Orygen

The National Centre of Excellence in Youth Mental Health

Evidence Summary

The Effectiveness of Motivational Interviewing for Young People Engaging in Problematic Substance Use

Young people and substance use, why is it important to intervene early?

Substance use is common among young people, with a recent survey of Australian secondary school students (aged 12-17 years) finding that 80% had tried alcohol, 14% had tried cannabis and 19% had used inhalants at some time in their lives (1). Young people report a wide range of reasons for their early substance use; curiosity and experimentation, relaxation, escape (from problems, negative mood etc.), enjoyment, rebellion, independence and agency, and social influences (2). While most young people will not go on to experience problems, research does indicate an association between use – particularly early onset – and a range of negative short- and long-term outcomes. For example, negative consequences can arise from the type of substance and the way it is used (respiratory problems from smoking, spread of blood-borne viral infections via injecting); from the immediate effects of intoxication (overdose, traffic accidents, falls, risky sex, violence and aggression); from long term physical effects (respiratory disease, liver disease and brain damage) and the significant psychological distress associated with problematic use or dependence (3). Additionally, early and frequent substance use may have negative impacts on social relationships and may disrupt work and school responsibilities (4). There is also an association between substance use and mental health disorders, with early onset use putting a young person at greater risk of developing mental illness (see (5) for review). Specifically early onset substance use – particularly cannabis – may predict later episodes of depression and anxiety (6) and strong evidence suggests that initiating substance use in early adolescence is predictive of usage levels later in life and may increase the risk of developing a substance use disorder (7). Furthermore, about half of people who reach the threshold for a diagnosis of a substance use disorder do so before the age of 20 (8), highlighting a critical period where targeted interventions can be delivered to prevent full threshold disorders developing.

Given the range of negative short- and long-term outcomes associated with substance use in young people, it is important to offer interventions that delay onset, prevent use from becoming regular or problematic and encourage reduction or cessation (9). The clinical staging model, as applied to psychiatry and mental health (10), may help guide early intervention practice around substance use. The staging model proposes that the course of disorder occurs along a continuum, and if early stages can be identified (i.e. risk for substance use or early substance misuse), targeted interventions can be delivered which prevent or delay the progression to further problematic or disordered substance use (e.g. dependence). The aim of this piece is to outline and provide a summary of the available evidence for a clinical style – Motivational Interviewing – that may be used to intervene with young people (12-25 years) who present with substance use/misuse that is problematic yet below the level that would constitute the diagnosis of a full-threshold use disorder (for simplicity here on referred to as problematic substance use).

Table 1. Principles of MI (Adapted from Miller & Rollnick (11))

Develop Discrepancy	Support & Empathy	'Roll with resistance'	Support Self Efficacy
Change is motivated by the discrepancy between behaviour and goals or values 'Change Talk' – the client (rather than the counsellor) voices arguments for change	Acceptance may facilitate change Listen Reflectively Normalise ambivalence Spend time building rapport	Resistance is not directly opposed, and is a signal to respond differently Arguing for change is avoided, refrain from using coercion or pressure	Client's belief that things can change is an important motivator Client is responsible for carrying out change Counsellor's belief in the client becomes a self-fulfilling prophecy

What is Motivational Interviewing?

Motivational Interviewing (MI) is a 'style' or 'method' that aims to enhance a person's motivation to change problematic behaviour by exploring and resolving their ambivalence about change and requires specific clinical training (11). It has been used extensively to treat substance use problems and was first developed in the 1980s in response to concerns about the traditional confrontational approach used in addiction treatment. In contrast to this traditional approach, it is assumed that client's have 'intrinsic motivation' to change (i.e. they want their behaviour to be different) and MI's goal is to facilitate movement towards – and consolidate commitment to – change (11).

MI enhances motivation for behaviour change by expressing empathy and support, exploring the discrepancies between present behaviour and current or future goals, eliciting change-talk, 'rolling with resistance' rather than arguing for change, supporting self-efficacy and affirming the client's choice and autonomy (11, 12). Given this philosophy of MI, it may be considered a 'good fit' for adolescents who have, or are at-risk of substance use problems (13).

