

THE IMPACT OF BRIEF MOTIVATIONAL INTERVENTION AT THE START OF AN OUTPATIENT DAY PROGRAMME FOR ALCOHOL DEPENDENCE

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Abstract. Motivational intervention, a strategy to increase motivation for change, was tested as an addition to treatment at the start of an outpatient programme for alcohol dependence. Admissions to the programme were randomly allocated to either a motivational or educational procedure. The three motivational constructs of the SOCRATES-8A Readiness to Change questionnaire (Ambivalence about change, Recognition of problems, Taking Steps to change) were used as measures of motivation for change. At one week post-intervention, motivational participants reported significantly greater levels of problem recognition. The motivational group's post-intervention scores were significantly higher on the Taking Steps scale and significantly lower on the Ambivalence scale. There was no difference on measures of engagement in treatment or drop-out from the outpatient treatment programme. For the population as a whole, a relatively low pre-intervention score on the Ambivalence scale was predictive of drop-out. Results support the efficacy of motivational intervention for decreasing self-reported levels of ambivalence about change and for increasing problem recognition and taking steps towards change. More detailed research with a longer follow-up period is needed to determine whether this has any impact on other vectors of motivation for change, including participation in treatment, outcome expectancy and drinking behaviour.

Keywords: Motivational intervention, alcohol dependence, outpatient treatment.

Introduction

Motivation for change is a multifaceted construct, historically regarded as necessary before an individual will respond positively to treatment (Beckman, 1980; Dean, 1958). In therapy it involves recognizing a problem, searching for a way to change, and then beginning and sticking to that change strategy. Lack of motivation for change is a long-standing and widely cited difficulty in therapy for drug and alcohol addictions (Mindlin, 1959; Sterne & Pittman, 1965).

Motivational interviewing (MI) (Miller, 1983; Miller & Rollnick, 1991; Rollnick & Miller, 1995) is a directive client-centred counselling style designed to increase and

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maintain motivation for change. It suggests that ambivalence about change should be the central target for motivational interventions and provides a style and strategies to help clients explore and resolve ambivalence about change and thereby increase their recognition of problems and the probability that they will enter a process of change (Miller, 1983). There is considerable evidence for the clinical efficacy of MI (Noonan & Moyers, 1997). Although the clinical trials demonstrate positive outcomes for this approach, few have examined the process of change, through measurements of components of motivation, especially ambivalence, which are hypothesized to mediate the effects of such interventions.

One of the specific clinical applications that has been developed using the Motivational Interviewing style is the “motivational intervention” (Saunders, Wilkinson, & Allsop, 1991). This lasts for two sessions; the first lasting for one hour and the second (a week later) lasting between 5–10 minutes. The former involves the use of a “balance sheet” to help the client identify and process the positive and negative consequences of their addictive behaviour; the second provides a continuation and consolidation of the process. In the only published study of the efficacy of this approach, Saunders, Wilkinson and Phillips (1995) examined its effects with opiate users attending an outpatient methadone programme. Some 122 clients were randomly allocated to receive either a motivational or a placebo (educational) intervention. Those who received the motivational intervention complied with the programme for longer and relapsed less quickly. If, as suggested by Miller (1985), length of time in treatment is a legitimate index of motivation, then these results support the notion that motivational intervention was effective in enhancing client motivation.

The present study examines the impact of providing Saunders’s motivational intervention to clients at the start of their attendance at a day programme for the treatment of alcohol dependence. In order to test assumptions of the Motivational Interviewing approach, it will assess components of the client’s reported level of motivation for change. Thus it assesses whether Saunders’s approach (a) improves clients’ short-term clinical outcome (b) increases their engagement in the treatment programme and (c) reduces their ambivalence and increases levels of problem recognition and engagement in change.

Method

Design

At the beginning of a standard, cognitive-behavioural 6-week day programme for the treatment of alcohol dependence, clients were randomly allocated to one of two groups. One group received the two-session motivational intervention, while the other received the control procedure of an educational intervention for the same length of time. A randomized controlled trial design was used to compare the levels of motivation, engagement in and short-term outcome of treatment across the two groups of clients.

Participants

Participants were clients who started the alcohol dependence treatment programme and (1) were dependent on alcohol (DSM IV: American Psychiatric Association, 1994)

(2) had contracted to take part for the 6-week programme (3) had sufficient comprehension of the English language, and (4) gave informed consent to participate in the study. During the data collection period a total of 62 consecutive clients were invited to take part in the study: all agreed but 2 failed to meet the inclusion criteria, leaving a total of 60 participants. However, a total of 9 failed to attend the second session of the intervention a week later. This left a total of 51 participants. Their characteristics are summarized in Table 1.

