Effectiveness of cognitive behavioral therapy for depression in patients receiving disability benefits: a systematic review and individual patient data meta-analysis


CRD summary
There was no evidence that cognitive-behavioural therapy had smaller effects in depressed patients receiving disability benefits compared to other patients and CBT should remain a recommended treatment for this group but the available evidence was limited and much larger trials were needed to confirm this hypothesis. The cautious conclusions of this review are likely to be reliable.

Authors' objectives
To compare the effectiveness of cognitive-behavioural therapy (CBT) to minimal/no treatment or care-as-usual in patients with depression receiving disability benefits versus those not receiving benefits.

Searching
PubMed, EMBASE, PsycINFO, AMED, CINAHL and Cochrane Central Register of Controlled Trials (CENTRAL) were searched up to June 2011. Bibliographies of relevant trials were searched. Search terms were reported.

Study selection
Adult patients diagnosed with major depression randomly assigned to cognitive-behavioural therapy versus minimal/no treatment or care-as-usual were eligible for inclusion. Data that compared CBT only versus active comparators were not abstracted unless the active comparator was equally balanced between treatment and control groups. Depression was the outcome of interest as measured by the Beck Depression Inventory (BDI-II).

Only one of the two studies that included patients receiving disability benefits reported the age of participants (mean 45 years). Participants who received disability benefits had more severe depression compared to those that did not receive disability benefits (BDI-II 32.9 versus 26.9).

CBT was delivered in person or over the Internet. Most sessions were in-person and individualised. Sessions lasted 30 minutes or one hour, once a week over nine to 15 weeks. Only one study reported the clinical background of the individuals delivering the intervention (master's level therapist). Comparators were pharmacotherapy alone or treatment as usual.

Three teams of reviewers selected the studies independently and in duplicate.

Assessment of study quality
Risk of bias was assessed by several reviewers and covered the domains: sequence generation; allocation concealment; blinding of participants, investigators, data collectors, outcome assessors and data analysts; incomplete outcome data; selective outcome reporting; and other sources of bias. Disagreements were resolved by discussion or with an additional reviewer. The review authors clarified uncertainties or discrepancies in the data sets with the study authors.

Data extraction
Where available, individual patient data on depression were obtained through contacting study authors to enable calculation of mean differences (MD) in Beck Depression Inventory (BDI-II) scores. Individual patient data could not be obtained for one study with separate data on patients who received disability benefits; data from this study was not extracted. Aggregate data from trials that did not enrol any patients in receipt of benefits were extracted.

Three teams of reviewers extracted data independently and in duplicate.

Methods of synthesis
An individual patient meta-analysis was used to pool mean differences using a one-stage method. Heterogeneity was assessed using I² and X². A difference of five points or more in the outcome of interest was considered clinically
Secondary analyses were conducted to evaluate differences in patients not in receipt of disability benefits between trials that included patients receiving disability benefits and trials with aggregate data that did not include patients receiving disability benefits. Secondary analyses using a two-stage method were conducted to assess whether there were differences in patients not in receipt of disability benefits between trials that included patients in receipt of disability benefits and trials with aggregate data that did not include patients receiving disability benefits.

Results of the review
Two randomised controlled trials (RCTs) reported some individual patient data on patients receiving disability benefits (34 out of a total of 227 patients) and were included in the main analyses. Follow-up duration was three months. Risk of bias was high for most quality domains, except for those associated with selection bias (low risk in one RCT), reporting bias (two RCTs) and other bias (two RCTs).

Pooled results from the trials including both those receiving and not receiving disability benefits suggested a possible benefit of CBT on depression (MD -2.61, 95% CI -5.28 to 0.07). Subgroup analyses showed improved outcomes both for patients in receipt of disability benefits (MD -6.88, 95% CI -14.06 to 0.31) and patients not receiving disability benefits (MD -2.22, 95% CI -5.07 to 0.63). Results suggested a possible larger effect on reducing depression in those receiving versus not receiving disability benefits but the difference was not statistically significant.

Secondary analyses showed no difference among patients not in receipt of disability benefits across studies that enrolled patients receiving disability benefits and studies that did not (eight trials, including the two included in the primary analyses).

Authors’ conclusions
There was no evidence that CBT has smaller effects in depressed patients receiving disability benefits compared to other patients and CBT should therefore continue as a recommended treatment for this group. The available evidence was limited and much larger trials were needed to confirm this hypothesis.

CRD commentary
The review question was clear and supported by potentially reproducible inclusion criteria. The search strategy included several relevant sources. Trial investigators were contacted for individual patient data.

Quality of the studies was assessed and indicated a high risk of bias for the studies included in the main analyses. Three teams of reviewers selected and extracted data in duplicate. Individual patient data were checked for uncertainties and discrepancies. Heterogeneity was assessed using appropriate tools and the chosen method of synthesis appeared to be appropriate. Inferences regarding the relative effect of CBT between populations receiving and not receiving disability benefits were very weak given the limited number of patients included and the imprecision of the pooled estimates (this was acknowledged by the authors).

The authors presented a conclusion that reflected the evidence and acknowledged some potential limitations of the review. Given the limitations in the size and quality of the evidence base, the authors' conclusions appear reliable.

Implications of the review for practice and research
Practice: The authors stated that CBT should continue as a recommended approach for addressing depression in patients receiving disability benefits.

Research: The authors stated that much larger comparative trials conducted with low risk of bias and collaboration with insurers were needed to confirm the review conclusions. They stated that outcomes such as return to work and claims resolution should be investigated.

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