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► [Fidelity to motivational interviewing and subsequent cannabis cessation among adolescents.](#)

McCambridge J., Day M., Thomas B.A. et al. [Request reprint](#)  
**Addictive Behaviors: 2011, 36, p. 749–754.**



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*Offering valuable clues to how best to do motivational interviewing, this London study of cannabis-using students found they were most likely to stop using after brief interventions which embodied the spirit of the approach and featured responses from the counsellor reflecting back and elaborating on the student's comments.*

**Summary** The featured report derives from a [British trial](#) of a single-session brief intervention based on motivational interviewing versus simple advice and information, intended to prompt [further education](#) college students who used cannabis at least weekly to curb their use. While there was little difference in outcome between the approaches overall, some interventionists were markedly more successful with motivational interviewing than simple advice, while others did slightly better with the more straightforward and familiar advice option. Based on a sub-set of motivational interviewing sessions which were audio-recorded, the featured report aimed to establish what is was about some of the motivational interviewing sessions which made them more effective than others.

Of the 147 students who participated in the motivational interviewing arm of the study, 81 gave permission to be recorded, the sessions were actually recorded, the students were followed up three months later, and they agreed to give a saliva sample to [confirm](#) their self-reported cannabis use. Six of the students had been counselled by interventionists who had conducted too few sessions for analysis, leaving 75 recorded sessions conducted by four practitioners as the basis for the featured analysis. Therapist statements in these sessions were coded by researchers not involved in delivery of the interventions. The students were similar to the full sample both in their characteristics and in the proportion who had stopped using cannabis, defined as no reported use in the previous month.

## Main findings

As in the [original report](#) on the full sample for which data was available, one interventionist (the lead researcher) was particularly successful at encouraging students to stop smoking cannabis three months later. Half his students stopped compared around a quarter for the other three interventionists, but not because he clearly differed from his colleagues in the degree to which he implemented motivational interviewing as intended.

After taking in to account differences between practitioners, two ways in which a session accorded with the principles of motivational interviewing were significantly related to a greater likelihood that the student would later have stopped using cannabis. The first was the extent to which overall the practitioner embodied the spirit of the approach – a collaborative style evoking personal reasons for change and supporting the client's autonomy. The second was a type of response particularly valued within motivational interviewing – reflective listening, and specifically the proportion of reflections which did not just convey understanding, but offered insights into what was going on for the client. Such 'complex' reflections encourage a response confirming, elaborating, or correcting the practitioner's views. Rather than both needing to be relatively high, these two variables bore an independent relation to outcomes. In contrast, stopping cannabis use was unrelated to other motivational or generic counselling behaviours including simple reflections, empathy, the extent to which questions were closed or open, and the degree to which other therapist comments were consistent or inconsistent with the principles of motivational interviewing. While based on the three-month outcomes the two significant relations were clear and strong, this was no longer the case six months after the intervention.

## The authors' conclusions

After controlling for practitioner effects, two specific aspects of the fidelity of motivational interviewing – spirit and the proportion of reflections which were complex – predicted cessation of cannabis by teenage students three months after a brief intervention. No other aspects of fidelity had any relationship with this outcome. The findings confirm those from other studies which have also found spirit and reflective listening important aspects of the approach. However, these findings have emerged from a study which simply observed what happened rather than randomly allocating clients to motivational counselling which more or less embodied these principles. This means for example that reverse causation cannot be ruled out – that perhaps with students who were clearly responding to the intervention, counsellors were more able to consistently embody the spirit of motivational interviewing and were encouraged or given greater scope to elaborate in their reflections. Other methodological limitations include the fact that the students' own accounts of their cannabis use were the sole indicator of cessation, and that students were not randomly allocated to the four counsellors.

 Reflective listening has been given special emphasis in motivational interviewing theory. [The approach's originators say](#) this core but challenging skill should form a substantial proportion of counsellor comments in the early stages of an intervention. Notably in studies from Switzerland ([▶ below](#)), it has emerged as a key active ingredient in brief interventions based on motivational interviewing. These and 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. In particular, there is backing for the proposition that both in brief interventions for risky substance use 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.

Apart from the reservations expressed by the authors, it should be borne in mind that the findings in the featured report emerged from an analysis which could include barely more than half the counselled students, and relied on an outcome – total cessation – which was not the primary outcome investigated by the parent trial. In the main report on the study, reduction in use was the primary outcome. Had that also been the case in the featured report, the findings might have been different. Arguably too, reduction in use is the more important outcome because it captures risk reduction at whatever level and is an appropriately modest target for a brief intervention.

## Related studies

[One of the Swiss studies](#) capitalised on the fact that Swiss men aged 19 are conscripted in to the army via an assessment of their fitness to serve. Researchers micro-analysed interactions between counsellors and heavy drinkers among recruits allocated to a brief intervention based on motivational interviewing. The focus was on what sorts of interactions promote 'change talk' – explicit indications by the client that they are inclined to some degree to curb their drinking or control resultant risks and harms. Generating such statements is thought to be the main final common pathway via which motivational interviewing promotes actual change. What they found was that counsellor comments consistent with motivational interviewing were especially often followed by change talk, and inconsistent comments were often followed by counter-change talk. Since an initial change talk utterance was overwhelmingly followed by another, the counsellor's motivationally consistent comments seemed to prompt a self-reinforcing process of change. In finer detail, the most powerful ingredient was the counsellor's reflections back of what the client has said or seems to be feeling. Since change talk has itself been found associated with actual change, the implication is that these counsellor responses help promote the changes client and counsellor were seeking – in this study, to curb excessive drinking or control resultant risks and harms.

A [second Swiss study](#) analysed brief advice to heavy drinkers among injured adult patients attending an emergency department. An [7early finding](#) was that counsellor comments consistent with the style of motivational interviewing were most likely to elicit positive statements about changing their drinking from the patient. A [subsequent report](#) related the same (and other) measures of counselling style to later drinking, limiting itself to interventions conducted by five counsellors with similar qualifications and experience and uniform preparatory training. Despite this they differed significantly in the their patients' weekly drinking at the 12-month follow-up, and in the degree to which this represented an improvement on the amount they were drinking on entry to the study. These differences were at least partly accounted for by how far the counsellor was able to actually deliver the intervention in a motivational style. Among these variables were the two which emerged in the featured study – embodying the spirit of the approach overall, and complex reflections elaborating on the patient's comments. These and other variables reflecting motivational interviewing skills seemed particularly important with patients who doubted their abilities to change their drinking.

From a very different domain – motivational therapy for treatment-seeking alcohol dependent patients – [the US Project MATCH study](#) found that change talk was related (if weakly) to actual changes in drinking, and that (among other factors) such talk was generated when the therapist noticed and reflected back the patient's prior change talk, creating a virtuous cycle of change talk, reflection and further change talk. On this basis the analysts argued that "therapists who wish to see more change talk should selectively reflect the change talk

they hear and provide fewer reflections for counterchange talk. What therapists reflect, they will hear more of ... the relatively sophisticated MI skill of differential reinforcement of client speech may be more important in evoking high levels of change talk than previously supposed."

Despite the persuasiveness of such findings, neither the featured study nor these other studies have established *causal* connections between therapist behaviour, client response and substance use outcomes. While it is plausible that counsellor reflections actually stimulate change talk, which in turn leads the client to make the desired changes in their substance use, it could be that these links are simply signs of an underlying change process which would have happened anyway.

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