



Effectiveness of motivational interviewing in changing risk behaviours for people living with HIV



Question

What is the effectiveness of motivational interviewing in changing risk behaviours (e.g. sex, drug use, medication adherence) for people living with HIV?

Key Take-Home Messages

- Interventions that make use of motivational interviewing can be effective in changing risk behaviours for people living with HIV (1-18); the longer the motivational interviewing intervention, the more it may help intervention participants to maintain healthier practices over time (19).
- For people living with HIV, motivational interviewing can have a positive effect on medication adherence (1;6-9;15;17;18), sexual risk behaviours (3-5;10;11), drug use (2;12;14), and numerous outcomes at the same time (13;16).
- Motivational interviewing has been implemented across diverse population that differ in age, gender, race and socio-economic status (20-22).
- Some motivational interviewing interventions showed sustained effects in health promoting behaviour over a long period of time (12;14;23), while others did (24).
- Motivational interviewing interventions can be implemented by a variety of trained staff including therapists, clinicians, doctoral students, and Masters level students in social work, counselling, and health behaviour and health education (5;11;14).

The Issue and Why It's Important

Motivational interviewing was first developed in the early 1980s as a way to help individuals manage excessive alcohol intake. Since then, it has been used in a variety of settings with a variety of desired outcomes such as diabetes self-care and smoking cessation (25). For people living with HIV, motivational interviewing has been used to reduce sexual risk behaviours, to curb drug and alcohol use and to increase medication adherence (26). For many people, it is viewed as a legitimate, effective, non-intrusive, evidence-based practice (1-18).

EVIDENCE INTO ACTION

The OHTN Rapid Response Service offers HIV/AIDS programs and services in Ontario quick access to research evidence to help inform decision making, service delivery and advocacy.

In response to a question from the field, the Rapid Response Team reviews the scientific and grey literature, consults with experts, and prepares a brief fact sheet summarizing the current evidence and its implications for policy and practice.

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Unlike more coercive methods, motivational interviewing seeks to change behaviour from within the individual. Trained therapists using motivational interviewing express empathy, manage resistance without confrontation, and use techniques such as reflective listening, summarization and affirmation to support individuals (27). The goal is to motivate individuals to address any ambivalence they may feel and to encourage them to make healthy decisions for themselves that are aligned with their own values, beliefs and concerns. As a result, decisions are made by the individual for the individual rather than by an outside party.

What We Found

We found many studies reporting the efficacy of motivational interviewing interventions in changing behaviours among people living with HIV. Desired outcomes included better adherence (1;6-9;15;17;18), a decrease in sexual risk behaviours (3-5;10;11) and reductions in drug and alcohol use (3-5;10;11).

Adherence

One of the most significant challenges for people living with HIV is sustaining high levels of adherence to highly active antiretroviral therapy (HAART) (9). HAART's benefits depend on strict adherence, requiring a minimum of 95% of doses to be taken correctly (25). However, only 50% to 70% of patients achieve HAART adherence in the first six months after beginning their regimen (25). A number of studies looked at the effects of motivational interviewing in improving HAART adherence among a variety of populations including youth (18), African-American youth (15), low-income men and women (7), and men and women with suboptimal adherence (9). The studies we found (1;6-9;15;17;18) supported the use of motivational interviewing as an effective strategy to promote medication adherence and recommended that it be further utilized and explored. They included the following findings:

- Motivational interviewing can influence behaviour change among youth living with HIV (18). A US-based study enrolled nine males and nine females, all African-American, HIV-positive and between the ages of 13 and 24. Participants engaged in a motivational interviewing intervention, which lasted 30 to 40 minutes. Participants' attitudes about adherence were collected before and after the intervention. Fourteen (78%) found the intervention helpful while 13 (72%) would recommend it to others. Most importantly, 12 participants (67%) had improved attitudes regarding adherence to antiretroviral medications as a result of the intervention. For this study at least, becoming proficient in motivational interviewing didn't require advanced training in counselling or psychology. The researchers described the motivational interviewing intervention as "feasible, acceptable and promising".
- A US-based study (9) involved 140 adults living with HIV who were either initiating or failing their HAART regimen. Over 12 weeks, participants either received a motivational interviewing intervention or standard information about HIV (the control group). The motivational interviewing intervention involved honing in on the various concerns of each person. It used reflective listening to raise the person's awareness of certain issues and improve his or her self-management skills. Over the 12 weeks, the mean adherence of the intervention group increased by 4.5% while the control group's adherence decreased by 3.8%; and 29% of those receiving the intervention achieved >95% adherence compared to 17% for the control group.
- In a three-month US-based study (7), 247 low-income men and women living with HIV were split into an intervention group and a control group. The goal of

the intervention was to encourage and improve antiretroviral adherence. Participants in the intervention group participated in five motivational interviewing sessions given by registered nurses while the control group received the regular adherence education provided at the clinic. The results support the use of motivational interviewing to improve adherence. During follow-up, those in the intervention group were taking a higher percentage of their doses than those in the control group. Moreover, in terms of taking doses on time, the intervention was significantly more successful than usual care.

