



AOTA Evidence Briefs

Substance-Use Disorders

**A product of the American Occupational Therapy Association's Evidence-Based Literature Review Project*

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Motivational intervention might be useful adjunct to methadone programs, especially if combined with behavioral strategies

Saunders, B., Wilkinson, C., & Phillips, M. (1995). The impact of a brief motivational intervention with opiate users attending a methadone programme. *Addiction*, 90, 415–424.

Level: IA2a

Randomized control trial, 20 or more participants per condition, moderate internal validity, high external validity

Why research this topic?

A type of intervention called “motivational interviewing” became popular in the 1980s in the field of addictions. Motivational interviewing systematically has the client reflect on their motivation for change, offers the therapist’s advice and feedback where appropriate, uses empathic reflection to reinforce change, and seeks to create and amplify the clients discrepancy between current behaviors and goals so as to enhance motivation for change. The therapist also avoids argumentation, rolls with the client’s resistance to change and supports the client’s self-efficacy for successful change (Miller & Rollnick, 1991). However, evidence of its effectiveness is almost nonexistent.

What did the researchers do?

Saunders, Wilkinson, and Phillips (1995), affiliated with Curtin University of Technology (Perth, Australia), conducted a study to determine the effectiveness of a motivational intervention with opiate users participating in a methadone program. They used the term “motivational intervention” to differentiate their strategy from the more broadly based intervention called “motivational interviewing.” They drew participants for their study from 432 people admitted to a methadone clinic from January 1988 to March 1989. They excluded 262 who had been treated in the previous 3 months, had been in the program for less than 7 days, were not dependent on heroin, were users of multiple drugs, were short-term users, were transfers from other programs, were on probation or parole, or had been receiving counseling before admission. Of the remaining 170, 48 declined to participate or failed to complete a research assessment. Thus, the number of participants at the start of the study was 122 (79 men, 43 women). Their average age was 28 years. By the end of the study (a 6-month follow-up), the number had declined to 73.

The researchers randomly allocated the participants by month of admission to the motivational intervention group or a **control group** (see *Glossary*). In a 1-hour session, the participants in the motivational intervention group were asked to describe the positive aspects of their using opiates and then to describe the negative consequences and discuss their concerns about these. Additionally, they were asked to think about the future and assess the effect of continued drug use, or abstention, on their lives. To aid this process, they used a “self-completion manual.” It included a 1-page “decision matrix” that allowed them to compare positive and negative consequences and the costs and the benefits of stopping. As a homework assignment, they completed the matrix and prepared themselves to discuss it at their next appointment (the 1-week follow-up).

The control group received a 1-hour presentation of information contained in a booklet designed for the study. It covered six areas: “what to do in the case of an overdose; the physical effects of opiates; the law; hints on how to stop; the effects of drugs; and useful referral addresses and phone numbers” (pp. 416–417).

One week after the first intervention, each participant attended a follow-up session. The first 5–10 minutes of this session were devoted to discussion of the decision matrix in the case of the motivational intervention group, and the contents of the booklet in the case of the control group.

The researchers were interested in the following outcome areas: *stage of change* (as measured by an instrument developed by McConaughy, Prochaska, and Velicer), *severity of opiate dependence* (as measured by an instrument developed by Sutherland and others), *opiate-related problems* (as measured by an instrument based on a drug abuse screening test developed by H. Skinner), *intent* (as measured by an instrument adapted from one developed by Hall and Havassy), *outcome expectancy* (as measured by a scale based on the Outcome Expectancies Questionnaire), *“self-efficacy”* (confidence; as measured by a questionnaire based on the Situational Confidence Questionnaire), and *time until first re-use of heroin* (as indicated by diaries kept by the participants). All the areas were measured before the study began and at a 3-month follow-up. Stage of change and outcome expectancy also were measured at the 1-week follow-up, severity of opiate dependence and opiate-related problems at a 6-month follow-up, and intent and self-efficacy at the 1-week and 6-month follow-ups.

What did the researchers find?