There is wide variation in the 'type' of MI interventions delivered making it difficult to determine exactly how it works. For example there is much variation in the length of the intervention (e.g. 15 minutes to 9 months) and the emphasis on different components (focusing just on the discrepancy between behaviour and goals/values or delivering a complete intervention). Furthermore the underlying mechanisms of MI's effect remain unclear. For example it is unclear whether MI actually increases the client's readiness to change or for whom it works best (14, 15). Taken together, there is great difficulty in making comparisons between 'types' of MI interventions and, if they are beneficial, to establish which components are effective. Despite these difficulties, some core principles of MI have been identified (Table 1.), and may illuminate the mechanisms by which MI promotes behaviour change; involving both the counsellor and the client (11, 16).

Eliciting behaviour change

Counsellor variables have been identified from Miller and Rollnick's (11) framework of MI; these are MI-Spirit, MI-consistent behaviour (MICO) and MI-inconsistent behaviour (MIIN). MI-Spirit is a construct that describes the general 'style' of MI and includes building rapport, being supportive, accepting and empathic and working collaboratively. Evidence surrounding the role that MI-Spirit plays is mixed, with some research proposing an association with better outcomes and some not (17-19), however it appears to be a necessary ingredient and may facilitate the action of other variables that promote change. MICO is a construct that describes a range of counsellor behaviours that are consistent with the principles of MI, such as being affirming and promoting self-efficacy, using open ended questions and reflective listening (i.e. reflecting client 'change-talk') and 'rolling' with resistance. This construct appears promising in promoting positive substance use outcomes (20) however further research is needed to establish how MICO behaviours do so (16). MIIN is a construct that describes a range of counsellor behaviours that are inconsistent with the principles of MI such as being overly directive and confrontational, using warnings and arguing for change and using closed questions. Despite some mixed evidence (21), the growing body of research indicates that counsellor MIIN behaviours are likely related to worse outcomes (16, 22), suggesting that these behaviours may elicit higher levels of client resistance (23). In summary, further research is required to unpack which counsellor variables facilitate better client outcomes, however the evidence is strongest regarding counsellor behaviours that lead to worse outcomes (e.g. MIIN), indicating that these should be avoided when working with young people.

Engaging in behaviour change

A recent review of potential within-session mechanisms of change in MI for substance use concluded that client 'change-talk' and 'experience of discrepancy' were consistently associated with outcome (16). 'Change-talk' occurs when the client (not the counsellor) verbalises the arguments for behaviour change and evidence suggests that it is a good predictor of better outcomes and therefore may be an important component of MI (17, 24). Additionally the client's experience of discrepancy between their behaviour and current or future goals/ values may be an important motivator for change and is associated with better outcomes (18). Other client variables that have received less attention – but may be important – are client engagement or involvement, readiness to change and client resistance.

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Is Motivational Interviewing effective? What's the evidence?

Research suggests that in adults, MI can help reduce substance use, both as a stand alone treatment and as a 'prelude intervention' before engaging in specialised substance use services (15, 25). MI has also been effectively applied as a smoking cessation intervention with adults and young people (26, 27); as a physical health intervention, promoting reductions in body mass index and systolic blood pressure (28); and as an intervention enhancing client engagement and increasing adherence to treatment (15, 29).

What about MI and young people with problematic substance use? Is it effective?

MI appears to be a promising intervention for young people engaging in problematic substance use. The body of research with this population suggests that MI may help reduce problematic substance use (i.e. reducing the amount or frequency of consumption) and related consequences (i.e., reducing negative health, social, educational, and legal outcomes) (30-33) with a recent meta-analysis of studies finding a small but significant effect in favour of MI (34). The effective 'dosage' of MI is quite variable – ranging from a single session to 9-month packages – and research suggests that even one to two sessions may produce successful results (35, 36), however MI's effects may only last for a short time (37, 38). Some research indicates that MI may promote rapid short-term reductions in negative substance use outcomes, however these reductions attributed to MI may be difficult to tease out from the natural developmental trend towards maturity that most young people experience over the long term, which typically involves a reduction in substance use (30, 39, 40). The effectiveness of delivering MI to prevent sub-threshold substance use problems from progressing to full-threshold use disorders over the long-term is yet to be established.

