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► [From in-session behaviors to drinking outcomes: a causal chain for motivational interviewing.](#)



Moyers T.B., Martina T., Houck J.M. et al. [Request reprint](#)  
**Journal of Consulting and Clinical Psychology: 2009, 77(6), p. 1113–1124.**

This substudy from the seminal US Project MATCH alcohol treatment trial found evidence for the appealingly simple and plausible conclusions that "What therapists reflect back, they will hear more of," and that promoting talk about change promotes change itself.

**Abstract** This analysis micro-analysed audio tapes of initial motivational interviewing sessions in the US [Project MATCH](#) alcohol treatment trial. The aim was to identify whether 'change talk' – client statements explicitly indicating that they are ready, willing and/or able to curb their drinking – really did play the pivotal role in fostering actual change [posited by](#) motivational interviewing's originators, and whether how the therapist behaved could promote this kind of talk. If both links were found, the study would support the expected route from skilful motivational interviewing which subtly encourages clients to self-generate pro-change statements, through to the expression of these sentiments, and finally to the intended change in drinking. In the process, clues should emerge about how therapists can maximise the desired changes.

Therapist and client statements during the first of the intended four therapy sessions were categorised using [a system](#) developed to characterise exchanges between motivational interviewing therapists and clients. At the broadest level, therapist comments were classified as [consistent](#) or [inconsistent](#) with the principles of motivational interviewing, or as not directly related to the therapy.

In all 118 tapes were analysed. The first step was to identify how clients responded to different kinds of remarks from the therapist. As expected, the more often therapists made comments in line with the principles of motivational interviewing, the more often their clients talked positively about curbing their drinking – the supposedly crucial [change](#)

**talk** indicative of movement towards the desired changes in drinking. The reverse was also the case; the more therapists behaved in ways contraindicated by the therapy's tenets, the more often their clients made 'counter-change talk' comments indicative of clinging to pre-treatment drinking patterns. Muddying the waters slightly was the fact that motivationally consistent therapist comments were also associated with these negative client statements, though to a much lesser degree.

The next steps **related** both therapist and client comments during therapy to the client's drinking. This was expressed as the number of drinks per week during the fifth week of treatment, and trends in weekly drinking since just before treatment started. During this time clients in the analysis would all have had an initial therapy session in week 1 – the one on which the analysis was based – and those who returned would also have had a session in week 2. As expected, the more often clients had expressed change talk, the less they later drank and the more they had reduced their drinking. **Similar** links with drinking were found in respect of the frequency with which therapists had made comments in line with the principles of motivational interviewing. In both cases the associations were minor but statistically significant.

Finally, these links were integrated in to single model of how the therapy had curbed drinking. As expected, one (but not all) of the ways of testing this suggested that the therapists' adherence to the principles of motivational interviewing curbed later drinking partly by promoting client change-talk.

### How to stimulate change talk and suppress its opposite

So far the analyses have concerned only global frequency counts of client and therapist comments. Another analysis dug deeper to **expose** which therapist comments were responded to with change talk or its opposite. The aim was discover clues to how therapists might generate higher levels of change talk and **thereby** greater reductions in drinking. Particular attention was paid to reflective listening – times when the therapist **signified their attention and understanding** by selectively echoing back to the client (with or without elaboration) some of what they had said. A potentially important extra dimension was whether these comments reflected back (and hopefully reinforced) the client's change talk, or whether they reflected back the opposite – counter-change talk indicative of unabated drinking. Also separated out in the analysis were questions asked by the therapist, divided in to those probing what for the client may be the **positive aspects** of their heavy drinking, versus those probing **negative aspects**.

What the analysts looked for was pairs of sequential client-therapist comments which occurred significantly more often than expected by chance; in these cases, the **possible** implication is that the first element in the sequence helped generate the second. What they found was that when therapists reflected the client's change talk back to them, the next statement was very likely to be further change talk. Change talk was also a likely response when therapists asked about the negative aspects of the client's drinking. Asking about the positive aspects of the client's drinking also appeared to stimulate change talk to minor degree, but was much more likely to generate counter-change talk. Riskier still it would seem is reflecting back to the client their own counter-change talk. This appeared to suppress change talk and stimulate further counter-change talk. Other therapist comments in line with the principles of motivational interviewing did not

significantly stimulate change talk but did significantly suppress counter-change talk. Change talk was less likely to occur when therapists behaved in ways incompatible with the motivational interviewing principles.

