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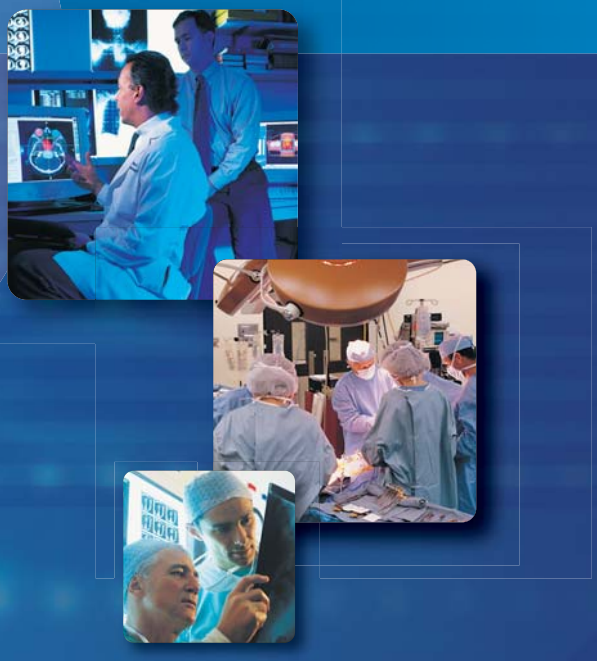
Self-Directed Cognitive Behavioural Therapy for Adults with Diagnosis of Depression: Systematic Review of Clinical Effectiveness, Cost-Effectiveness, and Guidelines



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Self-Directed Cognitive Behavioural Therapy for Adults with Diagnosis of Depression: Systematic Review of Clinical Effectiveness, Cost-Effectiveness, and Guidelines

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March 2010

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Health technology assessment (HTA) agencies face the challenge of providing quality assessments of medical technologies in a timely manner to support decision-making. Ideally, all important deliberations would be supported by comprehensive health technology assessment reports, but the urgency of some decisions often requires a more immediate response.

The Health Technology Inquiry Service (HTIS) provides Canadian health care decision-makers with health technology assessment information, based on the best available evidence, in a quick and efficient manner. Inquiries related to the assessment of health care technologies (drugs, devices, diagnostic tests, and surgical procedures) are accepted by the service. Information provided by the HTIS is tailored to meet the needs of decision-makers, taking into account the urgency, importance, and potential impact of the request.

Consultations with the requestor of this HTIS assessment indicated that a review of the literature would be beneficial. The research question and selection criteria were developed in consultation with the requestor. The literature search was carried out by an information specialist using a standardized search strategy. The review of evidence was conducted by one internal HTIS reviewer. The draft report was internally reviewed and externally peer-reviewed by two or more peer reviewers. All comments were reviewed internally to ensure that they were addressed appropriately.

Reviewers

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ACRONYMS AND ABBREVIATIONS

CBT	cognitive behavioural therapy
CCBT	computerized cognitive behavioural therapy
CI	confidence interval
DSM	Diagnostic Statistical Manual of Mental Disorders
HTA	health technology assessment
ICD	International Classification of Disease
BDI	Beck Depression Inventory
RCT	randomized controlled trial

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TITLE: Self-Directed Cognitive Behavioural Therapy for Adults with Diagnosis of Depression: Systematic Review of Clinical Effectiveness, Cost-Effectiveness, and Guidelines

DATE: March 2010

EXECUTIVE SUMMARY

Context and Policy Issues

The treatment options for depression include antidepressants and psychotherapy. One form of psychotherapy is self-directed cognitive behavioural therapy (CBT), which has the same treatment goals as traditional CBT. Self-directed CBT requires less involvement of and assistance from health care professionals. It can occur through the reading of self-help books (bibliotherapy) or through the use of computerized CBT (CCBT). It can be argued that patients have easier and more convenient access to self-directed CBT compared with traditional CBT.

Because of the potential for fewer resource demands as well as increased accessibility compared with other types of psychotherapy, there is an interest in evaluating the clinical and cost-effectiveness of self-directed CBT for individuals with a diagnosis of depression.

Research Questions

1. What is the clinical effectiveness of using self-directed cognitive behavioural therapy in the treatment of adults with a diagnosis of depression?
2. What is the cost-effectiveness of using self-directed cognitive behavioural therapy in the treatment of adults with a diagnosis of depression?
3. What are the evidence-based guidelines for using self-directed cognitive behavioural therapy in the treatment of adults with a diagnosis of depression?

Methods

Medline, Medline In-Process & Other Non-Indexed Citations, Embase, and PsychINFO were searched through the Ovid interface. Parallel searches were run in PubMed and The Cochrane Library (Issue 4, 2009). No filters were applied to limit the retrieval by study type. The search was restricted to English language clinical articles published between 2004 and November 2009. Regular alerts are current to January 5, 2010. Grey literature was also searched. Two authors selected articles for inclusion. Any disagreements were resolved through discussion until consensus was achieved.

Summary of Findings

Two randomized controlled trials (RCTs), one economic study, and three guidelines were summarized. One RCT found CCBT to be as effective as the comparators in treating depression. The second RCT found that minimal and assisted telephone contact bibliotherapy were effective in treating depression. The economic study found that, in Australia, bibliotherapy was the most cost-effective option compared with other CBT options. All three guidelines recommended self-directed CBT for the treatment of mild to moderate depression. Two guidelines recommended the "Beating the Blues" CCBT program as being clinically effective and cost-effective.

Conclusions and Implications for Decision or Policy-Making

Overall, the reviewed evidence indicated that self-directed CBT improved the clinical ratings of depressive symptoms and that it could be a cost-effective therapy option for individuals with mild to moderate depression. Given the limited evidence, it was uncertain whether self-directed CBT was effective for all individuals with depression; for example, those with more severe depressive symptoms. Also, it was uncertain whether one form of self-directed CBT was superior to another form of self-directed CBT. The factors that optimize the outcomes of self-directed CBT (for example, degree of assistance) were not explored in this report.