Measures

Short-term outcome. The treatment programme required a commitment from clients to attend for 7 hours a day on 5 days a week and for them to abstain from alcohol and illicit drugs. Lapses were managed by excluding the person from the premises while they had alcohol (or drugs) in their system, and completing a lapse debriefing to learn therapeutically from the experience. Repeated lapses led to discharge. Only clients who consistently abstain can therefore complete the programme, and so completion is a good index of outcome. In this programme 80% of drop-outs occur in the first fortnight of treatment and it is assumed that drop-outs have a bad outcome. Keeping clients in treatment in the first few weeks of treatment is an important therapeutic goal. The short-term outcome was operationally defined as completing treatment.

Engagement in treatment. Two indices of engagement were used: (a) number of days the client attended for treatment (maximum of 30); (b) the percentage of contracted sessions that the client had actually attended (two sessions a day, a maximum of 60).

Ambivalence and motivation. The SOCRATES-8A is a 19-item measure of motivation for change, with item content focusing specifically on problem drinking: this gives scores on three independent dimensions of motivation: "Ambivalence", "Recognition of Problems" and "Taking Steps to change" (Miller & Tonigan, 1996).

Dependence. The Severity of Alcohol Dependence Questionnaire (SADQ), a 20-item self-completion questionnaire (Stockwell, Hodgson, Edwards, Taylor, & Rankin, 1979) was used.

Procedure

Assignment to interventions. Immediately before their first meeting with the researcher (SD), participants were randomly allocated by another member of staff (who was unaware of the purpose of the study) to either the control intervention or experimental intervention. The first session of each intervention took place individually with SD on the participant's second day in the treatment programme and lasted for an hour. Participants completed the SOCRATES at the start of their first session with the researcher.

The control (educational) intervention. This was intended as a placebo control rather than an active educational intervention. First, clients completed a quiz about myths and facts concerning alcohol, received feedback on the correctness of their answers and then discussed these. Next they received a presentation and discussion of information

Table 1. Pretreatment characteristic of the 51 participants who completed interventions

Variable	Motivational intervention		Educational control	
	<i>n</i> = 24	%	<i>n</i> = 27	%
Gender				
Male	16	(67)	21	(78)
Female	8	(33)	6	(22)
Referrer				
GP	20	(83)	25	(93)
Consultant psychiatrist	4	(17)	2	(7)
Previous alcoholism treatment				
None	10	(42)	14	(52)
Some	14	(58)	13	(48)
Marital status				
Never married	10	(42)	7	(26)
Married	3	(12)	4	(15)
Divorced	11	(46)	16	(59)
Inpatient detoxification before treatment				
Yes	14	(58)	16	(59)
No	10	(42)	11	(41)
Employed				
Yes	1	(4)	3	(11)
No	23	(96)	24	(89)
SADQ categories				
Under 20	7	(29)	6	(22)
20 to 30	10	(42)	12	(44)
Over 30	7	(29)	9	(34)
Age				
Under 30 years	3	(12)	4	(15)
30 to 50 years	15	(62)	14	(52)
Over 50 years	6	(26)	9	(33)
Mean	41.3		42.8	
SD	10.3		11.4	
SADQ				
Mean	27.3		31.0	
SD	11.3		9.5	
Years dependent on alcohol				
Mean	10.4		12.2	
SD	6.1		7.2	
Weekly consumption of alcohol (units)				
Mean	123.0		132	
SD	68.2		71.3	

about the long-term and short-term physical effects of alcohol use. The therapist reflected back what clients understood about the facts presented, but never reflected back their feelings. The quiz and information used were adapted from the *Managing drink* manual (Mason, 1989).

The experimental ("motivational") intervention. The motivational intervention was based upon constructs developed by Miller (1983, 1985) for problem drinkers and closely modelled on the procedures described by Saunders et al. (1995). It invited participants to describe in detail their positive experiences of using alcohol, and then their negative experiences. Participants were required to describe specific negative consequences in detail, and then to discuss how concerned they were about these. They were prompted to examine social, psychological, legal, financial, health, work and relationship issues. The therapist reflected back negative statements about their alcohol use or intentions to change. At no stage did the therapist attempt to persuade the participants that any of these areas presented problems. Then participants were asked to think of the future and to assess the impact that either returning to alcohol use or continued abstinence would have on their lives. This was aided by a self-completion manual, containing a one-page decision matrix, which enabled clients to compare the positive and negative consequences of drinking alcohol. A second page asked them what they thought the main drawbacks of returning to alcohol use would be, as well as their main reason for staying abstinent. They were asked to complete the matrix for the next appointment (one week follow-up). The intervention has been described in detail in Saunders et al. (1991).

