TITLE: Group Therapy for Mood Disorders: A Review of the Clinical Effectiveness

DATE: 09 November 2009

CONTEXT AND POLICY ISSUES:

Mood disorders include bipolar disorder and depression. Bipolar disorder occurs in approximately 1% of the population and has high rate of relapse and suicide.1 Symptoms of major depressive disorder often persist despite antidepressant therapy2 and the disorder is often recurrent.3 Psychotherapy may have a role as adjunctive therapy to prevent relapse or to resolve residual symptoms in patients with mood disorders.1,4 This report will address the clinical effectiveness of group psychotherapy or psychoeducation in patients with mood disorders.

RESEARCH QUESTION:

What is the clinical effectiveness of group therapy interventions for the treatment of patients with mood disorders to improve functioning, health-related quality of life (HRQL), and reduce hospitalization?

METHODS:

A focused search (main concepts appeared in subject heading) was conducted in Medline and PsycINFO. A limited literature search was conducted on all other key health technology assessment resources, including PubMed in process, The Cochrane Library (Issue 3, 2009), University of York Centre for Reviews and Dissemination (CRD) databases, ECRI, EuroScan, international health technology agencies, and a focused Internet search. The search was limited to English language articles published between 2004 and September 2009. Filters were applied to limit the retrieval to health technology assessments, systematic reviews, meta-analyses, randomized controlled trials (RCTs), controlled clinical trials, and observational studies.
Studies were included if they compared group psychotherapy or psychoeducation to other forms of treatment in patients with depression or bipolar disorder. Studies of family therapy, or studies of patients with sub-clinical depression, or depression related to another condition (eg, cancer, multiple sclerosis, HIV infection) were excluded. Due to the volume of studies identified, only health technology assessments, systematic reviews or meta-analyses, and RCTs were included.

HTIS reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment (HTA) reports, systematic reviews, and meta-analyses are presented first, followed by RCTs.

**SUMMARY OF FINDINGS:**

One HTA, two meta-analyses, one systematic review, and eight RCTs were found that assessed group psychotherapy in patients with a mood disorder.

**Health technology assessments**

**Bipolar disorder**

One HTA evaluated the clinical and cost-effectiveness of interventions to prevent relapse in patients with bipolar disorder. The authors conducted an extensive systematic literature search of multiple databases. Randomized and quasi-randomized trials with at least three months of follow-up were included in the systematic review. The report included three clinical trials of group psychotherapy which were relevant to this HTIS response.

Data from two RCTs comparing group psychoeducation to unstructured group meetings were pooled. One RCT reported the two year outcome data from the Colom et al.\(^5\) trial described in the randomized controlled trials section. The second study enrolled 50 adult patients with bipolar I disorder (38% male). In this study, patients in both groups attended weekly 90 minute group sessions for 21 weeks and were followed for 2 years. When data were pooled, group psychoeducation was associated with significantly fewer relapses to hospital [OR 0.42 (95% CI 0.21 to 0.86) \(p=0.02\)], manic relapses [OR 0.27 (95% CI 0.14 to 0.53) \(p<0.001\)], and depressive relapses [OR 0.24 (0.12 to 0.45) \(p<0.001\)] compared to non-structured group meetings.

One quasi-randomized trial compared integrated group therapy to usual care (pharmacotherapy and possibly psychotherapy). It included 45 adult patients with bipolar I and II disorder (51% male, 80% single). Patients in the treatment group received 12 to 20 one hour integrated group sessions on a weekly basis as an adjunct to usual pharmacotherapy. Quality of the study was stated as poor by the HTA authors. No statistically significant difference was detected between groups in the number of relapses requiring hospitalization [OR 0.86 (95% CI 0.26 to 2.85)]. There was no difference in the number of suicides although the data was too sparse to draw any conclusions.\(^5\)

The authors stated that overall, studies of psychosocial interventions were small, with few data for each comparison, making it difficult to draw any firm conclusions. None of the studies reported on adverse events and drop-outs were poorly reported. There is some evidence that group psychoeducation is more effective than non-structured group meetings.\(^5\)
Systematic reviews and meta-analyses