1 CONTEXT AND POLICY ISSUES

An individual with clinically diagnosed major depression or major depressive disorder has symptoms such as feelings of hopelessness, discouragement, and being "down in the dumps." The individual may be irritable, experience aches and pains, and have feelings of sadness.[1] Major depression can be diagnosed when an individual who experiences one or more major depressive episodes does not have a history of manic episodes or a mood disorder as a result of another medical condition.[1] An individual can experience one episode or recurrent episodes, and each episode can be mild, moderate, severe without psychotic features, or severe with psychotic features.[1]

Approximately 5.0% of Canadians report having had a major depressive episode within the past 12 months,[2] and approximately 8.0% of Canadians will experience major depression in their lifetime.[3] Up to 15.0% of individuals with clinically diagnosed severe major depression will commit suicide, and people with diagnosed major depressive disorder have more physical illnesses and decreased physical and social functioning.[1] Major depression has a large impact on the economy through health care costs and loss of work productivity.[3]

The treatment of major depression varies because there are several antidepressants and types of psychotherapy available.[4,5] Common types of psychotherapy that are used to treat individuals with major depression include interpersonal therapy and cognitive behavioural therapy (CBT).[5]

CBT is used to teach individuals about the way that thoughts can contribute to depressive symptoms and how to modify these thoughts.[5] The therapy is time-limited (often between six and nine weeks),[4] structured, goal-directed, and problem-focused.[5] CBT is often used by individuals with mild to moderate depression.[6] CBT can be performed individually or in groups, and with a therapist or self-directed.

Self-directed CBT can occur through the reading of self-help books (bibliotherapy) or through the use of a computerized system that is known as computerized CBT (CCBT). CCBT includes web-based programs, interactive telephone voice response systems, or computer programs.[7,8] Self-directed CBT assistance is limited to helping an individual use the materials, monitoring outcomes, and providing support. There is less assistance from health care professionals than during other therapies.[4,8] Because there is usually more access to self-directed CBT, it can often be used by people in rural and urban areas. CCBT can often be accessed from an individual's home, office, library, or from another place where an individual has computer access.[8] Because there are no appointment times for the therapy, an individual can access CCBT whenever they have access to a computer. The sessions can be repeated at each individual's convenience.[8]

Given the potential for more accessibility and less resource demands compared with other types of psychotherapy, there is interest in evaluating the clinical effectiveness of computerized and non-computerized self-directed CBT for individuals with clinically diagnosed depression.

2 RESEARCH QUESTIONS

1. What is the clinical effectiveness of using self-directed cognitive behavioural therapy in the treatment of adults with a diagnosis of depression?
2. What is the cost-effectiveness of using self-directed cognitive behavioural therapy in the treatment of adults with a diagnosis of depression?
3. What are the evidence-based guidelines for using self-directed cognitive behavioural therapy in the treatment of adults with a diagnosis of depression?

3 METHODS

3.1 Literature Search

Peer-reviewed literature searches were conducted to obtain published literature. All search strategies were developed by the information specialist with input from the project team.

The following bibliographic databases were searched through the Ovid interface: Medline, Medline In-Process & Other Non-Indexed Citations, Embase, and PsychINFO. Parallel searches were run in PubMed and The Cochrane Library (Issue 4, 2009). The search strategy comprised controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. No filters were applied to limit the retrieval by study type. Appendix 1 shows the search strategies.

The search was restricted to English language clinical articles that were published between 2004 and November 2009. Regular alerts were established on PsychINFO, Embase, and Medline. The information that was retrieved through alerts was current to January 5, 2010.

Grey literature (literature that is not commercially published) was identified by searching the websites of health technology assessment (HTA) and related agencies, professional associations, and other specialized databases. Google and other Internet search engines were used to search for additional information. These searches were supplemented by hand-searching the bibliographies and abstracts of key papers, and through contacts with appropriate experts and agencies.

Health Technology Inquiry Service reports are organized so that the higher quality evidence is presented first. Therefore, HTA reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials (RCTs), economic evaluations, and evidence-based guidelines.

3.2 Article Selection

The selected studies included adult patients (18 years and older) who were diagnosed with depression based on the Diagnostic Statistical Manual of Mental Disorders (DSM) III, IV, IV-R, or IV-TR; the International Classification of Disease (ICD) 9 or 10; or a validated and standardized clinical rating scale, such as the Beck Depression Inventory (BDI) with a clinical interview or clinical input. Primary studies were comparative and randomized. Systematic reviews reported a population where at least half of the participants met the depression criteria.

Where possible, statements about clinically meaningful differences were made. If the original study did not report clinically meaningful summary measures, other summary measures such as means and standard deviations were presented. More information on the clinical rating tools that were mentioned in the selected studies appears in Appendix 2.

Two independent reviewers (RB and KM) screened the titles and abstracts of the retrieved publications. The same two reviewers independently evaluated the full-text publications for article selection. Any disagreement was resolved through discussion until consensus was achieved.

This report was peer-reviewed by clinical experts.

4 SUMMARY OF FINDINGS

Of the 353 publications that were identified in the literature search, 304 were excluded after the screening of titles and abstracts. Five of the 49 publications that were retrieved for full-text screening were included. An additional five reports from the grey literature were included. The study selection appears in Appendix 3.

No HTAs, systematic reviews, or meta-analyses met the inclusion criteria. Four RCTs,[9-12] two economic studies,[13,14] and four evidence-based

guidelines[15-18] did meet the inclusion criteria. Two RCTs[9,10] were included in the systematic literature review of one of the guidelines[15] and are not separately summarized. One economic study[13] was summarized in a guideline[15] and is not separately summarized. One guideline[18] was an update to a previous guideline,[15] and therefore, only the updated guideline[18] was summarized. Details about the included studies appear in Appendix 4.

4.1 Randomized Controlled Trials

In 2009, de Graaf et al.[11] published an RCT on the clinical effectiveness of a self-guided CCBT program called "Colour Your Mood," which was a Dutch version of another program entitled "Coping with Depression Course." Originally intended for adults older than 50 years of age, "Colour Your Mood" was adapted for adults aged 18 years to 65 years for the study.

Randomly selected people from the general public were invited to complete an online screening questionnaire. Adults with confirmed Axis I depression (BDI-II scores of at least 16 and a computerized Composite International Diagnostic Interview) were randomized to be in one of three groups; "Colour Your Mood" (100 participants), treatment as usual control group (103 participants), or treatment as usual plus the CCBT program (100 participants). The adults had depressive symptoms for at least three months and were not being treated psychologically or pharmaceutically for depression.

Treatment as usual consisted of four to five visits with a general practitioner every second week and a prescription for antidepressant medication, if necessary. Adherence to CCBT was defined as attending a minimum of five sessions. Adherence to treatment as usual was defined as attending four consultations or taking prescribed antidepressant medication. At six months, participant adherence rates, rounded to the nearest percentage point, were 49% (of 91 participants) in the CCBT group, 34% (of 90 participants) in the treatment as usual group, and 13% (of 93 participants) in the CCBT plus treatment as usual group. The rationale for the number of participants per group was unclear. The percentage of patients who were prescribed antidepressants by a general practitioner was not statistically significantly different between the groups (range of 25.4% in the CCBT plus treatment as usual group to 37.9% in the treatment as usual group).