### The authors' conclusions

The findings support the theory that client change talk mobilised by therapists during motivational interviewing would promote reduced drinking, and that change talk in general is important, not just (as found by some other studies) the kind which specifically expresses commitment to change. The implication is that in similar therapeutic encounters, therapists should work to elicit and reinforce all types of client statements in support of change, and do so by attending carefully to client language about change and responding with the tactics recommended by motivational interviewing theorists. Among these are asking questions about the negatives of the client's drinking and reflecting back change talk when it occurs. The study also offers clues to what therapists should *not* do if they wish to hear change talk. They should avoid confrontation, giving advice, raising concerns without permission, or telling clients what to do – yet these are common tactics in substance abuse treatment. Though only loosely related to later drinking, the amount of change talk stimulated in a motivational interviewing session is probably a useful indicator of how well therapy is going.

Among the tactics recommended by motivational interviewing theorists, reflective listening emerges in this study as the most potent in eliciting change talk, especially when it reflects prior change talk. Reflecting back counter-change talk is a risky tactic because on balance it stimulates more of the same. In sum, what therapists reflect back, they will hear more of. The amalgam of other motivational tactics tested by the study seemed less influential, though sub-tactics within this mix may have been more potent. Often change talk was **embedded** in counter-change talk. The findings suggest that therapists should learn to selectively reinforce the change talk elements while avoiding the temptation to reflect back, attempt to suppress or challenge the less promising elements, which are best seen as the expected background 'noise' for more favourable comments.

**FINDINGS** Reflective listening is emerging as possibly the key active ingredient in psychosocial interventions based on motivational interviewing. In this respect the findings of this study broadly parallel those of [a study](#) of a very different sample of heavy drinkers – young male Swiss army conscripts generally devoid of severe drink problems who were not seeking treatment, but were identified through screening and mandated to attend a single brief motivational session to reduce alcohol-related risks. In both studies, the reflective listening which was related to change talk occurred in the early stages of the intervention; in the Swiss study there was just one brief session, and the featured study focused on the first session of four. It is at these stages that motivational interviewing's originators [say](#) this core but challenging skill should form a substantial proportion of counsellor responses. The featured study adds the refinement that not just reflective listening itself, but *what* is reflected, determines the frequency of change talk and, by extension, the degree to which therapy achieves the intended behaviour changes. Reflecting change talk generates further change talk in a virtual cycle, while reflecting back its opposite is usually counterproductive. There is [some evidence](#) that these mechanisms are also active in therapy sessions not based on motivational

interviewing.

As the authors point out, the appealingly simple and plausible conclusions that "What therapists reflect back, they will hear more of", and that promoting talk about change promotes change itself, are suggested but not proven by the study. Possibly of least concern is the small size of some of the links in the chains of associations which led to these conclusions. This is only to be expected when the focus is on one therapy session among the multiple influences on patients, including **for some** immediately prior intensive treatment and for many a second therapy session. Also the **extensive training and monitoring** of MATCH therapists reduced variation in their implementations of motivational interviewing which might have made it clearer that these variations affected the degree of change talk and of later drinking.

Of greater concern is the possibility that the associations did not reflect *causal* relationships, such as motivationally consistent theorist comments *causing* increased change talk which then *cause* less drinking, or reflecting back change talk *causing* more change talk. It could be that these links are simply signs of an underlying change process which would have happened anyway, and/or that both sides of the link are related to something else such as the client's character or motivation. Similarly at the micro-level of moment-to-moment interactions in the therapy session, in this and in the Swiss study referred to above, change talk by the client was likely to be followed by further change talk (change talk 1 > change talk 2). It could be that the counsellor's reflective comments stimulated by change talk 1 had no impact on whether change talk 2 would or would not follow, but simply neutrally intervened between a pair of comments which would have happened anyway. If the presumed causal relationships identified by the study were in fact artefacts of this kind, then nothing would be gained by attempts to 'artificially' raise the level of change talk by for example, selectively reflecting it back to the client. That the counsellor's comments were entirely uninfluential seems implausible, but this possibility could only securely be eliminated by a study which, for example, trained some therapists to selectively reinforce change talk and others to do the opposite, to see what impact this had on change talk and subsequent drinking.

Nevertheless these and some other findings are consistent with the proposition that the principles and techniques of motivational interviewing stimulate change via the generation of self-motivational statements and the voicing by the client themselves of an intention (or the precursors of an intention) to change. The theoretical grounding and plausibility of this proposition, and the experiences of many counsellors and clients, mean that this possibility has to be taken seriously, even if the research is not as yet conclusive. In particular, there is backing for the proposition that both in brief interventions for risky drinking and in the treatment of alcohol dependence, skilful reflective listening is a key element stimulating change, though one which perhaps has to rely on less directly potent ingredients, such as the ability to forge a trusting relationship within which the client will be prepared to give the counsellor opportunities to reflect back change talk statements. Advice to follow the principles of motivational interviewing **does not rule out** departures from these principles by socially skilled counsellors, found in **one study** to deepen engagement with therapy, and is very different from advocating adherence to a set, manualised programme, which **has proved** counterproductive.

Last revised 27 November 2010

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