Depression

A meta-analysis by Cuijpers et al.\(^4\) compared individual psychotherapy to group psychotherapy in adults with depression or elevated depressive symptomatology. The authors conducted an extensive search of electronic databases, and hand-searched for relevant RCTs. The effect size was calculated by subtracting the mean score of the experimental group from the mean score of the individual treatment group and dividing by the combined standard deviation. An effect size of 0 to 0.32 was considered small, 0.33 to 0.55 moderate, and 0.56 to 1.2 as large.\(^4\)

Fifteen RCTs with a total of 673 patients (range 10 to 182 patients) were included in the review.\(^4\) In 12 studies, patients met diagnostic criteria for depression and in the other three studies, patients scored high on a self-rated depression scale. A number of the studies had multiple treatment groups therefore a total of 19 comparisons were analyzed. In 13 comparisons the intervention and control treatments were considered equivalent (same manual or methods delivered either individually or in groups). In six comparisons the intervention and control treatments were not equivalent (for example a wait-list). The number of sessions varied between six and 20. The studies were conducted in the US, UK, and Australia and were published between 1981 and 2005. The Beck Depression Inventory (BDI) was the instrument used to measure outcomes in most of the studies. Quality of the studies varied and drop-outs ranged from 0% to 43%. When all studies were pooled, an overall effect size of 0.2 (95% CI 0.05 to 0.35) was detected favoring individual over group treatment. Six and 12 months after termination of the intervention the differences between groups were similar and no longer statistically significant [12 months: effect size -0.17 (95% CI -0.53 to 0.19)]. The authors concluded that there may be small differences between treatments in the short term but differences may not be clinically relevant. The results of the meta-analysis should be viewed with caution because of the small number of studies and limited quality of trials.\(^4\)

A second meta-analysis by Oei et al.\(^7\) evaluated the effectiveness of group cognitive behavior therapy in patients with unipolar depressive disorders. They searched two electronic databases for randomized and non-randomized studies in adult patients. Thirteen of the included studies were controlled trials and 22 were uncontrolled (pre to post design). Only data from the controlled trials are included in this summary. The controlled trials enrolled a total of 673 patients (range 19 to 97 patients) in studies published between 1977 and 1999. Severity of depression ranged from patients with symptoms of low mood to those with a diagnosis of severe major depression. The length of treatment duration was five to 20 weeks of group cognitive behavior therapy. Many of the studies had multiple comparators. A wait-list control group was included in 77% of trials, placebo or brief consultation for medication monitoring in 23% of trials, and non-directive or minimal contact control in 15% of trials. Active comparators included other forms of group or individual psychotherapy or drug therapy. The outcome measures included cognitive, behavioral, mood, or general health measures. If there was more than one outcome per study, an effect size was calculated for each variable and then averaged to form a composite effect size estimate.\(^7\)

All the controlled trials yielded an effect size that favored group cognitive behavior therapy over the control group (range 0.1 to 2.87). The average effect size was 1.11 across studies. This indicates that the average person in cognitive behavior group therapy improved more than one standard deviation compared with the average person in the control group. Compared to other
active treatments, the effect size favored group cognitive behavior therapy in 13 comparisons, and favored the comparator treatment in six comparisons. The authors concluded that group cognitive behavior therapy yielded better outcomes than no-treatment controls and comparable outcomes to other active controls in patients with varying levels of depression.⁷

A third systematic review compared the effectiveness of group or individual cognitive behavior therapy in patients with long-term depression.⁸ This study included randomized and quasi-randomized trials in adolescents or adults with depression measured by the BDI (≥12) or Hamilton Depression Rating Score (HAMD) (≥14). The outcome measure of interest was change in depression inventory scores (ie, BDI or HAMD). The review authors did not report the search or screening methods, or the number of included and excluded studies. Meta-analyses were conducted when there were a sufficient number of studies with the same treatment and comparator. Narrative synthesis was conducted for all other comparators.

In the review, 11 studies (describing 12 treatment comparisons) were relevant to this HTIS inquiry; nine in adults and two in adolescents.⁸