The primary outcome was severity of depression, which was measured using the BDI-II. Higher scores indicate more severe depression. The BDI-II was administered at baseline and at two, three, and six months. Other clinical rating scales were administered as secondary measures. In each of the three groups, there were statistically significant improvements in BDI-II scores over time (the authors stated that there were medium effect sizes, range 0.69 to 0.89, indicating strength of relationship). There were no statistically significant differences between the three groups for BDI-II scores, quality of life, dysfunctional beliefs, and general psychological distress. The only statistically significant difference in clinical rating scales occurred at three months in the Work and Social Adjustment Scale. Those using CCBT plus treatment as usual experienced greater improvement than those using CCBT alone or treatment as usual alone. The authors cautioned that interpretation of this test result was limited because multiple statistical tests were performed (increasing the chance of erroneous statistically significant findings). Possible explanations that were provided by the authors for the lack of between group differences included the thoughts that the actual CCBT program was less effective than other methods of self-guided CCBT, that the lack of clinical support affected the adherence rates (which the authors considered to be low) and effectiveness for individuals receiving CCBT, and that the severity of depression may have been uncharacteristically high for CCBT treatment (mean BDI-II scores in the groups ranged between 27.4 and 28.2, with a score greater than 29 indicating severe depression[15]). The authors noted that no group performed better than the 30% to 40% of participants who were expected to experience clinical

improvement from receiving orally administered placebo, as documented in previous research. Subgroup analyses for BDI-II scores were only done for those who adhered to the full treatment (per protocol). There were no clinically significant differences.

Other secondary measures included general practitioner visits, medical specialist visits, and use of antidepressants. Individuals in the CCBT group were statistically significantly less likely to access general practitioner services than individuals in the other two groups. Individuals in the treatment as usual group accessed more mental health care specialist services than individuals in the other groups. The authors stated that treatment adherence was low in all three groups. There were no differences in the use of antidepressants between the three groups. No conclusions about these outcomes were reported.

In 2008, Bilich et al.[12] published an RCT on the effectiveness of self-directed CBT bibliotherapy in adults with mild to moderate depression. CBT bibliotherapy is standardized treatment that is presented in books. The goal is to help patients identify issues about their thoughts and learn how to reframe their thinking by reading and doing exercises from the book with little to no therapist supervision. *The Good Mood Guide* by Phipps et al., which was published in 2003, was used as the treatment workbook.

Adult patients, who were recruited through advertisements, had to score between 10 and 29 on BDI-II and have a successful screening interview with a psychologist before they could be included in the study. During the eight-week CBT program, follow-up occurred at baseline, end of treatment, and four weeks after treatment ended. Patients were randomized to receive no therapy, bibliotherapy plus five minutes per week of telephone contact with a therapist (minimal contact group), or bibliotherapy plus 30 minutes per week of telephone contact with a therapist (assisted contact group). During the weekly follow-up, the groups with contact were assessed using the Depression Anxiety Stress Scales – Depression Subscale. Their progress on the bibliotherapy was also assessed. The research assistants conducting the telephone calls were dissuaded from counseling. Adherence was monitored.

No differences on baseline attributes, such as gender, age, or geographic location were found between the three groups. Baseline BDI-II mean (standard deviation) scores were 19.2 (5.7), 19.5 (5.4), and 20.4 (5.0) in the wait-list group, minimal contact group, and assisted contact group respectively. No differences in adherence rates occurred between the groups. Participants completed an average of two sessions per week. Patients in the minimal contact and assisted contact groups obtained statistically significant improvements at the end of the treatment compared with the control group in all three measures (BDI-II, Kessler Psychological Distress Scale-10, and Depression Anxiety Stress Scales). The minimal contact and assisted contact groups performed better in their groups over time on the Depression Anxiety Stress Scales and BDI-II. The benefits were maintained four weeks after the end of treatment. There were no differences between the minimal contact and assisted self-help groups at the end of the study or at follow-up. Of the participants who completed the study, clinically significant improvements were seen in 44% of the minimal contact group, 56% of the assisted contact group, and 18% of the control group. A clinically significant improvement was based on a BDI-II score of less than 9 (representing a score within one standard deviation of a non-distressed sample) and a reliable change index (using 0.48 as a reliability coefficient). More information on the reliable change index appears in Appendix 2.

4.2 Economic Evaluations

In 2005, Vos et al.[14] published an article on the cost-effectiveness of guided CBT, self-guided CBT using books (bibliotherapy), and drug interventions.

The cost-effectiveness of therapy for depression was modelled from an Australian health care perspective as the cost per disability-adjusted life-year. The authors stated that the indication was major depression. They did not, however, define

how patients were recruited or how the model was constructed. The cost-effectiveness of bibliotherapy was based on health gains during acute episodes of depression and included the costs of buying the book, one long visit (20 minutes to 40 minutes), and two short visits (less than 20 minutes) with a general physician. Bibliotherapy was found to be cost-effective at A$10,000 per disability-adjusted life-year. Group CBT and individual CBT that were provided by a psychologist on public salary were considered to be cost-effective. When the upper limit of the 95% uncertainty range was taken into account, the cost-effectiveness held. CBT cost-effectiveness was calculated for maintenance treatment periods and for treatment during an acute episode. The calculated adherence rate was between 50% and 81% for CBT. It is unclear whether this included bibliotherapy. The pooled effect size that was used for bibliotherapy was 0.98 (95% confidence interval [CI] 0.62 to 1.35), which may be considered to be a large effect.[19] For guided CBT, the pooled effect size was 0.77 (95% CI 0.44 to 1.10), which may be considered to be a medium effect.[19] The effect sizes were based on meta-analyses that were conducted by the authors to compare bibliotherapy with non–evidence-based treatment. Other details about effectiveness were not provided. The cost of a long general physician visit was estimated to be A$39.51 for government and A$1.87 for the patient. A shorter visit was estimated to cost the government A$21.88 and cost the patient A$2.21. The source of these estimates was the Australian Medicare Benefits Schedule.

