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▶ A meta-analysis of motivational interviewing: twenty-five years of empirical studies.

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Better than 'treatment as usual' but not than other specific therapies are the headlines from the most comprehensive synthesis of motivational interviewing studies to date. Along the way are insights in to the equivocal value of manuals and of feeding back assessment results to patients.

Abstract A team of authors from the USA has produced the most comprehensive synthesis yet of studies of the influential counselling approach, motivational interviewing. The breadth of the analysis has enabled them to conduct detailed sub-analyses of relevance to practitioners and service planners.

The review aimed to isolate motivational interviewing's contribution to client/patient improvements when implemented as a sole or additional intervention, and to do so across the entire range of targeted behaviours and across caseloads ranging from healthy and well functioning individuals to those with diagnosable illness or dysfunction. It was not confined to randomised controlled trials, but included studies did have to feature a no- or alternative-treatment comparison group against which to benchmark the motivational intervention. The analysis contrasted findings on 'classical' motivational interviewing against those on generally more structured versions featuring feedback of assessment or screening results, often known as motivational enhancement therapy.

During 2007 an unusually comprehensive search yielded 119 studies in peer-reviewed journals which provided sufficient information for their results to be aggregated using meta-analytic techniques. Together these studies evaluated 132 implementations of motivational interviewing. Most evaluated substance use outcomes. Other outcomes or intermediary behaviours included diet, exercise, safe sex, gambling, and engagement in treatment.

Results compared to any alternative

Across all 132 comparisons, motivational interventions were associated with a statistically significant improvement in outcomes whose effect size at 0.22 is conventionally considered to represent a small impact. In a quarter of cases, the motivational intervention was roughly equivalent to the comparator, in another quarter it was associated with small positive improvements, and in a half with substantial improvements. The added benefits showed no signs of fading up to two years or more after intervention, though few studies tested this beyond a year.

Variation in impact was partly accounted for by the strength of the comparator. Compared to another specific intervention such as cognitive-behavioural therapy or a 12-step programme, motivational interventions were roughly equivalent; participants may have benefited from both, but across all 39 such comparisons there was no appreciable or statistically significant extra benefit from using a motivational approach. In contrast, motivational interventions significantly outperformed every one of the weaker alternatives including treatment as usual (effect size 0.24, a small advantage), being handed health education booklets or other written materials, being placed on a waiting list, or offered no intervention at all. This pattern of results held with substance use problems in particular and across caseloads with problems of differing severity; details below.

The pattern of no difference compared to other specific therapies, but small, statistically significant gains compared to weaker alternatives, applied to each of the substances whose use had been evaluated. Compared to weaker alternatives, motivational interventions recorded a small advantage in alcohol-related outcomes, aggregating to an effect size of 0.2; for smoking and cannabis outcomes, the advantage was slightly greater, for miscellaneous drugs, slightly less. Among the other variables assessed, engagement with treatment followed the same pattern; motivational interviewing further deepened engagement only when the comparator was treatment as usual, no intervention, or nothing more than handing the participant written materials.

Results compared to another specific therapy

Though generally motivational interventions were no more effective than other specific therapies, certain ways of doing them might have been. Incorporating assessment feedback to the patient did not help; these types of intervention remained no better than the alternatives. The only distinction which did make a significant difference was whether motivational therapists had been trained to follow a manual. If they had, then they did no better than therapists using a specific alternative approach. But if they were not guided by a manual, motivational therapists produced significantly better outcomes, aggregating to a small to medium effect size of 0.45. This was most apparent in the few studies in which a motivational intervention prepared patients for the main treatment, still substantial and significant when it was the sole therapy, and least apparent (failing to achieve statistical significance) when additional to another treatment component.

While generally clients improved to roughly the same degree, on average motivational interventions took three and half hours, alternative approaches, just over five, a difference of about 100 minutes which, though large, just failed to meet the criterion for statistical significance.

Results compared to weaker alternatives

Across all the studies motivational interventions were more effective than weaker alternatives (treatment as usual, handing the participant written materials, no intervention, waiting lists). They were most effective of all when they incorporated feedback to the patient on the results of assessments or screening tests; these implementations led to significantly greater improvements than classical motivational interviewing. Longer interventions also led to relatively greater improvements in patients. Training therapists to follow a manual did not diminish effectiveness. All these findings contrast with those from studies which compared motivational interventions with specific alternative therapies.

Conclusions and practice implications

The main conclusion was that motivational interventions exert small though significant positive effects across a wide range of problems as well as deepening engagement in treatment. Their economy of time and widespread applicability suggest services should consider their adoption. Motivational interventions can be used as a prelude to another treatment, an enhancement, or as a standalone intervention, though deploying them solely as a group therapy seems to diminish their impact.

Decisions on which therapy to use must be taken in the light of the alternative approaches. Compared to the 'treatment as usual' found in the reviewed studies, or to just handing over written materials, motivational interventions clearly foster more positive change in patients and clients. But compared to other specific therapies, they are equivalent. The implication is that the choice between alternative therapies is best based on features like ease of learning, cost and fit with the agency's ethos; motivational interventions may have the edge in terms of the time required for a programme of therapy.

