

## Psychosocial Treatment Programs for People With Both Severe Mental Illness and Substance Misuse

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**Over 50% of people with a severe mental illness also use illicit drugs and/or alcohol at hazardous levels. This review is based on the findings of 25 randomized controlled trials which assessed the effectiveness of psychosocial interventions, offered either as one-off treatments or as an integrated or nonintegrated program, to reduce substance use by people with a severe mental illness. The findings showed that there was no consistent evidence to support any one psychosocial treatment over another. Differences across trials with regard to outcome measures, sample characteristics, type of mental illness and substance used, settings, levels of adherence to treatment guidelines, and standard care all made pooling results difficult. More quality trials are required that adhere to proper randomization methods; use clinically valuable, reliable, and validated measurement scales; and clearly report data, including retention in treatment, relapse, and abstinence rates. Future trials of this quality will allow a more thorough assessment of the efficacy of psychosocial interventions for reducing substance use in this challenging population.**

*Key words:* psychosocial interventions/cochrane review/  
dual diagnosis

### Introduction

Over 50% of people with a severe mental illness also use illicit drugs and/or alcohol at hazardous levels. This sub-

stance misuse is associated with higher rates of treatment noncompliance, relapse, suicide, incarceration, hepatitis, HIV, homelessness, and aggression.<sup>1–3</sup>

### Objectives

The aim of the review was to assess the effectiveness of psychosocial interventions for reducing substance use by people with a serious mental illness.

### Search Strategy

For this update,<sup>4</sup> we searched the Cochrane Schizophrenia Group Trials Register. This is compiled by systematic searches of major databases, journals, and conference proceedings. We also inspected references of all identified studies for further trials and contacted trial authors to ascertain if they knew of any current or recent trials.

### Selection Criteria

We included all randomized controlled trials (RCTs) that assessed a psychosocial intervention to reduce substance use in patients with severe mental illness compared with standard care.

### Data Collection and Analysis

Three investigators extracted data independently. For dichotomous data, we calculated relative risks (RRs) and their 95% confidence intervals (CIs) on an intention-to-treat basis, based on a random effects model. We calculated numbers needed to treat (NNT)/harm where data were homogeneous. For continuous data, we calculated weighted mean differences, again based on a random effects model. The data were grouped into 6 main a priori categories according to whether the intervention was offered over a long period in an integrated or nonintegrated program or over a shorter period involving individual or group interventions.

### Results

We included 25 trials (total  $N = 2478$ ). Evaluation of long-term integrated care found no significant difference

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Review: Psychosocial interventions for people with both severe mental illness and substance misuse  
 Comparison: 04 COGNITIVE BEHAVIOUR THERAPY vs TREATMENT AS USUAL  
 Outcome: 01 Lost to treatment

