Integrated psychological treatment for substance use and co-morbid anxiety or depression vs treatment for substance use alone: a systematic review of the published literature

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CRD summary
The author concluded that psychotherapeutic treatment for co-morbid depression and substance-use disorders was a promising approach, but was not sufficiently supported empirically at the time of the review. Psychotherapeutic treatment for co-morbid anxiety and substance-use disorders was not supported empirically. The lack of study quality details and other methodological concerns made it difficult to judge the reliability of these conclusions.

Authors' objectives
To assess the effects of integrated psychological treatment for substance-use disorders and co-morbid anxiety/depression.

Searching
MEDLINE, PsycINFO, CINAHL and Cochrane Central Register of Controlled Trials were searched without language restriction. Search terms were reported, but search dates were not. Reference lists of retrieved studies were screened. The following registers of clinical trials were also searched: Clinical Trials, Current Controlled Trials, National Health Service Research and Development HTA Programme, National Institute of Health and ClinicalTrials.gov. Only published studies were considered.

Study selection
Randomised controlled trials (RCTs) of adult patients with substance-use disorders and co-morbid depression/anxiety were eligible for inclusion if the RCTs compared an integrated psychological treatment for both substance-use disorders and co-morbid anxiety/depression with a treatment programme solely for substance-use disorders. Studies that evaluated a mixed intervention of pharmacotherapy and psychotherapy were excluded, although patients were allowed to receive concomitant pharmacotherapy during the trial. Studies were excluded if the experimental condition differed from the control condition on medication status, or if the included patients had schizophrenia spectrum disorders or personality disorders. The primary outcomes were percent days abstinent and Hamilton Rating Scale for Depression. Additional outcomes were self-reported depressive symptom outcomes (SCL-90 or Beck Depression Inventory) and the retention rate in treatment.

The included studies evaluated self-examination therapy, cognitive-behavioural therapy, brief behavioural activation intervention and interpersonal psychotherapy. Most included studies permitted additional therapy with antidepressants. Half of included studies assessed integrated psychological therapy for patients with substance-use disorders and co-morbid depression. Half of included studies evaluated integrated psychological therapy for patients with substance-use disorders and co-morbid anxiety. Most included studies recruited patients with alcohol dependence; some recruited drug and alcohol abusers.

The author did not state how the papers were selected for the review.

Assessment of study quality
The author did not state that validity assessment was performed.

Data extraction
For dichotomous outcomes, the number of events for the intervention and control group were extracted and odds ratios (ORs) with 95% confidence intervals (CIs) were calculated. For continuous outcomes, the mean and standard deviation in each group were extracted and the mean differences with 95% CIs were calculated.

One reviewer performed the data extraction.
Methods of synthesis
A narrative synthesis was used for studies of integrated treatment for substance-use disorders and co-morbid anxiety. Studies of integrated treatment for substance-use disorders and co-morbid depression were combined in meta-analyses that used random-effects models. Weighted mean differences (WMDs) or standardised mean differences (SMDs) with 95% CIs were calculated for continuous outcomes. Pooled ORs with 95% CIs were estimated for dichotomous outcomes. Statistical heterogeneity was investigated using $I^2$ statistics.

Results of the review
Ten RCTs were included in the review (total number of patients not reported), five of which were included in meta-analyses (n=223). The follow-up durations of included RCTs were not reported.

Patients with substance-use disorders and co-morbid depression (five RCTs): Integrated psychological therapy was significantly associated with a reduction in Hamilton Rating Scale compared with controls of a single-focus treatment (WMD -4.56, 95% CI -7.37 to -1.74; four RCTs), a reduction in the self-reported depressive symptom outcome using SCL-90 or Beck Depression Inventory (SMD -0.58, 95% CI -1.1 to -0.06; four RCTs) and a reduction in percent days abstinent (WMD 14.13, 95% CI 2.14 to 26.12; three RCTs). There was no significant difference in the drop-out rate from treatment between the two groups. Statistically significant heterogeneity was observed only in the outcome of Hamilton Rating Scale for depression ($I^2=61\%$, $p=0.05$).

Patients with substance use disorders and co-morbid anxiety (five RCTs): Patients fared better in several studies when assigned to substance-use treatment only (except for a small study of obsessive-compulsive disorder treatment).

Authors' conclusions
Psychotherapeutic treatment for co-morbid depression and substance-use disorders was a promising approach, but was not sufficiently supported empirically at the time of the review. Psychotherapeutic treatment for co-morbid anxiety and substance-use disorders was not supported empirically.

CRD commentary
This review's inclusion criteria were clear. Several relevant databases were searched. The decision to restrict the review to published studies may have increased the chances of publication bias. Publication bias was not assessed. No language restrictions were applied, which limited the possibility of language bias. Only one reviewer performed the data extraction; methods to minimise errors and biases in other review processes were not reported. A formal validity assessment was not carried out, but the authors discussed the quality of the included studies in some detail. The authors used meta-analysis and narrative synthesis where appropriate. Statistical heterogeneity was assessed and appropriate methods were used to pool the results. However, without further details on study quality and given the other methodological concerns it was difficult to judge the reliability of the author's conclusions.

Implications of the review for practice and research
Practice: The author did not state any implications for practice.
Research: The author stated that further larger trials were needed to replicate the findings from studies of integrated treatment for substance-use disorders and co-morbid depression, and for the development of new treatment options for substance-use disorders together with co-morbid anxiety. The author noted several such ongoing studies (such as treatment of co-morbid depression and substance abuse in young people, group therapy for women prisoners with co-morbid substance use and depression, and outpatient adolescent treatment for co-morbid substance use and internalising disorders).

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