Classical motivational interviewing is best suited to integration with other approaches or as a set of principles running through all a service's therapeutic work, and may work best as a prelude to further treatment. Motivational enhancement formats incorporating feedback to the patient seem best as additive or standalone interventions. Though perhaps easier to learn, these require standardised assessments to have been conducted. Training therapists to follow a manual confers no benefits, and seems to eliminate any advantage motivational interventions have over specific alternative therapies. However, this finding requires confirmation in studies designed to test its validity.

FINDINGS Run this search for other relevant Findings analyses, and see in particular these Findings reviews (1 2).

The featured review adds its considerable weight to the common conclusion that any well structured therapy is as good as any other. However, this may be partly because studies inappropriately standardise the treatment of individuals seeking help, and equivalence of impact applies only on average across the entire caseload. It remains the case that different therapeutic styles are more or less suited to different people or people at different stages in their commitment to change. Additional to the conclusions drawn in the review itself, what we can tentatively take from the findings is that when individuals seek treatment for their individual problems, individualising the response is important. However, this is not (or not so much) the case in public health programmes which involve identifying people who are not seeking help at all, but have been identified

through screening. All these issues are explored further below.

Treatment seekers are different

One disappointment is that the analysis did not identify whether participants were seeking treatment for the problems addressed by the interventions. The motivational state of people who decide they have a problem and seek treatment is likely to be very different from that of, for example, people intercepted by screening programmes while routinely visiting their GPs. Appropriate comparators also differ; for people seeking intervention, the key issue is whether motivational interventions are preferable to others; denying help is not usually considered appropriate. For people identified through screening, the key issue is whether having an intervention 'seek them' through active screening and recruitment is better than doing nothing.

This leaves treatment services wondering which bits of the analysis are relevant to them, and screening and brief intervention practitioners wondering the same. Though a clear distinction is not possible, we can guess that the more problematic participants and those offered a specific alternative therapy are most likely to have been seeking treatment, the well-functioning 'community' samples, and those for whom the alternative to motivational intervention was a booklet or nothing at all, most likely to have been identified through screening. In line with this expectation, 14 of the 16 alcohol/drug studies listed in the review which compared motivational interventions to a specific alternative therapy appear to have involved help-seeking patients rather than people identified through screening programmes. This commentary analyses the results with these assumptions in mind.

Are all specific interventions really equivalent?

The fact that motivational interventions did not outperform alternative therapies suggests that what is important is not the specific therapy, but the degree to which it is convincing and coherent, generating optimism among both patient and therapist that there is a way forward and identifying it in a way which secures the patient's collaboration. Though this applied at each of the levels of distress/pathology of the samples, it was best established among the participants most likely to have been seeking help – those with at least moderately severe problems. More below.

The main alternative psychological approach is cognitive-behavioural therapy. An earlier analysis found that the equivalent-impact finding also applied specifically to comparisons between this approach and those based on motivational interviewing (though the latter took less time). Confirming this verdict, but from the point of view of cognitive-behavioural therapy, an analysis of substance use treatment studies found this family of therapies confers little if any benefit relative to other similarly extensive and coherent approaches. In respect of psychological therapy for drinking problems, another analysis found that any structured approach grounded in an explicit model seemed as effective in curbing drinking as any other.

However, for at least three reasons, the 'it doesn't matter' message does not necessarily apply to individual patients or different types of patients.
First, across psychological therapies (including those for substance use problems), implementing the client's informed choice of their preferred therapy nearly halves drop-out rates and significantly if modestly improves outcomes.
Second, relative to treatment as usual or directive advice consonant with their decisions,

motivational sessions can worsen outcomes for patients who already see themselves as committed to and engaged in a process of change. For less committed patients, motivational interviewing has been more consistently beneficial.
Third, while the specific therapeutic programme may not be directly relevant, some programmes are more conducive to certain interpersonal styles than others, and these styles suit some patients more than others.

When, without being able to make these fine distinctions, analyses like those in the featured study find an overall equivalence between different therapies, this probably masks the fact that different therapies have done better or worse with different types of clients, the ups and downs evening out to the 'equivalent' verdict.

Treatment of an individual is best individualised

A previous analysis which, like the featured review, covered substance use and other types of behaviours and treatment-seeking and non-seeking participants, also found that motivational interventions which have not been standardised through a manual were on average more effective. The same conclusion emerged from a Findings analysis of motivational interventions as a way of preparing patients for the main substance use treatment. Though there are methodological concerns, the featured analysis adds that this advantage for non-manualised interventions is confined to comparisons with specific alternative therapies which mainly involve help-seeking patients and clients.

One tentative way to make sense of these findings is that individuals seeking help at treatment services both expect and respond best to individualised therapies which respond to their responses rather than following a set programme. They have problems they themselves have identified which from their perspective are unique to them, even if they share some similarities to those of other people, and for which they have a right as a patient to expect a patient-centred response. In contrast, people identified through screening programmes, the ones most likely to be in studies with weaker comparators, have no such investment in 'their' unique set of problems; as far as many knew before the screening test, they did not even have the identified problems. Typically people are identified by someone else as embodying a common public health problem involving the contravention of an impersonal standard of healthy behaviour/status such as drinking over national limits or not eating five portions of vegetables and fruit a day.

Such rationalisations offered 'after the event' are at best speculative, and in this case are hampered by the fact that the featured analysis did not explicitly distinguish participants who were and were not seeking treatment.

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