This finding may apply only when trainees are motivated to learn and devote considerable time to using the learning materials. The analysis also supports (as do other studies) the extra benefits of supplementing training with individualised feedback on actual performance through for example supervision or coaching, in line with the analogy that "learning [motivational interviewing] is rather like learning to play a complex sport or a musical instrument" – one which implies that extended practice and feedback are crucial.

Relative to untrained or self-trained practitioners, face-to-face training in motivational interviewing did not further enhance abilities to embody the spirit of the approach – an amalgam of being collaborative, evoking client involvement, respecting their autonomy, and being able to show they see things from the client's perspective. In two of the three studies these findings were based on, the

comparator was self-training with books and videos. So rather than face-to-face training being *in*effective in helping trainees absorb the spirit of the approach, it could be that face-to-face training and self-training are *equally* effective. Though on this score, face-to-face training offered no further advantages, it did on other dimensions relevant to competent implementation; in particular, attendees improved more in enacting the techniques and empathic stance of motivational interviewing.

Face-to-face training seems especially beneficial for more experienced professionals and those not working in mental health. Mental health specialists may already be familiar with establishing therapeutic relationships with patients suffering from mental disorders, while experienced professionals may be more able to reflect on and challenge their routine practices than younger trainees more eager to develop theoretical knowledge about motivational interviewing. Self-learning is perhaps particularly suitable as a first step in the learning process for inexperienced trainees.

However, the lack of studies intended to test training programmes, inconsistency in the methodological quality of the studies included in the analysis, and an indication of possible bias in which controlled studies were available, preclude definite conclusions.

Editor's note: For more on the need for feedback and supervision to supplement training in motivational interviewing see this informal account from the US government's addiction programme implementation and improvement centre.

Thanks for their comments on this entry in draft to research author Yves de Roten of the University Institute of Psychotherapy in Lausanne Swizerland, and to Gillian Tober of the Leeds Addiction Unit and University of Leeds in England. Commentators bear no responsibility for the text including the interpretations and any remaining errors.

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