- In adult patients, two trials compared group therapy to wait list controls. One trial reported that group therapy produced statistically significant reductions in the BDI compared to wait list control at the end of treatment (group therapy mean BDI 13.8 [SD 10.3]; control 22.8 [11.0] p<0.05). Treatment gains were maintained at one year post therapy. Statistically significant reductions in BDI and HAMD depression scores were reported in a second trial of group cognitive behavior therapy compared to wait list control however the authors failed to report the data to support this inference.
- Four studies compared individual to group cognitive behavior therapy in patients with long-term mild to severe depression (mean age 30 to 43 years). Both treatment modalities were effective in reducing BDI depression scores from baseline to post treatment, and from baseline to follow up (one month to 12 months). These differences were reported as statistically significant in all four studies, however only two studies reported intention to treat analyses were statistically significant. When group therapy was compared to individual therapy, no statistically significant difference was detected between treatments (pooled weighted mean difference 0.2 [95% CI -2.1 to 2.6]). Similar results were reported when HAMD data were pooled.
- In the two studies that compared group therapy to computer-assisted therapy no statistically significant differences between treatments were detected. Both treatments were associated with significant reductions in depression scores over the time of treatment (p<0.0001).
- In two trials group versus individual class therapy showed no significant differences between treatments when data on BDI scores one month and six months after treatment were pooled (6 month weighted mean difference -2.1 [95%CI -5.5 to 1.2]). Compared to baseline, BDI scores were statistically significantly reduced for both treatments at one and six months follow-up.
- Two studies assessed group cognitive therapy in adolescents with depression (total n=56). Reductions in BDI scores favored group therapy versus wait list control (weighted mean difference -11.2 [95%CI -16 to -6.5]).

The authors concluded that individual and group cognitive behavior therapy were comparable in effectiveness for adults with moderate to severe depression. Both were superior to no treatment.⁸
Randomized controlled trials

Bipolar disorder

Our search identified two RCTs evaluating group therapy in patients with bipolar disorder (Appendix Table 1). One pilot study compared group therapy (education, peer support, coping strategies, and relapse prevention) plus a Collaborative Therapy Journal, to a non-active control. This study enrolled 20 adult patients with a current DSM-IV diagnosis of bipolar affective disorder whose symptom severity allowed for participation in group therapy. All patients received standard pharmacological treatment but no additional group therapy programs. The treatment group received 12 weekly group sessions followed by three monthly booster sessions. Control patients were contacted weekly by the research staff. Patient characteristics were similar between groups. Three of the 20 patients left the study early.

After six months of follow-up, patients in the treatment group showed higher Global Assessment of Functioning (GAF) scores than the control group. Mean improvement due to treatment was 12 points (95% CI 3 to 21). These differences were statistically significant in the unadjusted analysis but not when adjusted for baseline GAF score. HRQL was similar between treatment and control groups for all but one subscale on the World Health Organization Quality of Life brief scale (WHOQoL-BREF). The social relationship subscale showed an improvement with group therapy treatment that reached statistical significance in the unadjusted but not the adjusted analysis. Fewer relapses were reported in the treatment than in the control group but the differences were not statistically significantly different (p=0.3). The authors concluded that group intervention in addition to usual treatment may potentially be beneficial but additional studies are required.

The second RCT compared group psychoeducation therapy to a non-structured group intervention. Adult patients who met the DSM-IV criteria for bipolar disorder (n=120) were recruited to participate in this five year study. Patients were randomly allocated to either treatment or control group sessions delivered weekly over 21 weeks. Patients currently experiencing mild to severe depressive or manic symptoms, or those with a DSM-IV Axis I comorbidity were excluded. Patients received standard pharmacotherapy but agreed not to receive psychotherapy outside of the trial. The research staff were blinded to the treatment group. Patient characteristics were similar between groups. Seventy-three percent of patients adhered to psychoeducation sessions and 88% to the control group sessions. A similar number of patients were lost to follow up in each group over the five-year study (~17.5%).

Over the five year follow-up, the time to recurrence was statistically significantly longer in the psychoeducation group compared to the control group (p<0.002). The number of recurrences were less in the psychoeducation group versus the control group (3.9 versus 8.4, p<0.0001, respectively). This reduction in recurrences did not diminish over time. Patients in the treatment group spent fewer days ill than the control over the 5 years [mean difference 433 days (95% CI 280 to 585) p<0.0001]. The total number of hospitalizations was not statistically significantly different between groups, however, the hospitalizations per person were significantly lower in the treatment group compared with the control group (0.24 versus 0.59 respectively, p=0.02). The authors concluded that a 21 week psychoeducation program has a lasting prophylactic effect on patients with bipolar disorders.
Depression

A total of six RCTs were identified in patients with depression (Appendix Table 2).\textsuperscript{2,3,9-12}