On the stage-of-change measure, at the 1-week follow-up, the largest proportion of the motivational group members (38%) were “contemplaters,” whereas the largest proportion of the control group members (35%) were “pre-contemplaters.” According to Miller and Rollnick (1991), contemplaters are people who are aware that they may need to consider change and are actively paying attention to their use of substances and the effect they have on their life. In contrast, pre-contemplaters are not aware that they need to pay attention and have no thoughts about there being any problem to pay attention to at all.) The difference was **significant** (see *Glossary*). At the 3-month follow-up, the largest proportion of the motivational group members (37%) now were “actioners,” that is, taking positive steps toward making changes such as cutting down or being totally abstinent, whereas the largest proportion of the control group members (47%) still were “pre-contemplaters.” This difference was just short of significance.

On the measure of severity of opiate dependence, both groups showed a significant decrease over time. There was **no significant** (see *Glossary*) difference between them, however.

On the measure of opiate-related problems, both groups showed a significant decrease over time. There were significant differences between them at 6 months, favoring the motivational group.

On the measure of intent, a comparison of 1-week and 3-month scores showed a 17% shift toward a goal of abstinence or reduced use by the motivational group. The difference between the groups at 3 months was significant, favoring the motivational group. This was not sustained over time, however.

On the measure of outcome expectancy, both groups improved significantly over time. The difference between the groups at 3 months was significant, favoring the motivational group.

On the measure of self-efficacy, the control group scored significantly better than the motivational group at 3 months but not at 6 months.

On the measure of time until first re-use of heroin, there was no significant difference between the groups. However, with those who had dropped out of the study factored into the analysis, the motivational group members were significantly less likely to have relapsed sooner.

What do the findings mean?

For therapists and other providers, the findings suggest that opiate users on a methadone program who are exposed to a motivational intervention are more likely to “(i) make a more positive initial change . . . ; (ii) report a greater reduction in opiate related problems; (iii) initially set goals representing a greater commitment to abstinence; (iv) perceive more positive outcomes for abstaining; (v) remain engaged in treatment longer; and (vi) relapse less quickly” (p. 422). The strategy might be a useful adjunct to methadone programs, especially if combined with behavioral strategies to strengthen participants’ sense of self-efficacy.

What are the study’s limitations?

The study has one limitation: The dropout rate was high—40%. This fact lessens the confidence one can have that the outcomes were attributable to the intervention.

GLOSSARY

control group—A group that received special attention similar to that which the treatment group received but did not receive the treatment.

nonsignificant (or no significance)—A statistical term that refers to study findings that are likely to be due to chance differences between the groups rather than to other factors (e.g., the treatment of interest). A nonsignificant result is not generalizable outside the study. Like significance, a nonsignificant result does not indicate the clinical effect. Often studies will show nonsignificant results, yet the treatment group's mean will be better than the control group's. This is usually referred to as a trend in the right direction. Because significance is closely determined by sample size, nonsignificant results would often become significant if the sample size were increased.

significance (or significant)—A statistical term that refers to the probability that the results obtained in the study are not due to chance but to some other factor (e.g., the treatment of interest). A significant result is likely to be generalizable to populations outside the study.

Significance should not be confused with *clinical effect*. A study can be statistically significant without having a very large clinical effect on the sample. For example, a study that examines the effect of a treatment on a client's ability to walk may report that the participants in the treatment group were able to walk significantly longer distances than those in the control group. However, after reading the study one may find that the treatment group was able to walk, on average, 6 feet, whereas the control group was able to walk, on average, 5 feet. Although the outcome may be statistically significant, a clinician may not feel that a 1-foot increase will make his or her client functional.

■ Terminology used in this document is based on two systems of classification current at the time the evidence-based literature reviews were completed: *Uniform Terminology for Occupational Therapy Practice—Third Edition* (AOTA, 1994) and *International Classification of Functioning, Disability and Health (ICIDH-2)* (World Health Organization [WHO], 1999). More recently, the *Uniform Terminology* document was replaced by *Occupational Therapy Practice Framework: Domain and Process* (AOTA, 2002), and modifications to *ICIDH-2* were finalized in the *International Classification of Functioning, Disability and Health* (WHO, 2001).

This work is based on the evidence-based literature review completed by Virginia Stoffel, MS, OTR, FAOTA and Penelope Moyers, EdD, OTR, FAOTA.

For more information about the Evidence-Based Literature Review Project, contact the Practice Department at the American Occupational Therapy Association, 301-652-6611, x 2040.



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