The authors concluded that there are cost-effective options for treating depression. The cheapest option was bibliotherapy. Another cost-effective option was CBT delivered by psychologists on a public salary. Generalizability was limited to similar Australian populations and to similar government funding for depression therapies. The authors stated that they likely underestimated the effectiveness of bibliotherapy by limiting the treatment effect to the acute period, and bibliotherapy likely has benefits beyond the acute period (although there is no evidence of a sustained benefit). There was no declaration of industry funding.

4.3 Guidelines and Recommendations

The Guideline Development Group, commissioned by the National Institute for Health and Clinical Excellence, provides guidance on the treatment and management of depression in adults.[15] This updates previous clinical practice guidelines on depression (NICE clinical guideline 23, 2004a[18]). The Guideline Development Group included two patients, a care giver, and professionals from areas such as psychiatry and nursing. Advisors and experts were also consulted. In the absence of high-quality research, the Guideline Development Group used an informal consensus process to determine the recommendation. External stakeholders were asked to provide comments. After the consultation period, the final recommendations were forwarded to NICE where the guidelines were approved. The date of the last search for clinical effectiveness evidence was unclear. The economic literature was current as of December 2008.

The guidelines stated that patients with persistent subthreshold depressive symptoms, mild depression, or moderate depression, are first offered low-intensity psychosocial interventions such as self-guided help based on the principles of CBT, self-guided CCBT, or a structured group physical activity program. Self-guided CBT includes appropriate written materials, support from a trained practitioner, and six to eight sessions that occur over nine to 12 weeks (face-to-face contact or telephone). CCBT can be provided through a web-based or stand-alone computer-based program, and supported by a trained practitioner, over nine to 12 weeks.

Seven RCTs (1,676 participants) were identified in the systematic clinical literature review on CCBT. Four of the seven RCTs included patients with no formal diagnosis of depression (47% of the total), and one study included patients with depression or anxiety disorders. As measured using BDI, patients typically had mild to moderate depressive symptoms. The duration of treatment ranged between six weeks and a

mean of 32 weeks, and that of follow-up ranged between two months and twelve months (two studies did not report follow-up periods). CCBT was compared with a group that were told they were on a wait-list for CCBT, a health information web page, or weekly telephone discussion control groups. The authors reported that there was a small to medium effect size on depression scores (standardized mean difference −0.40, 95% CI −0.58 to −0.22) in the CCBT group compared with a control group. One RCT that examined patients with depression or anxiety found a small to medium effect after three months (standardized mean difference −0.40, 95% CI −0.70 to −0.11). When CCBT was compared with active controls (psychoeducation or group CBT), no clinically important differences were reported.

Two economic studies concluded that the CCBT program "Beating the Blues" was likely to be cost-effective. One economic study took a societal perspective and based its conclusions on an RCT that compared the CCBT software "Beating the Blues" with the standard care of people who were diagnosed with depression and or anxiety. "Beating the Blues" is a CCBT that consists of weekly sessions completed in a primary health care setting (for example, a general practitioner's office). Weekly progress reports are sent to the health care professional monitoring the CCBT,[18] and homework projects are assigned. The analyses used BDI scores and quality-adjusted life-years, and included the costs (incurred over eight months) of mental health care staff, primary care staff, hospital services, medication, home help contacts, other services (for example, physiotherapists, dieticians), licensing, and overhead. The authors concluded that "Beating the Blues" had a high probability of being cost-effective. A sensitivity analysis was performed on the cost of the CCBT program. One limitation (noted by the authors) was the use of utility values that were taken from a study combining values from a range of sources and methods. A second economic study evaluated three CCBT packages ("Beating the Blues," "Overcoming Depression," and "Cope") over an 18 month time span. Patients had a range of severity of depression. The authors used a health service perspective and included licensing fees, overhead costs, the cost of clinical support to patients, and the cost of staff training. The comparator group was treatment as usual. "Beating the Blues" was the most likely to be cost-effective at £30,000 per quality-adjusted life-year and was the only program of the three that had clinical effectiveness addressed in a RCT. Based on their analysis, the authors of the economic evaluation recommended "Beating the Blues" as a treatment for depression. The other two programs were not recommended. The economic analysis based the rates on the assumptions of factors including compliance, relapse rates, and costs of licensing.

In 2008, the New Zealand Guidelines Group published a guideline for primary care providers on managing depression.[17] The authors defined depression as a disorder meeting the DSM or ICD diagnostic criteria for major depression or major depressive episode. The guideline development team created the clinical questions, which were investigated through a systematic review. The guideline was drafted by the New Zealand Guidelines Group with external support (for example, expert feedback) and national feedback.

CBT was mentioned in four graded recommendations for first-line therapy. No recommendation specifically referred to CCBT. It is possible, however, that CCBT is included in CBT because the authors defined guided self-help as CBT-based therapies provided through the use of written, computerized, or web-based materials. The recommendations for CBT (defined as a guided, self-managed psychological therapy involving a limited amount of health care guidance and feedback) are:

- Patients with moderate depression should be offered a brief psychological intervention such as CBT over 10 to 12 weeks or a selective serotonin reuptake inhibitor. The level of recommendation is B (supported by valid studies where there is some uncertainty about consistency and applicability, but it is unlikely to be overturned by other evidence).
- Patients with more severe depression should be offered a combination of structured

psychological intervention such as CBT for 16 to 20 sessions and antidepressant medications. The level of recommendation is B.

- For women in the antenatal or postnatal period who have mild to moderate depression, CBT or another brief psychological intervention (six to eight sessions) is recommended as first-line therapy or if the woman has not responded to initial treatment. The level of recommendation is C (supported by international expert opinion).
- If, after four to six weeks, patients are not responding to antidepressant medication, then the case should be reviewed, the dose of the antidepressant medication adjusted or changed, and psychological therapy changed or added. The level of recommendation is C.

The authors stated in the document, though not in the recommendations, that there was evidence to suggest that CCBT (level of therapist assistance not specified) can be effective in treating patients with mild depression and moderate depression. This statement is likely based on the three RCTs evaluating CCBT that were identified in the systematic review. Two RCTs were self-guided CCBT and were found to be as effective as therapist-delivered CBT. The third RCT found that CCBT was more effective than treatment as usual for patients with depression and/or anxiety; it was not stated whether CCBT was self-guided.