The study by Ludman et al.\textsuperscript{12} was designed to test the feasibility of a telephone care management program for patients with depression. A total of 104 adults with chronic or recurrent depression were randomized to one of four treatments: usual care, telephone care management, telephone care management plus peer-led self-management group program, or telephone care management plus professionally led group cognitive behavior therapy. No statistically significant differences were detected between groups on the change in depression symptom scores over time. All groups showed improvement over the 12 month follow-up. Although the two group programs had a lower percentage of patients with major depression at 12 months than usual care or telephone management, the differences were not statistically significant. The authors stated that the study was too small to determine clinical efficacy and that further study is necessary.\textsuperscript{12}

A naturalistic multicentre study conducted in Sweden evaluated a six week group education and support program compared to usual care (n=319).\textsuperscript{3} Follow up of patients was limited to six weeks and reporting of results was not clear. Data was presented only for a subset of patients with clinical depression symptoms at the beginning of the trial. It was therefore difficult to draw conclusions from the finding reported in this short term trial.\textsuperscript{3}

A pilot study in Germany assessed the feasibility of a dialectical behavior therapy group program in patients with treatment resistant depression.\textsuperscript{2} A total of 24 patients were randomized to either group therapy or a wait list. Nineteen patients completed the 16 week treatment course (10 in group therapy and nine on the wait list). Patients in group therapy showed greater improvement in depression scores over the 16 weeks of treatment than the wait list control. These differences were statistically significant and the effect size of 1.45 was considered large. In other exploratory analyses, patients in the group program showed greater improvement in measures of satisfaction in current functioning compared to those in the wait list control group. The authors concluded that behavior therapy improved depression symptoms compared to control warranting further study in larger scale trials.\textsuperscript{2}

A single centre RCT in Germany enrolled patients (n=368) with mild depression or dysthymia into one of five treatment groups: group cognitive behavior therapy, group self-help therapy, sertraline, placebo, or the patient’s choice of either cognitive behavior therapy or sertraline.\textsuperscript{10} Patients were treated for 10 weeks and the primary outcome measure was the change in the HAMD score. The patients enrolled were primarily female (68%) of whom 29% had received prior antidepressant therapy. Baseline mean HAMD scores were similar and varied from 15.6 to 16.4 across groups. After 10 weeks of treatment the mean change in HAMD scores was lowest in the self-help group [1.9 (95% CI -0.3 to 4.1)] and highest in the sertraline group [6.8 (95%CI 4.9 to 8.6)]. A change in HAMD score of three or more is considered clinically important. In the cognitive behavior therapy group, the change in HAMD score was 6.7 (95% CI 4.7 to 8.8). The difference between cognitive behavior therapy and other treatments was statistically significant for self-help (p=0.001) but not placebo, sertraline, or patient’s choice groups. The differences between groups in the number of drop-outs was also statistically significant, with the patient’s choice and placebo groups showing the lowest drop out rates (30% to 33%), and the self-help and cognitive behavior groups showing the highest rates (59% and 46% respectively). The authors concluded that sertraline is effective in patients with mild depression. Although group
Cognitive behavior therapy was superior to a guided self-help program, the authors stated that this may be in part due to problems designing an appropriate "placebo" condition for psychotherapy.\textsuperscript{10}

A multicenter trial conducted in Europe (n=410) evaluated the efficacy of group therapy, individual problem solving therapy, and usual care in the management of depression in a cohort of adults.\textsuperscript{11} Patients were selected from rural and urban areas using census records and screened for depression. Those with clinical depression were randomly enrolled in one of the three treatment groups. The study did not provide any details on the nature of the group or individual treatments offered, nor the portion of patients completing treatment. After six months, the mean BDI score was statistically significantly higher (indicating more depression symptoms) in the control group compared to individual therapy (mean difference 2.7 points p=0.04). Mean BDI scores were similar between the patients in individual and group therapy [individual: 12.4 (SD 10.5), group: 14.5 (SD 9.8), p=0.08]. At 12 months, no statistically significant differences in mean BDI scores were found between groups. The study also analyzed the impact of personality disorder and baseline BDI score on six and 12 month outcomes. The authors concluded that further study is needed on the effectiveness of different types of psychotherapy in patients with personality disorder.\textsuperscript{11}