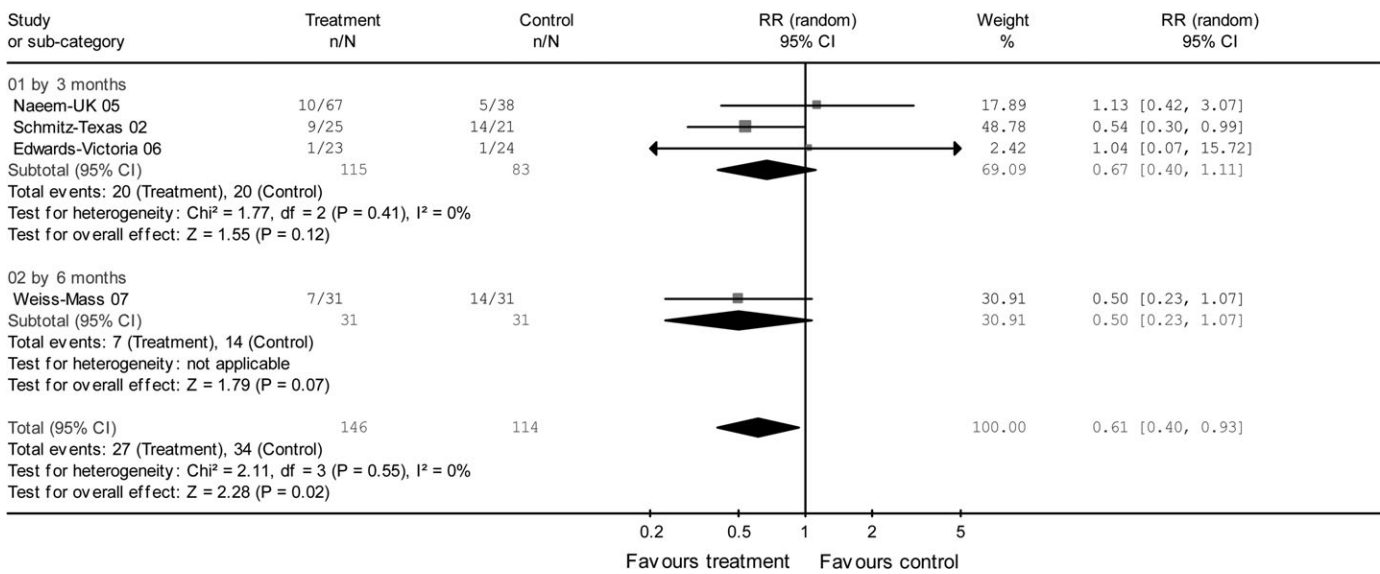


Fig. 1. Cognitive Behavioral Therapy (Lost to Treatment).

compared with standard care on measures of substance use ( $n = 85$ ) or loss to treatment ( $n = 603$ ). For the long-term nonintegrated trials, we also found no significant difference for loss to treatment ( $n = 134$ ). Individual motivational interviewing plus cognitive behavioral therapy did not reveal any advantage over standard care for reducing substance use ( $n = 119$ ), retaining participants in treatment ( $n = 36$ ), or for relapse ( $n = 36$ ). Cognitive behavioral therapy alone showed significantly fewer participants lost from treatment ( $n = 260$ ,  $P = .02$ , 4 RCTs,  $\text{RR} = 0.61$ ,  $\text{CI} = 0.4$  to  $0.9$ ; see figure 1), however, when lesser quality trials were removed from the analysis the difference was no longer significant. No benefits were observed on measures of lessening cannabis use ( $n = 47$ ), on the number of participants using substances ( $n = 46$ ), or on measures of mental state ( $n = 105$ ). We found no advantage for motivational interviewing alone in reducing the number of participants lost to follow-up ( $n = 338$ ), although significantly more participants in one trial assessing a motivational interviewing group reported for their first aftercare appointment ( $n = 93$ , 1 RCT,  $\text{RR} = 0.69$ ,  $\text{CI} = 0.5$  to  $0.9$ ,  $\text{NNT} = 4$ ,  $\text{CI} = 3$  to  $12$ ). In another single trial of motivational interviewing, significant differences were observed in the number of participants abstaining from alcohol, favoring treatment ( $n = 28$ , 1 RCT,  $\text{RR} = 0.36$ ,  $\text{CI} = 0.2$  to  $0.8$ ,  $\text{NNT} = 2$ ,  $\text{CI} = 2$  to  $5$ ), but not other substances ( $n = 89$ ), and no differences were observed in mental state ( $n = 30$ ). Data from 2 trials revealed no significant differences for group skills training in the numbers lost to treatment by 12 months ( $n = 94$ ). Finally, several comparisons yielded no usable data due to skewness.

**Reviewer’s Conclusion**

We found no compelling evidence to support any one psychosocial treatment over another to reduce substance use (or improve mental state) by people with serious mental illnesses. Furthermore, methodological difficulties exist which hinder pooling and interpreting results and include high dropout rates, varying fidelity of interventions, varying outcome measures, settings and samples, and some comparison groups may have received higher levels of treatment than standard care. Further trials are required which address these concerns and improve the evidence in this important area.

**Implications for Practice**

One small motivational interviewing study provided the main support for alcohol use reduction and another for increasing participant attendance at their first aftercare appointment. In combination with cognitive behavioral therapy, motivational interviewing also improved mental state, life satisfaction, and social functioning although differences between groups were not significant. This review found little support for integrated, nonintegrated, or skills training programs as being superior to standard care. However, much of the data were unable to be used due to skewness, use of unvalidated measures, or unclear reporting.

**Implications for Research**

Clear reporting and adherence to the CONSORT statement<sup>5-7</sup> for methodology and all outcomes should be the

goal of future trials. A full description of the randomization process, assessor blinding, number of participants lost after randomization, and the use of only validated and nonadapted scales are essential. Clear reporting of data during treatment and at various follow-up periods is also essential, and dichotomous data should be reported in addition to continuous data. This is because the reporting of dichotomous outcomes (retention in treatment, relapse, abstinence rates, etc) is relevant to the topic and preferable to reporting skewed scale data.<sup>8</sup> The use of intention-to-treat analysis can assist with minimizing bias resulting from missing data. Future reviews may explore differences between subgroups (determined a priori), such as differences between levels of substance use (misuse vs dependence), differences between substances used and differences between diagnoses (eg, schizophrenia vs depression).

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