In 2007, the Malaysian Ministry of Health published guidelines on managing major depressive disorders in adults and the elderly.[16] Mild, moderate, and severe major depressive disorders were classified according to the DSM-IV or ICD-10. The guidelines were based on a literature search (it is unclear whether the search was systematic) that was assessed by individual members on the guideline team and then discussed as a group. The recommendations were based on the evidence and were created by a development group, a review group (the groups consisted of clinical experts such as psychiatrists and family medicine practitioners), and a review committee. One recommendation stated that CCBT may be used for patients with mild depression or moderate depression. The amount of therapist assistance was not stated. The authors did reference two CCBT programs that were self-guided. The recommendation for CCBT was given a grade of A, which indicated that it was based on evidence that was rated as good and directly applicable, or was based on at least one meta-analysis, systematic review, or RCT. The authors identified six studies on the self-guided CCBT program "Beating the Blues," and all six studies indicated that the program was effective. An audit of registrants using the free self-guided CCBT "MoodGYM" also showed that there were statistically significant changes to depressive and anxiety symptoms. No further information was provided.

4.4 Limitations

Non-English, unpublished, and non–peer-reviewed articles were not searched for this review, and the scope of the report was focused on the clinical benefit and costs of self-directed CBT. Factors such as barriers to accessing the therapy,[20] adherence to treatment,[20] and individual factors such as education[21] were not reviewed.

The two RCTs did not state whether they concealed random allocation or whether any part of the design was blinded. The authors of one RCT[11] reported less than a fifth of individuals in the CCBT group finished all therapy sessions, and the second RCT[12] stated attrition rates of 24%, 30%, and 47% in the assisted contact group, minimal contact group, and control group respectively. One RCT[12] studied the impact of CCBT on access to general practitioners and mental health care specialists. Other outcome measures such as self-harm and suicide were not measured. One trial included an eight-week treatment period with a four-week follow-up,[12] and the second included an eight-week treatment period with a six-month follow-up. Whether the effectiveness of self-directed CBT is sustainable in the longer-term is unclear.

It was difficult to determine whether the recommendations from the evidence-based guidelines were related to self-directed CBT. The generalizability of the findings may be

limited to the specific CCBT programs that were evaluated (for example, "Beating the Blues," bibliotherapy) and to different health care settings (for example, Australia).

The literature search revealed that most RCTs, systematic reviews, and HTAs recruited volunteers from the public. Decisions for inclusion were typically made based on the scores of self-reported clinical rating scales, such as the BDI, with no clinical input.

5 CONCLUSIONS AND IMPLICATIONS FOR DECISION- OR POLICY-MAKING

Overall, the evidence supported the clinical effectiveness and cost-effectiveness of self-directed CBT, as measured using clinical rating scales. One study provided evidence that CCBT may result in fewer visits to a general practitioner and mental health care specialist. The percentage of individuals completing the CCBT, however, was interpreted by the authors as low. In addition, self-directed CBT was generally recommended as a therapy option for individuals with mild to moderate depression.

The evidence on the barriers that exist for self-directed CBT was not explored. Factors that may be considered, especially for self-directed CCBT, are staff requirements (for example, administrative staff, supervised junior professional staff, and psychologists or psychiatrists[20]), amount of assistance provided to the patient, computer accessibility, and level of computer literacy.

Limited systematic reviews, RCTs, economic studies, and evidence-based guidelines exist on self-directed CBT in individuals with a diagnosis of depression based on DSM or ICD criteria or clinical input. In addition, the guidelines did not always state whether the recommendations pertained to self-directed CBT (bibliotherapy) or self-directed CCBT.

In the literature, self-directed CBT was associated with improved clinical ratings of depression and with being a cost-effective therapy for individuals who experience mild to moderate depression. It is difficult, however, to reliably determine when self-directed CBT would be most effectively implemented as therapy; for example, in cases of severe depression. The conclusions on cost-effectiveness are interpreted with caution, because the economic studies were not Canadian. Thus, the approaches to routine care and other model assumptions may influence the actual cost-effectiveness in Canada. Also unclear is whether one form of self-directed CBT is superior to other forms. Other factors to consider before prescribing a course of treatment for patients with a diagnosis of depression include patient preference and family history.[4]

6 REFERENCES

1. *Diagnostic and statistical manual of mental disorders*. 4th rev. ed. Washington: American Psychiatric Association; 2009. 943 p.
2. *The human face of mental health and mental illness in Canada* [Internet]. Ottawa: Health Canada; 2006. [cited 2009 Nov 24]. Available from: http://www.phac-aspc.gc.ca/publicat/human-humain06/pdf/human_face_e.pdf
3. Public Health Agency of Canada. Chapter 2: mood disorders [Internet]. In: *A report on mental illnesses in Canada*. Ottawa: Public Health Agency of Canada; 2002 [cited 2009 Nov 24]. Available from: http://www.phac-aspc.gc.ca/publicat/miic-mmac/chap_2-eng.php .
4. The management of depression in primary care. *MeReC Brief* [Internet]. 2005 Sep [cited 2009 Nov 13];31:1-8. Available from: http://www.npc.co.uk/ebt/merec/cns/depression/resources/merec_briefing_no31.pdf
5. Gafford J, Searight HR. Psychological treatment of psychiatric disorders. 2009 [cited 2009 Nov 13]. In: *Uptodate* [database on the internet]. Waltham (MA): Uptodate; c1992 - . Available from: www.uptodate.com Subscription required.

6. Stuhlmiller C, Tolchard B. Computer-assisted CBT for depression & anxiety: increasing accessibility to evidence-based mental health treatment. *J Psychosoc Nurs Ment Health Serv*. 2009 Jul;47(7):32-9.

7. Cognitive behavioural therapy (CBT) [Internet]. In: *Treatments*. London (UK): The Royal College of Psychiatrists; 2009 [cited 2009 Nov 13]. Available from: http://www.rcpsych.ac.uk/mentalhealthinformation/therapies/cognitivebehaviouraltherapy.aspx .

8. Improving access to psychological therapies (IAPT) programme. *Computerised cognitive behavioural therapy (cCBT) implementation guidance.* [Internet]. London (UK): Department of Health; 2007. [cited 2009 Nov 11]. Available from: http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_073541.pdf

9. Clarke G, Eubanks D, Reid E, Kelleher C, O'Connor E, DeBar LL, et al. Overcoming Depression on the Internet (ODIN) (2): a randomized trial of a self-help depression skills program with reminders. *J Med Internet Res* [Internet]. 2005 [cited 2009 Nov 19];7(2):e16. Available from: http://www.jmir.org/2005/2/e16/

10. Proudfoot J, Ryden C, Everitt B, Shapiro DA, Goldberg D, Mann A, et al. Clinical efficacy of computerised cognitive-behavioural therapy for anxiety and depression in primary care: randomised controlled trial. *Br J Psychiatry* [Internet]. 2004 Jul [cited 2009 Nov 19];185:46-54. Available from: http://bjp.rcpsych.org/cgi/reprint/185/1/46

11. de Graaf LE, Gerhards SA, Arntz A, Riper H, Metsemakers JF, Evers SM, et al. Clinical effectiveness of online computerised cognitive-behavioural therapy without support for depression in primary care: randomised trial. *Br J Psychiatry*. 2009 Jul;195(1):73-80.