What about young people with co-occurring problematic substance use and mental disorders? Is MI effective?

Research investigating the effectiveness of MI for the treatment of co-occurring problematic substance use and mental illness is limited and is restricted to adult psychiatric populations. A Cochrane systematic review found no benefit of MI over treatment as usual among those with severe mental illness (e.g. psychotic disorders, bi-polar and major depressive disorders) and co-occurring substance use problems, except possibly in increasing engagement with services (41). Research investigating MI as a stand-alone treatment with young people is not yet available making evidence-based clinical guidance difficult, however co-occurring substance use and mental illness is common and particularly problematic for young people engaging in treatment services (42-44).

Emerging research around the treatment of co-occurring mental and full-threshold substance use disorders in young people suggests that the delivery of MI in conjunction with Cognitive Behavioural Therapy (CBT) can promote improvements in both substance use and depression outcomes (45). Given the promising nature of this research with full-threshold disorders and the negative impact that substance use can have on mental disorder treatment outcomes (e.g., (43)), it may be of clinical utility to offer MI in combination with established interventions (e.g., CBT) to those with comorbid mental disorders and problematic (sub-threshold) substance use. However, further research is required to establish the effectiveness of this approach.

What about involving parents? Is it effective?

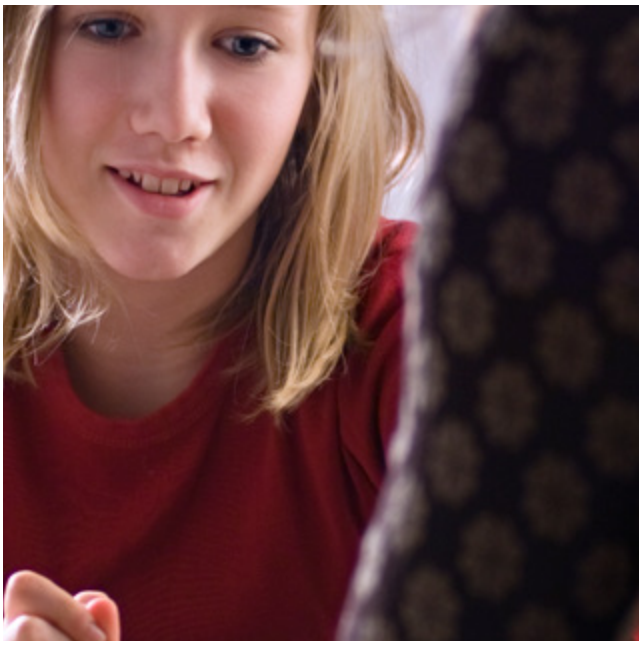
Some research suggests that MI with parental involvement may be beneficial for young people with problematic substance use. A recent large study proposed that a brief MI-style intervention with an additional parental intervention (handbook with psychoeducation, communication and skill building strategies for parents and young people, see (46)) was more successful at lowering alcohol and cannabis use and related consequences than either intervention delivered on its own (47, 48). Research using MI with parental involvement is promising, however further work is needed to establish its effectiveness.

...but that's not the whole story

There is considerable difficulty in providing firm conclusions about the effectiveness of MI for young people engaging in problematic substance use. The first source of difficulty within the body of research literature is the variety of intervention 'types' (e.g. Brief Motivational Intervention, Motivational Enhancement Therapy or Motivational Feedback) delivered under the MI banner. These intervention 'types' usually include additional components delivered within an MI framework; the most common of these components being personalised feedback (presenting an overview of the client's substance use profile – quantity and frequency of consumption and related consequences)

and normative comparisons (presenting the client's substance use profile in relation to a 'normal' population). While these components are not strictly part of the MI framework (49), they may play a role in the effectiveness attributed to MI. Further research is needed to establish this, however including them within MI is likely to be effective (11, 50, 51) and, until firm conclusions are available, their use is unlikely to cause any harm.