- A US study (24) of 204 HIV-positive participants who were randomly assigned to either standard of care, motivational interviewing-based cognitive behavioural therapy (MI-CBT), or MI-CBT combined with modified directly observed therapy (MI-CBT/mDOT) showed no significant differences between groups. The MI-CBT/mDOT group had its greatest impact at the 12-week follow-up period, and then declined more steeply than the standard of care and MI-CBT groups. This indicates the declining effects of the intervention at the end of active treatment.
- Another study (1) suggested that motivational interviewing sessions don't have to be long to be effective. In this study, a 15 to 30 minute motivational interviewing session to improve adherence was administered to 20 adults living with HIV. After the sessions, 70% of participants came up with strategies to improve their health and almost all (95 to 100%) found the sessions to be helpful and useful.

We found one systematic review (25) on the effects of motivational interviewing on HAART adherence:

- Authors reviewed five randomized controlled trials. Sample sizes ranged from 141 to 326. Three of the five studies showed a significant increase in adherence rates. Two studies reported a significant decrease in viral loads and one study showed an increase in CD4 cell counts. The varying definition of adherence across studies was a challenge when comparing improvements. Nonetheless motivational interviewing still appeared to be a promising intervention to improve HAART adherence in HIV-positive individuals.

Sexual Risk Behaviours

It is estimated that 13% to 50% of HIV-positive individuals engage in risky sexual practices (23;28). HIV prevention interventions for HIV-positive people aim to reduce the chance of HIV-positive persons acquiring different sexually transmitted infections or other strains of HIV (28). We found a number of studies (3-5;11) that demonstrated the efficacy of motivational interviewing in reducing sexual risk behaviours among people living with HIV:

- A US-based study (11) recruited 490 people living with HIV, all of whom reported unprotected oral, vaginal or anal sex in the past 12 months. Approximately half the participants received SafeTalk, a safer sex motivational interviewing program, and the other half (the control group) did not. Both groups had similar levels of unprotected sex at baseline. The results showed that unprotected sex acts with at-risk partners decreased among participants in the intervention group and increased for those in the control group.
- According to another study (5), more than half of youth living with HIV engage in unprotected sex. The study sought to determine the efficacy of Healthy Choices, a four-session intervention based on motivational interviewing and risk reduction, to increase condom use. Half of the 142

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participants received the Healthy Choices intervention while the other half were in the control group. Three categories were used to sort the participants: persistent low sexual risk, delayed high sexual risk, and high and growing sexual risk. Compared to those in the control group, participants who received the intervention were more likely to be in the first group, less likely to be in the middle group and more likely to use a condom.

- In a US study (28) with older adults living with HIV, 100 participants were randomly assigned to either four telephone-delivered motivational interviewing sessions, one telephone-delivered motivational interviewing session, or no motivational interviewing sessions. Compared to those who completed four sessions, control participants reported three times more unprotected sex, while the one session participants reported a four time increase. Another US study (23) involving 79 HIV-infected rural people also showed that a brief motivational interviewing plus skills-building intervention was promising in reducing sexual risk compared to a skills-building intervention alone.
- Another study (4) provided a safer sex motivational interviewing intervention to a group of 183 people living with HIV over a 12-month period. The results indicated that, as the number of motivational interviewing sessions increased, the level of sexual risk behaviour decreased.

Drug Use

Drug use can have a negative effect on people living with HIV. For example, crack cocaine use is associated with lower levels of medication adherence (12) and injection drug use is a common means of transmitting HIV (2). Substance use also affects judgement, making people more likely to engage in high-risk sexual behaviours. Given the potential impact, it is important to develop interventions to help people living with HIV develop effective ways to reduce the harm caused by drug use. We found some studies that sought to determine the efficacy of motivational interviewing to address this issue.

- One study (14) looked at the effects of motivational interviewing on alcohol and marijuana use for youth living with HIV. The US-based study recruited 143 participants and tested the efficacy of Healthy Choices, an intervention targeting multiple risk behaviours. The participants were randomly assigned to either a control or the intervention, which specifically targeted substance use. After 15 months, alcohol use was much lower among intervention participants (40%) than in the control group (54%). This outcome was particularly promising because it indicated that the intervention effect is sustained over a long period of time; however, the intervention was less effective in reducing marijuana use.
- Another study (12) tested two motivational interviewing interventions to curb crack cocaine use among 54 adults living with HIV. Participants, 92% of whom were dependent on crack cocaine, received one of two interventions – one of which incorporated video. A significant reduction in drug use was observed for both groups at three months and six months follow-up.