12. Bilich LL, Deane FP, Phipps AB, Barisic M, Gould G. Effectiveness of bibliotherapy self-help for depression with varying levels of telephone helpline support. *Clin Psychol Psychother*. 2008 Mar;15(2):61-74.

13. McCrone P, Knapp M, Proudfoot J, Ryden C, Cavanagh K, Shapiro DA, et al. Cost-effectiveness of computerised cognitive-behavioural therapy for anxiety and depression in primary care: randomised controlled trial. *Br J Psychiatry* [Internet]. 2004 Jul [cited 2009 Nov 19];185:55-62. Available from: http://bjp.rcpsych.org/cgi/reprint/185/1/55

14. Vos T, Corry J, Haby MM, Carter R, Andrews G. Cost-effectiveness of cognitive-behavioural therapy and drug interventions for major depression. *Aust N Z J Psychiatry*. 2005;39(8):683-92.

15. National Collaborating Centre for Mental Health. Depression: the treatment and management of depression in adults: national clinical practice guideline 90 [Internet]. In: *Clinical guidance*. London (UK): National Institute for Clinical Excellence; 2009 [cited 2009 Nov 10]. Available from: http://www.nice.org.uk/nicemedia/pdf/Depression_Update_FULL_GUIDELINE.pdf .

16. Hum LC, Siong ANW, Ebenezer E, Kassim A, Wah LT, Yahya B. *Clinical practice guideline: management of major depressive disorder.* [Internet]. Putrajaya: Ministry of Health Malaysia; 2007. [cited 2009 Nov 13]. Available from: http://www.acadmed.org.my/view_file.cfm?fileid=250

17. *Identification of common mental disorders and management of depression in primary care* [Internet]. Wellington (NZ): New Zealand Guidelines Group; 2008. [cited 2009 Dec 1]. Available from: http://www.nzgg.org.nz/guidelines/0152/Depression_Guideline.pdf

18. *Computerised cognitive behaviour therapy for depression and anxiety* [Internet]. London (UK): National Institute for Clinical Excellence; 2007. (Technology appraisal; 97). [cited 2009 Nov 11]. Available from: http://www.nice.org.uk/nicemedia/pdf/TA097guidance.pdf

19. Cohen J. Quantitative methods in psychology: a power primer. *Psychol Bull*. 1992;112(1):155-9.

20. Waller R, Gilbody S. Barriers to the uptake of computerized cognitive behavioural therapy: a systematic review of the quantitative and qualitative evidence. *Psychol Med*. 2009 May;39(5):705-12.

21. Andersson G, Bergstrom J, Hollandare F, Ekselius L, Carlbring P. Delivering cognitive behavioural therapy for mild to moderate depression via the internet: predicting outcome at 6-month follow-up. *Verhaltenstherapie*. 2004;14(3):185-9.

22. de Graaf LE, Gerhards SA, Evers SM, Arntz A, Riper H, Severens JL, et al. Clinical and cost-effectiveness of computerised cognitive behavioural therapy for depression in primary care: design of a randomised trial. *BMC Public Health* [Internet]. 2008 [cited 2009 Nov 19];8:224. Available from: http://www.biomedcentral.com/content/pdf/1471-2458-8-224.pdf

23. World Health Organization. *The World Health Organization (WHO) composite international diagnostic interview (CIDI)* [homepage]. Geneva: World Health Organization; 2004. [cited 2010 Jan 4]. Available from: http://www.hcp.med.harvard.edu/wmhcidi/

24. Horswill M. *The reliable change index* [presentation on the internet]. Brisbane: The University of Queensland; 2009. [cited 2010 Jan 12]. Available from: www.psy.uq.edu.au/formsandpolicies/download.html?file=927

APPENDIX 1: SEARCH STRATEGIES

OVERVIEW	
Interface:	OVID
Databases:	EMBASE <1996 to 2009 Week 52> Ovid Medline < 1950 to December Week 4 2009> Ovid Medline In-Process & Other Non-Indexed Citations <1950 to Present> PsychINFO <2000 to present> **Note:** Subject headings have been customized for each database. Duplicates between databases were removed in Ovid.
Date of Search:	November 10, 2009
Alerts:	Monthly search updates began November 10, 2009 and ran until January 5, 2010.
Study Types:	No filters were applied to limit the retrieval by study type.
Limits:	Publication years 2004-January 2010
SYNTAX GUIDE	
/	At the end of a phrase, searches the phrase as a subject heading
.sh	At the end of a phrase, searches the phrase as a subject heading
MeSH	Medical Subject Heading
fs	Floating subheading
exp	Explode a subject heading
*	Before a word, indicates that the marked subject heading is a primary topic; or, after a word, a truncation symbol (wildcard) to retrieve plurals or varying endings
#	Truncation symbol for one character
?	Truncation symbol for one or no characters only
ADJ	Requires words are adjacent to each other (in any order)
ADJ#	Adjacency within # number of words (in any order)
.ti	Title
.ab	Abstract
.hw	Heading Word; usually includes subject headings and controlled vocabulary
.pt	Publication type
.rn	CAS registry number