Follow-up sessions. Participants in both the experimental and control group were followed-up one week after the intervention. At the second session, a 5–10 minute review of the previous session was undertaken. This involved either discussion of the educational information or, with motivational participants, discussion of an alcohol use matrix. Participants then completed the SOCRATES-8A.

End of treatment follow-up. At the end of the 6-week treatment programme participants were asked to fill in a SOCRATES-8A questionnaire.

Therapy check. All interventions were audio-taped to enable an independent rater to check that each intervention contained target therapist components, and that the components of the two interventions did not overlap. An undergraduate psychology student who was totally unaware of the purposes of the study was asked to listen to 10 randomly selected tapes from each intervention. All tapes were coded to prevent identification of participants and assignment to intervention. The student was asked to rate each tape by circling "yes" or "no" on a sheet containing five elements of target therapist behaviours for each intervention.

Statistical methods. Most tests were of differences between two groups and used either the χ^2 test for nominal data or the Mann Whitney U Test for others (since score distributions were heavily skewed). Tests on repeated measures were carried out using the Wilcoxon tests. An alpha level of 0.05 was used.

Results

Comparison of participant characteristics

The pre-treatment characteristics of participants in each condition (listed in Table 1) were compared but no significant differences on any variable were found. Of the nine

participants who dropped out after the first session, six were in the experimental group and there was no significant association between dropping out and condition.

Therapy check

There was no overlap between the rated elements of target therapist behaviour for the motivational and educational interventions, but 90% and 80% of intervention-specific therapist target behaviours present in the experimental and educational sample respectively.

1. Did motivational intervention increase participants' short term outcome?

Nine of the 24 participants in the motivational group subsequently dropped out of treatment, while 10 out of the 27 educational participants did so (a non-significant difference: $\text{Chi}^2 = 0.001$, $df = 1$, $p = \text{NS}$).

2. Did motivational intervention increase participants' engagement in subsequent treatment?

(a) *Number of days in subsequent treatment for those who completed treatment.* Mean days in treatment were, for the motivational group, 28.0 ($n = 15$; $SD = 1.5$; range = 24–30), and for the educational group 26.0 ($n = 17$; $SD = 3.21$; range = 19–30). The groups did not differ significantly.

(b) *Number of days in subsequent treatment for those who did not complete treatment.* Those who dropped out of the motivational intervention group ($n = 9$) had attended for a mean of 17.2 days ($SD = 6.62$; range = 7–25), while those who dropped out of the educational group ($n = 10$) had been in treatment for a mean of 19.7 days ($SD = 5.75$; range = 7–25). The groups did not differ significantly.

(c) *Percentage of contracted sessions attended.* The motivational group attended a mean of 98% of their contracted sessions ($SD = 2.54$; range = 93–100); the educational group attended a mean of 97% of their contracted sessions ($SD = 5.2$; range = 83–100). The groups did not differ significantly.

3. Did motivational intervention reduce ambivalence and increase motivation for change?

(a) *Changes in SOCRATES scores over the period of the intervention.* The SOCRATES measures were taken before and after the intervention. Repeated measures comparisons across those two occasions were carried out within each of the two groups on each of the three scales derived from the SOCRATES (Ambivalence, Taking Steps, Problem Recognition). There were no significant differences between pre- and post-intervention scores on the Ambivalence or the Taking Steps scale for either the motivational or the educational group. Recognition scale scores changed significantly. The scores for the motivational intervention group rose significantly ($z = 1.76$, $p < .05$, one-tailed), while those for the educational group fell significantly ($z = 2.19$, $p < .05$, one-tailed).