The second source of difficulty in drawing firm conclusions about MI's effectiveness surrounds study methodology. Research regarding young people engaging in problematic substance use has often evaluated MI's effectiveness only in comparison to no treatment or simple education. Sufficient research comparing MI to other established interventions is not yet available and therefore it is not possible to determine if MI is the best treatment option for this population, only that it may be better than no treatment. Furthermore, many studies have not included adequate screening tools assessing the level of substance use and related consequences, therefore it is sometimes unclear whether the young people studied have sub-threshold substance use problems or are exhibiting use and behaviour that constitutes the diagnosis of a full-threshold disorder.



Can the evidence guide clinical practice?

Despite some difficulties in making firm conclusions from current research literature, MI appears to be a promising intervention for young people engaging in problematic substance use. The growing body of evidence indicates that MI may promote reductions in substance use and related consequences, however there is insufficient evidence to make conclusions about its effectiveness in preventing or delaying the onset of disordered substance use in at-risk young people over the long term. Until further research is available, MI's use does not appear to cause harm and may in fact be beneficial. Incorporating components of personalised feedback and normative comparisons within the MI framework may be useful and counsellors adhering to the underlying style and principles of MI (e.g., MI-Spirit and MI-Consistent behaviours), while avoiding the use of warnings, scare tactics, and confrontational or overly directive approaches (e.g., MI-Inconsistent behaviours), may have greater success effecting change.

Things to keep in mind...

Build rapport and express empathy

- These are the corner stones on which further therapy techniques are built.

Work collaboratively

- Avoid being overly directive and confrontational as this will likely increase resistance.

Consider a harm-reduction approach

- It may be unrealistic to expect young people to cease all substance use. Be clear you are not condoning the behaviour but are aiming to keep them safe while they are cutting down use.

Engage

Develop engagement with the young person

- Create a safe environment and develop alliance through collaboration, evocation, exploration and by respecting autonomy.

Support and affirm

- Encourage the young person's participation and agency in proposing strategies for change.

Guide & Evoke

Develop discrepancy

- Aim to develop a sense of discrepancy between how the young person sees their current situation (substance use and related consequences) and how they would like it to be.
- (e.g., think about your future as two different paths of making change or not making change...what are the possible consequences or outcomes of each?)

Promote 'Change-talk'

- The young person, rather than the counsellor, expresses the arguments for change. Use open-ended questions which invite the young person to consider aspects of change.
- (e.g., DESIRE: How might you like things to be different? ABILITY: If you did decide to change, how could you do it? REASON: What reasons do you have as to why you want to change? NEED: How important is it for you to make change about your...? COMMITMENT: What do you think you will do?)

Responding to 'Change-talk' (moving towards change)

- Respond by asking for elaboration, affirming the young person's position, reflective listening (both simple and complex reflections), reframing and summarising the young person's arguments for change.

Responding to 'Sustain-talk' (sustaining current behaviour)

- This is the oposite side of the 'ambivalence' coin. Respond by emphasising personal choice and control while using simple and complex reflections (e.g., amplified reflection, double-sided reflection, shifting focus, reframing, agreement with a twist, coming along side, see (11)).

Roll with resistance

- If the young person expresses resistance to the counsellor (i.e., arguing, interrupting or ignoring), try doing things differently. Don't argue for change and avoid using coercion, warnings or scare tactics.

Plan

Recognise and consolidate commitment to change

- Assist the young person to maintain motivation to change in face of an unresolved or residual ambivalence by exploring options and negotiating a change plan.

Promote self-efficacy

- Aim to develop and increase the young person's confidence that making and maintaining change is possible. (e.g., brainstorm goals and develop strategies to achieve them, beginning with ones that are easily attainable in order to build confidence).

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