MULTI-DATABASE STRATEGY		
	PsycINFO, Ovid Medline(R), Embase	
#	**Searches**	**Results**
1	((Cognitive or Cognition) adj4 (behaviour or Behavior or behavioural or behavioural or psychoeducation or psychotherap*)).ti,ab.	23452
2	(CCBT or CBT).ti,ab.	8716
3	1 or 2	28605
4	(self adj2 (help or directed or direction or guided or instruction* or management or care)).ti,ab.	35727
5	(Computerized or Computerised or web or internet or online or on line or unguided or un guided or unsupported or un supported).ti,ab.	224289
6	4 or 5	258183
7	(depression or depressed or depressed or depressive).ti,ab.	415838
8	*Behavior Therapy/ or Cognitive Therapy/	44199
9	3 or 8	63456
10	Programmed Instruction as Topic/	12526
11	6 or 10	269546
12	Depressive Disorder, Major/ or *Depressive Disorder/ or *Depression/	129925
13	7 or 12	436802
14	9 and 11 and 13	780
15	14 use prmz	304
16	Cognitive Therapy/	28851
17	16 or 3	48551
18	exp self help/	4637
19	18 or 6	259692
20	exp major depression/ or *Depression/	117108
21	20 or 7	430468
22	17 and 19 and 21	773
23	22 use emef	314
24	exp cognitive behavior therapy/	31316
25	3 or 24	48574
26	exp self help techniques/	2342
27	26 or 6	258755
28	exp Major Depression/	48660
29	*Depression/	70294
30	28 or 29 or 7	430468
31	30 and 27 and 25	756
32	31 use psya	181
33	(Adolescent/ or Child/ or Infant/ or Pediatrics/ or (child or children or childhood or infant or infants or baby or babies or newborn or newborns or neonate or neonatal or neonates or preemie or preemies or infancy or paediatric or pediatric or girl or girls or boy or boys or kid or kids or teen or teens or teenage or teenager or teenagers or youngster or youngsters or youth or youths or adolescent or adolescents or adolescence or preschooler or school age or school aged).ti,ab.) not (Adult/ or (adult or adults or adulthood or middle age or middle aged or elderly or senior or seniors or man or men or woman or women).ti,ab.)	1938523
34	(15 or 23) not 33	585

MULTI-DATABASE STRATEGY		
	PsycINFO, Ovid Medline(R), Embase	
35	34 or 32	766
36	limit 35 to English language	731
37	limit 36 to yr="2004 -Current"	541
38	(editorial or comment or letter or newspaper article).pt.	1574844
39	37 not 38	533
40	remove duplicates from 39	325
41	from 40 keep 1-57 (PsychINFO results)	57
44	from 40 keep 58-218 (Medline results)	161
46	from 40 keep 219-325 (Embase results)	107

OTHER DATABASES				
PubMed		**Search**	**Most Recent Queries**	**Result**
		#12	Search ("2004"[Publication Date] : "3000"[Publication Date]) AND (#11 NOT #10) Limits: English	171
		#11	Search ("2004"[Publication Date] : "3000"[Publication Date]) AND (#8 NOT #9) Limits: English	176
		#10	Search editorial[pt] OR comment[pt] OR letter[pt] OR newspaper article[pt] Limits: English	917779
		#9	Search (Adolescent[mh] OR Child[mh] OR Infant[mh] OR Pediatrics[mh] OR child[tiab] OR children[tiab] OR childhood[tiab] OR infant[tiab] OR infants[tiab] OR baby[tiab] OR babies[tiab] OR newborn[tiab] OR newborns[tiab] OR neonate[tiab] OR neonatal[tiab] OR neonates[tiab] OR preemie[tiab] OR preemies[tiab] OR infancy[tiab] OR paediatric[tiab] OR pediatric[tiab] OR girl[tiab] OR girls[tiab] or boy[tiab] OR boys[tiab] OR kid[tiab] OR kids[tiab] OR teen[tiab] OR teens[tiab] OR teenage[tiab] OR teenager[tiab] OR teenagers[tiab] OR youngster[tiab] OR youngsters[tiab] OR youth[tiab] OR youths[tiab] OR adolescent[tiab] OR adolescents[tiab] OR adolescence[tiab] OR preschooler[tiab] OR school age[tiab] OR school aged[tiab]) NOT (Adult[mh] OR adult[tiab] OR adults[tiab] OR adulthood[tiab] OR middle age[tiab] OR middle aged[tiab] OR elderly[tiab] OR senior[tiab] OR man[tiab] OR men[tiab] OR woman[tiab] OR women[tiab]) Limits: English	1040647
		#8	Search ("2004"[Publication Date] : "3000"[Publication Date]) AND (#5 AND #6 AND #7) Limits: English	189
		#7	Search Depressive Disorder, Major[mh] OR Depressive Disorder[mh:noexp] OR Depression[majr] OR Depression[tiab] OR Depressed[tiab] OR Depressive[tiab]	241295
		#6	Search "Programmed Instruction as Topic"[Mesh] OR self help[tiab] OR self directed[tiab] OR self direction[tiab] OR self guided[tiab] RO self instruction*[tiab] OR self management[tiab] OR self care[tiab] OR Computerized[tiab] OR Computerised[tiab] OR web[tiab] OR internet[tiab] OR online[tiab] OR “on line”[tiab] OR	133591

OTHER DATABASES				
PubMed		**Search**	**Most Recent Queries**	**Result**
			unguided[tiab] OR unsupported[tiab]	
		#5	Search #1 OR #3 OR #4	59344
		#4	Search (Cognitive[tiab] OR Cognition[tiab]) AND (behaviour[tiab] OR Behavior[tiab] OR behavioural[tiab] OR behavioural[tiab]) AND (Therap*[tiab] OR modification[tiab] OR psychotherapy[tiab] OR management[tiab] OR treatment*[tiab] or treating[tiab]) OR psychoeducation[tiab] OR psychotherap*[tiab]	34208
		#3	Search CCBT[tiab] OR CBT[tiab]	2576
		#1	Search Behavior Therapy[mh:noexp] OR Cognitive therapy[mh]	29063
Cochrane Library Issue 1, 2004; Issue 4, 2009	Same MeSH, keywords, and date limits used as per PubMed search, excluding study types and Human restrictions.			

Grey Literature

Dates for Search:	November 2009 – January 2010
Keywords:	Behavior Therapy; Cognitive therapy; CBT; CCBT; self-guided; self directed; self-help; self management group therapy; individual therapy; web based; computer based; cognitive-behavioural therapy; Internet based therapy; guided therapy
Limits:	Publication years 2004-January 2010; English and French

The following sections of the CADTH grey literature checklist, "Grey matters: a practical tool for evidence-based searching" (http://www.cadth.ca/index.php/en/cadth/products/grey-matters) were searched:

- Health Technology Assessment Agencies
- Health Economic
- Clinical Practice Guidelines
- Databases (free)
- Internet Search
- Open Access Journals

APPENDIX 2: TERMS AND EXPLANATIONS

36-Item Short Form Health Survey[22]

The 36-item short form health survey is used to assess specific features of health-related quality of life. The scores range between 0 and 100, with high scores indicating higher health-related quality of life.