Table 2. SOCRATES scores pre-and post-intervention, and at the end of the 6-week programme

	Ambivalence		Recognition		Taking Steps	
	Mean	(SD)	Mean	(SD)	Mean	(SD)
(a) Scores of all participants completing the pre- and post-intervention assessments						
Experimental (<i>n</i> = 24)						
Week 1	11.29	(3.26)	31.04	(4.34)	36.08	(3.44)
Week 2	10.62	(3.72)	32.12	(4.55)	36.75	(3.56)
Control (<i>n</i> = 27)						
Week 1	12.14	(2.96)	30.26	(4.25)	34.41	(3.91)
Week 2	12.40	(2.73)	28.92	(4.86)	34.96	(3.24)
(b) Scores of all participants completing the treatment programme						
Experimental (<i>n</i> = 12)						
Week 1	11.25	(3.31)	31.33	(4.44)	35.58	(3.40)
Week 2	9.67	(4.23)	32.08	(5.16)	36.83	(4.37)
Week 6	9.33	(3.58)	31.25	(6.96)	37.67	(2.67)
Control (<i>n</i> = 13)						
Week 1	11.69	(3.22)	30.23	(4.30)	34.08	(4.25)
Week 2	12.00	(3.34)	29.00	(5.85)	35.77	(3.42)
Week 6	9.69	(3.75)	29.38	(4.96)	37.00	(3.49)

Before intervention there were no significant differences between the scores of the two groups on any of the three measures. After intervention (week 2) there were significant differences on each measure. The motivational group's mean score on Ambivalence was significantly lower than that of the educational group ($z = 1.72$, $p < .05$, 1-tailed). In contrast, the scores of the motivational group were significantly higher than those of the educational group on the Recognition ($z = 2.94$, $p < .01$, 1-tailed) and Taking Steps scales ($z = 2.02$, $p < .05$, 1-tailed).

(b) *Changes in SOCRATES scores over the period of the 6-week treatment.* At the end of the 6-week programme, data were available from only 25 of the 32 participants who completed treatment, 12 from the motivational group and 13 from the educational group. There were no significant differences between the groups' end of treatment scores on either the Ambivalence or Taking Steps scale. However, there was a significant difference between the groups' Recognition scores, with significantly higher scores for the motivational group ($z = 1.77$, $p < .05$, 1-tailed).

4. Do pre or post intervention scores of the SOCRATES scales predict dropout?

Mann Whitney U tests were used to examine the motivational scores of those who did ($n = 19$) and did not ($n = 32$) drop out. Analysis of the pre-treatment scores found that the two groups only differed significantly on the Ambivalence scale ($z = -1.98$, $p < .05$ 2-tailed) with the mean for treatment completers (12.28, *SD* 3.25) significantly

exceeding that of dropouts (10.84, *SD* 2.67). There were no significant differences on the post intervention scores.

Discussion

The results partially support the notion that motivational intervention increases motivation for change by lowering ambivalence about change and increasing problem recognition and reported steps to change drinking behaviour. The motivational group's end of treatment (6 week) Recognition scores were also significantly higher than those of the educational group. These findings suggest that motivational intervention produces durable increases in this component of motivation for change.

A major component of motivational intervention was to facilitate clients in examining the consequences they had experienced as a result of their drinking. The main immediate effect of increasing recognition of such problems suggests that it had a specific effect. The theory of Motivational Interviewing states that helping people become aware of the negative consequences of their behaviour can motivate change, so long as it is carried out in an empathic and supportive way (Rollnick & Miller, 1995). Increasing awareness of both the many persisting harmful consequences at the same time as the few, short-term, positive consequences can also be expected to help clients resolve ambivalence about change. Reductions in ambivalence could also increase willingness to work towards taking steps to change their behaviour and thus maintain changes.

Motivational intervention did not impact on clients' engagement in treatment. Evidence from the therapy check indicates that the failure of motivational intervention to impact on engagement in treatment was not due to insufficient differences between the interventions. However, any possible impact that motivational intervention had on increasing engagement levels in comparison to the control may have been masked by the effect of the subsequent treatment programme, which contained both educational and motivational elements. In addition, further sessions of motivational intervention throughout the 6-week treatment programme may have produced a more evident behavioural impact. Draycott and Dabbs (1988) suggest that using motivational interventions in a more structured form throughout treatment may increase behaviour change. They propose that maintaining awareness of discrepancies between drinking behaviours and a client's personal goals is important to maintain cognitive dissonance and to bring about changes in behaviour. Therefore, they suggest regular updates of the balance sheet (pros and cons of drinking) throughout treatment. Unfortunately outcome data from using this more structured adaptation of motivational intervention are not yet available in the field of alcohol dependence.

The failure of the study to demonstrate behavioural change may also be partly attributable to the fact that clients were already quite motivated, in comparison to those in methadone maintenance in the study of Saunders et al. (1995). In the present study, participants could be construed as further along in the process of change as they had actually stopped their substance use altogether. Therefore, there may have been less room for motivational intervention to have a significant behavioural impact. Evidence for this ceiling effect comes from the fact that some individuals attained maximum scores on the Recognition and Taking Steps scales.