Multiple Outcomes

Motivational interviewing interventions can target more than one risk behaviour at a time. We found primary studies that used an intervention to target a combination of substance use, sexual risk and adherence. Two systematic

reviews assessing the effects of motivational interviewing on multiple outcomes were also found.

- A US-based study (13) looked at the effectiveness of a motivational interviewing intervention to minimize club drug use and sexual risk among 150 HIV-positive men who have sex with men who were not seeking treatment. Participants were randomly assigned to either four motivational interviewing sessions or an educational control intervention. The sessions lasted one hour and spanned anywhere from four to eight weeks and the follow-up occurred quarterly for one year. The results showed that club drug use declined for those who participated in the motivational interviewing intervention group; however, the intervention did not have an impact on sexual risk taking.
- A US-based study (27) among 253 men who have sex with men with alcohol disorders found that, compared to the control group, participants who took part in motivational interviewing reduced the number of drinks they had as well as the number of days in a 30-day period where they engaged in heavy drinking and unprotected sex.
- In another US study (29) with 143 HIV-positive men and women with alcohol use disorders, participants who took part in motivational interviewing showed higher adherence to antiretroviral doses, lower viral loads and higher CD4 counts at three month follow-up. However, the intervention did not show effects for alcohol use, and the effects on dose adherence, viral load and CD4 counts were not significant at six months.
- Another US-based study (16) used a motivational interviewing intervention combined with a cognitive behavioural therapy intervention to increase adherence to medication and decrease drug use among 12 people living with HIV. The eight-week intervention consisted of weekly individual sessions conducted with a trained therapist. From pre-treatment to post-treatment, participants experienced a significant reduction in substance use. In terms of medication adherence, the results were not statistically significant but the authors were optimistic that future studies could have positive results with a larger sample. Retention for the eight sessions was 73%; and 80% completed the follow-up assessment three months after the intervention.
- In a study involving 203 predominantly African American HIV-positive women (30), participants were assigned to an eight session motivational interview group or a health promotion control group. Participants with higher attendance for motivational interviewing had higher adherence rates compared to controls at three months. In terms of sexual risk behaviour, a significantly larger proportion of those in the intervention group reported abstinence and use of protection during sex at six and nine month follow-ups.

We found one Cochrane Collaboration review (31) with two included studies on the use of motivational interviewing to improve outcomes in HIV positive youth. The studies reported short-term reduction on viral load and a reduction in unprotected sex acts. One of the studies also reported decreased alcohol use. Another systematic review (32) on motivational interviewing among HIV-positive individuals showed that motivational interviewing interventions had the potential to reduce sexual risk behaviours, but the effects on reducing substance use was less consistent.

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Common motivational interviewing interventions

Two of the most common interventions were entitled Healthy Choices and Safe Talk. In both cases, risk behaviours (e.g. low adherence, high drug use, high sexual risk) are selected before the beginning of the intervention. Thereafter, the intervention focuses on decreasing or eliminating this risk behaviour from the person's life.

Healthy Choices (5;14)

Over a 12-week period, four hour-long sessions are conducted between the participant and a trained therapist, utilizing structured, personalized feedback to elicit behaviour change. During the first two sessions, the problem behaviour is discussed, the willingness to change is assessed and a behaviour change plan is completed. The goal of the third session is to review progress, reinforce positive changes and discuss how best to maintain commitment in the future. The last two sessions address the self-efficacy of the participant and map out a strategy for long-term maintenance of the behaviour change. The first two sessions occur in week one and week two, session three occurs one month later and session four one month after that. Therapists are either doctoral students in psychology or trained clinicians.

SafeTalk (11)

SafeTalk is a multicomponent motivational interviewing safer sex program specifically designed for people living with HIV. It consists of four one-on-one motivational interviewing sessions conducted once a month for four months. Sessions are delivered by trained counselors who have at least a Masters degree in social work, counselling, or health behaviour and health education. Participants are given a CD and a booklet before each session to give them tailored safer sex information to aid in preparation. They also receive booster letters, each related to what was discussed in the previous session. The first session establishes rapport, the second sets goals and strategies, and the third and fourth are used to follow up on the original goals. A month between sessions gives participants the time to address and change their behaviour.

Factors That May Impact Local Applicability

All papers included in this summary were published in high income countries, primarily the US, which has an HIV epidemic similar to that in Canada. However it is important to note that no motivational interviewing interventions among HIV-positive individuals have been published in Canada.

What We Did

We searched Medline using key words "HIV" and "motivational interviewing" in titles and abstracts. We also reviewed the references in the systematic reviews found. All searches were completed on 30 June 2014 and were limited to studies conducted in high income countries and published in English without any date restrictions.