A pilot randomized trial (n=45) in elderly patients with depression compared group cognitive behavior therapy to usual care (pharmacotherapy but no psychotherapy).\textsuperscript{9} Patients >60 years of age with a prior episode of major depression and who were receiving antidepressant therapy were recruited from general or psychiatric practice in the UK. Patients in the treatment group received eight group therapy sessions. Twenty percent of patients were lost to follow-up over the course of one year. Fewer patients in the treatment group had a relapse over six or 12 months. The differences in relapse rates were not statistically significant [relative risk of relapse at 12 months treatment versus control: 0.7 (95% CI 0.26 to 1.94) p=0.5 adjusted for baseline depression score and cluster effect]. The author concluded that cognitive behavior therapy is promising however a full scale trial in older adults is warranted.\textsuperscript{9}

Limitations

The overall quality of studies evaluating group psychotherapy in patients with mood disorders was limited. Many of the studies were pilot of feasibility trials with small sample size (64% enrolled ≤50 patients) and short term follow up (67% had a follow up period ≤ six months). Most studies measured changes in depression scores and did not assess HRQL or other important patient outcomes. None of the studies reported potential adverse events of psychotherapy. Assessors were blinded to treatment allocation but none of the studies evaluated if blinding was maintained. Many of the trials were single centre studies in outpatients and excluded patients with co-morbidities or substance abuse problems. This may limit generalizibility. In addition, the use of pharmacotherapy likely varied throughout the trials, and not all patients may have been taking antidepressants.

None of the studies conducted best-case/worst-case sensitivity analyses to assess the impact of patients who withdrew from treatment or were lost to follow-up. The majority of studies did not take into consideration the cluster effect seen with group treatment. The patients attending a group therapy will tend to have more similar outcomes than others receiving an individual therapy. Statistical tests which do not take into consideration this within group correlation may underestimate the standard errors.
CONCLUSIONS AND IMPLICATIONS FOR DECISION OR POLICY MAKING:

The studies identified suggest that group psychotherapy may be beneficial in reducing depression scores in the short term relative to no-psychotherapy controls however the benefits may not persist with longer term follow up. No conclusions can be drawn on the impact on functioning, HRQL, or hospitalization.

In patients with bipolar disease, data from 5 reports (4 studies) was found. The limited data suggests that group psychotherapy may reduce the number of recurrences compared to non-structured group therapy. No conclusions can be drawn on the impact on HRQL.

There were differences in the patient populations included in the RCTs, and selecting the patient population suitable for group therapy may be a consideration for decision makers. In addition, compliance with therapy and details such as appropriate length of treatment may also be a factor to consider when deciding about the use of group therapy for patients with mood disorders.

PREPARED BY:
Gaetanne Murphy, BSc Pharm, Research Officer
Carolyn Spry, BSc, MLIS, Information Specialist
Health Technology Inquiry Service
Email: htis@cadth.ca
Tel: 1-866-898-8439
REFERENCES:


## APPENDIX: SUMMARY OF RCTs ON GROUP THERAPY AND MOOD DISORDERS

### Table 1: Summary of RCTs in Bipolar Disorder

<table>
<thead>
<tr>
<th>Study, design, number enrolled, withdrawals, follow-up, setting</th>
<th>Population</th>
<th>Intervention</th>
<th>Results</th>
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</thead>
<tbody>
<tr>
<td>Castle et al. 2007¹ RCT, blinded assessors</td>
<td>Adults with DSM-IV diagnosis of bipolar affective disorder referred by service providers or self-referred. Mean age: 44 years (SD 10) Male: 18% Employed: 53% Married: 82%</td>
<td>Treatment group received weekly 90 minute group therapy for 12 weeks plus 3 monthly booster sessions as outpatients. Information booklet and Collaborative Therapy Journal were provided. Control group received weekly phone calls from research staff. All patients received medical management excluding other structured group therapy programs.</td>
<td>GAF mean improvement with treatment from baseline to 6 months: Treatment: 15(SD 11) Control: 1(8), p=0.08 WHOQoL-BREF change from baseline to 6 months No statistically significant differences between groups in the adjusted analysis Relapse over 10 months (patients who met DSM-IV criteria for manic or depressive episode or required hospitalization) Treatment: 1/8 Control: 4/9, p=0.3</td>
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¹ Note: This study had a sample size of 20 participants, with 2/10 withdrawing from the treatment group and 1/10 from the control group. The follow-up period was 10 months, and the study was conducted at a single centre in Australia.
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<tr>
<td>Colom et al. 2009&lt;sup&gt;6&lt;/sup&gt;</td>
<td>18 to 65 year old patients with DSM-IV diagnosis of bipolar affective disorder referred by clinicians.</td>
<td>Treatment group received 21 weekly 90 minute group outpatient psychoeducation sessions</td>
<td>Time to recurrence statistically significantly different between groups, favoring psychoeducation, p&lt;0.002.</td>
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<tr>
<td>RCT, blinded assessors</td>
<td>Mean age: 34 years Male: 37%</td>
<td>Control group met weekly in groups without special instructions from therapist.</td>
<td>Number of recurrences over 5 years</td>
</tr>
<tr>
<td>N=120 (10/60 withdrew or lost to follow-up in treatment group, and 11/60 in control group)</td>
<td>Mean number of prior hospitalizations Treatment: 1.81 (SD 1.8)</td>
<td>All patients received standard pharmacologic treatment without additional psychotherapy.</td>
<td>Treatment: 3.86 Control: 8.37, p&lt;0.0001</td>
</tr>
<tr>
<td>Follow-up: 5 years</td>
<td>Control: 2.01 (SD 2.1)</td>
<td></td>
<td>Hospitalizations due to recurrence over 5 years</td>
</tr>
<tr>
<td>Single centre, Spain</td>
<td>Treatment: 1.81 (SD 1.8)</td>
<td></td>
<td>Treatment: 17/56 (30.4%) Control: 24/60 (40%), p=0.3</td>
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<tr>
<td></td>
<td>Control: 2.01 (SD 2.1)</td>
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<td>Mean days spent ill over 5 years</td>
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CI=confidence interval; DSM-IV=Diagnostic and Statistical Manual of Mental Disorders, 4th Edition; GAF=Global Assessment of Function scale (range 1 to 100, higher score reflect improvement); RCT=randomized controlled trial; SD=standard deviation; WHOQoL-BREF= World Health Organization Quality of Life brief form
### Table 2: Summary of RCTs in Depression