Almost half the entrants to the programme dropped out of treatment, confirming the fact that treatment completion is an important index of short-term outcome. The finding that drop-outs had lower pre-treatment Ambivalence scores, may initially appear contrary to the prediction from the Motivational Interviewing approach (Miller & Rollnick, 1991). This suggests that high levels of ambivalence impede commitment to or persistence with change-oriented action. The model highlights the harmful effects of high levels of ambivalence and predicts reducing them through increasing awareness of the pros of change relative to the cons. However, the impact of very low ambivalence at the start of treatment due to failure to acknowledge uncertainty about the cons of drinking is not directly addressed in Miller and Rollnick's model. This is a clinically important issue because, if ambivalence levels remain very low at the start of treatment, then clients will be less able to acknowledge doubts and work in treatment to resolve ambivalence about change. One potential clinical implication is that treatment programmes might benefit from openly encouraging clients to identify ambivalence so that they may use the support of treatment more efficiently to resolve residual doubts about change.

In addition to the above, it may be of great value to construct better measurements of perceived pros and cons of change in order to assess the relative levels of each in clients presenting for treatment and their relationship to outcome of treatment. Preliminary findings from Cunningham, Sobell, Gavin, Sobell and Breslin (1997) indicate that measures assessing costs and benefits of change appear to be useful indexes of client motivation and for predicting long-term change within the addictions.

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References

- AMERICAN PSYCHIATRIC ASSOCIATION (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Association.
- BECKMAN, L. J. (1980). An attributional analysis of Alcoholics Anonymous. *Journal of Studies on Alcohol*, 41, 714–726.
- CUNNINGHAM, J. A., SOBELL, L. C., GAVIN, D. R., SOBELL, M. B., & BRESLIN, F. C. (1997). Assessing motivation for change: Preliminary development and evaluation of a scale measuring the costs and benefits of changing alcohol or drug use. *Psychology of Addictive Behaviours*, 11, 107–114.
- DEAN, S. I. (1958). Treatment of the reluctant client. *American Psychologist*, 13, 627–630.
- DRAYCOTT, S., & DABBS, A. (1998). Cognitive dissonance 2: A theoretical grounding of motivational interviewing. *British Journal of Clinical Psychology*, 37, 355–364.
- MASON, P. (1989). *Managing drink: A training package*. Birmingham: Aquarius.
- MILLER, W. R. (1983). Motivational Interviewing with problem drinkers. *Behavioural Psychotherapy*, 1, 147–172.

- MILLER, W. R. (1985). Motivation for treatment: A review with special emphasis on alcoholism. *Psychological Bulletin*, *98*, 84–107.
- MILLER, W. R., & ROLLNICK, S. (1991). *Motivational Interviewing: Preparing people to change addictive behaviour*. London: Guilford Press.
- MILLER, W. R., & TONIGAN, J. S. (1996). Assessing drinkers' motivation for change: The stages of change readiness and treatment eagerness scale (SOCRATES). *Psychology of Addictive Behaviours*, *10*, 81–89.
- MINDLIN, D. (1959). The characteristics of alcoholics as related to prediction of therapeutic outcome. *Quarterly Journal of Studies on Alcohol*, *29*, 604–619.
- NOONAN, W. C., & MOYERS, T. B. (1997). Motivational Interviewing. *Journal of Substance Misuse*, *2*, 8–16.
- ROLLNICK, S., & MILLER, W.R. (1995). What is Motivational Interviewing? *Behavioural and Cognitive Psychotherapy*, *23*, 325–334.
- SAUNDERS, B., WILKINSON, C., & ALLSOP, S. (1991). Motivational Intervention with heroin users attending a methadone clinic. In W. R. Miller & S. Rollnick (Eds.), *Motivational Interviewing: Preparing people to change addictive behaviour* (pp. 279–292). London: Guilford Press.
- SAUNDERS, B., WILKINSON, C., & PHILLIPS, M. (1995). The impact of brief motivational intervention with opiate users attending a methadone programme. *Addiction*, *90*, 415–424.
- STERNE, M., & PITTMAN, D. (1965). The concept of motivation: A source of institutional and professional blockage in the treatment of alcoholics. *Quarterly Journal of Studies on Alcohol*, *16*, 41–57.
- STOCKWELL, T., HODGSON, R., EDWARDS, G., TAYLOR, C., & RANKIN, T. (1979). The development of a questionnaire to measure severity of alcohol dependence. *British Journal of Addiction*, *74*, 79–87.