<table>
<thead>
<tr>
<th>Study, design, number enrolled, withdrawals, follow-up, setting</th>
<th>Population</th>
<th>Intervention</th>
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<tbody>
<tr>
<td>Ludman et al. 2007&lt;sup&gt;12&lt;/sup&gt; RCT, blinded assessors</td>
<td>Adults with recurrent major depression receiving antidepressant therapy recruited from specialist care. Mean age: 50 years (SD 12.3) Male: 29% Married: 48% Employed: 61%</td>
<td>Professional led group cognitive behavior therapy (22 sessions) plus telephone care management Peer-led chronic disease self-management (6 week program) plus telephone care Telephone care management Usual care (any primary or specialty care services)</td>
<td>SCL depression scores over time (0, 3, 6, 9, 12 months) No statistically significantly differences between groups. All treatment groups showed a reduction in symptom scores over time. Major depression at 12 months Group: 24% Peer-led: 20% Telephone: 35% Usual care: 35%, p=NS</td>
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<tr>
<td>N=104 (lost to follow-up NR) Follow up: 12 months Single centre, US</td>
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<td>Hansson et al. 2008&lt;sup&gt;3&lt;/sup&gt; RCT, blinding NR N=319 (17% withdrew from treatment group and 8% from control) Follow-up: 6 weeks Multi-centre, Sweden</td>
<td>Adults (18 to 69 years) diagnosed as clinically depressed by family physician Mean age: 43 to 45 years Male: 27% Antidepressants: 82% Psychotherapy: 8%</td>
<td>Group therapy: 6 weekly educational and group sharing discussions Control: usual care All patients received primary care treatment for depression which may include pharmacotherapy or psychotherapy.</td>
<td>Proportion of patients on sick leave: Treatment: baseline 52.7%; 6 weeks 58.9% Control: Baseline 38.6%; 6 weeks 68.6% p=0.004 Among a subset (35 to 40%) of patients with clinical depression at baseline, 42% in the treatment group and 21% in the control group achieved remission (p=0.021).</td>
</tr>
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<tr>
<td>Harley et al. 2008&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Adults (18 to 65 years old) with major depression (DMS-IV) and ongoing symptoms despite adequate doses of antidepressants</td>
<td>Group dialectical behaviour therapy 16 weekly 90 minute sessions</td>
<td>Mean HAMD score at 16 weeks Treatment: 11.3 (SD 5.3) Control: 17.1 (6.2), p&lt;0.05</td>
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<tr>
<td>RCT, blinded assessors</td>
<td>N=24 (21% withdrew)</td>
<td>Wait list control</td>
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<tr>
<td>Follow-up: 6 months</td>
<td>Mean age: 42 years Male: 25% Married: 25% HAMD baseline score: 17.3 (SD 4.7)</td>
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<td>Single centre, US</td>
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<tr>
<td>Hegerl et al. 2009&lt;sup&gt;10&lt;/sup&gt;</td>
<td>Adults with subthreshold depression, dysthymia or mild to moderate major depression (DSM-IV) recruited from primary care</td>
<td>Group cognitive behavior (CBT) therapy: 9 weekly 90 minute sessions</td>
<td>Change in HAMD score (baseline to 10 weeks) CBT: 6.7 (95% CI 4.7 to 8.8) Self help: 1.9 (-0.3 to 4.1) Sertraline: 6.8 (4.9 to 8.6) placebo: 4.5 (2.9 to 6.0) patient’s choice: 6.1 (4.5 to 7.7) Between group comparisons CBT vs: self help p=0.001 sertraline p=0.39 placebo p=0.31 patient’s choice p=0.95</td>
</tr>
<tr>
<td>RCT, assessor blind</td>
<td>Mean age: 46 years (SD 14.6) Male: 31.8% Major depression: 31% Prior drug treatment: 29%</td>
<td>Guided self-help group program: 9 weekly 90 minute sessions</td>
<td></td>
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<tr>
<td>N=368 (27% excluded in primary analysis, 41% in per protocol analysis)</td>
<td>Sertraline 50 to 200 mg/day</td>
<td>Placebo</td>
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<tr>
<td>Follow-up: 10 weeks</td>
<td>Patient’s preference of sertraline or cognitive behavior therapy</td>
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<td>Single centre, Germany</td>
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Drop out rates
CBT: 46%
Self help: 59%
Sertraline: 42%
Placebo: 33%
Patient’s choice: 30%, p=0.005
<table>
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<tr>
<td>Kelly et al. 2009&lt;sup&gt;11&lt;/sup&gt;</td>
<td>Adults (18 to 64 years old) selected from census register (non-treatment seeking). Those diagnosed with depression on screening were enrolled. Mean age: 45 years (SD 10.6) Male: 35% Mean BDI baseline: 22.8 (SD 8.2)</td>
<td>Group sessions on prevention of depression Individual problem solving treatment Usual primary care (no specific psychological treatment)</td>
<td>Mean BDI score at 6 months Group: 14.5 (SD 9.8) p=0.08 vs individual Individual: 12.4 (10.1) Control: 15.2 (10.5) p=0.04 versus individual Mean BDI score at 12 months No differences were detected between treatment groups, p=0.13</td>
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<tr>
<td>Wilkinson et al. 2009&lt;sup&gt;9&lt;/sup&gt;</td>
<td>Adults &gt;60 years old who had experienced an episode of major depression (WHO criteria) within 1 year and were receiving antidepressant therapy (MADRS&lt;10). Mean age: 73 to 75 years Male: 38% Severe or psychotic depression: 31%</td>
<td>Group cognitive behavior therapy: 8 weekly 90 minute sessions Control: usual care (no psychological treatment) All patients continued antidepressant therapy with follow up by GP or mental health team.</td>
<td>Recurrence at 6 mo (MADRS&gt;10) Treatment: 1/18 (6%) Control: 4/19 (21%) RR 0.34 (95% CI 0.03 to 3.35) adjusted p=0.35 Recurrence at 12 mo Treatment: 5/18 (28%) Control: 8/18 (44%) RR 0.7 (0.26 to 1.94) adjusted p=0.50</td>
</tr>
</tbody>
</table>

BDI= Beck Depression Inventory; CBT=cognitive behavior therapy; CI=confidence interval; DSM-IV=Diagnostic and Statistical Manual of Mental Disorders, 4th Edition; GP=general practitioner; HADS=Hospital Anxiety and Depression Scale; HAMD=Hamilton Depression Rating Scale; MADRS=Montgomery-Asberg Depression Rating Scale; SCL=Hopkins Symptom Checklist; NR=not reported; NS=not statistically significant; RCT=randomized controlled trial; SD=standard deviation; WHO=World Health Organization