The Beck Depression Inventory II (BDI-II)[12]

The BDI-II is a self-reported clinical rating scale that is used to assess depressive symptoms. There are 21 items. All items focus on answering questions about what best describes how the individual has been feeling during the previous two weeks. Each item is rated between 0 and 3, and a total score is obtained by summing the ratings. Higher scores indicate more severe depression. The BDI-II is the second version of the BDI scale.

Composite International Diagnostic Interview[23]

The Composite International Diagnostic Interview is a structured interview that is used to diagnose and assess mental disorders. The interview is based on ICD-10 and DSM-IV criteria. It is used for clinical and research purposes, and can be given by a lay interviewer.

Depression Anxiety Stress Scale-21[12]

The Depression Anxiety Stress Scale is a 21-item clinical self-rating scale that is used to assess the symptoms of depression, anxiety, and stress. Individuals rate how much each statement applies to them over the past week. Each item is rated between 0 and 3.

Dysfunctional Attitude Scale[22]

The Dysfunctional Attitude Scale is used to measure the intensity of dysfunctional beliefs. The scores range between 17 and 119, with high scores indicating more dysfunctional beliefs.

Kessler Psychological Distress Scale-10[12]

The K10 is a self-reported screening scale for mental disorders and non-specific psychological distress. To answer the 10 questions, the individual selects the statement that best describes his or her level of distress over the past week. Each item is rated between 1 and 5.

Reliable Change Index[24]

The reliable change index provides a standardized score that represents the change in a participant's score from pre-intervention to post-intervention. The change in the pre-intervention score is subtracted from the post-intervention score. This difference is divided by the standard error of the difference between the two test scores. If the reliable change index is 1.96 or more (equates to the 95% CI) then the difference is statistically significant.

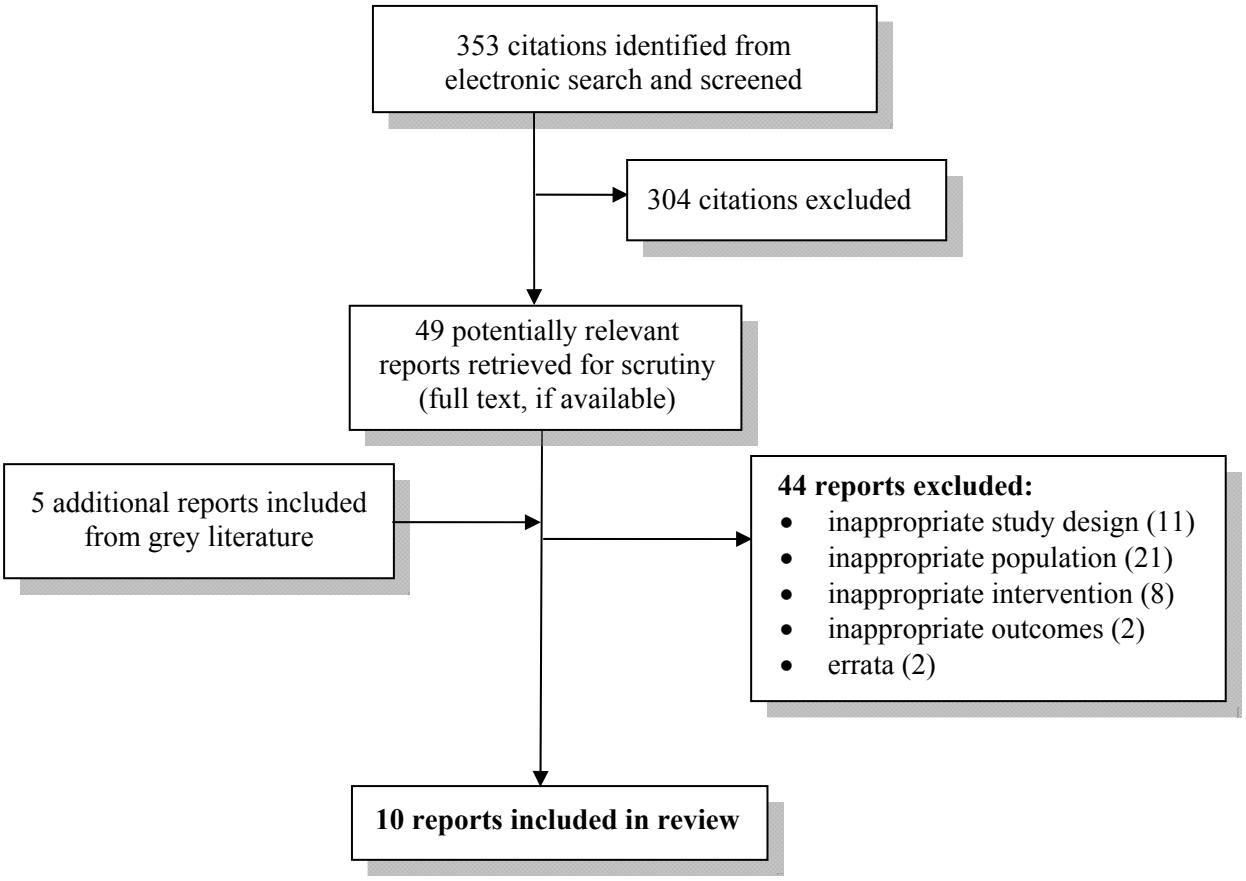
The Symptom Checklist-90[22]

The Symptom Checklist-90 is used to assess general psychological distress. The scores range between 90 and 450, with higher scores indicating more severe distress.

Work and Social Adjustment Scale[22]

The Work and Social Adjustment Scale is used to assess the impairment in social functioning due to depression. The scores range between 0 and 40, with a higher score indicating more severe impairment.

APPENDIX 3: SELECTION OF PUBLICATIONS



APPENDIX 4: ADDITIONAL INFORMATION ON INCLUDED STUDIES

Table 1: Summary of Randomized Controlled Trial Findings

Study	Patient Population, Inclusion and Exclusion Criteria	Interventions Compared	Sessions and Duration	Patient Traits	Study Outcomes, Follow-up	Summary of Main Results
Randomized Controlled Trials						
De Graaf et al.[11,22]	Adults (18 to 65 years), access to Internet, mild to moderate depressive symptoms (BDI-II ≥ 16), depressive symptoms at least 3 months, no current therapy, DSM-III R Axis I diagnosis through computerized Composite International Diagnostic Interview	CCBT: 100 participants Control: (treatment as usual) 103 participants CCBT plus treatment as usual: 100 participants	Eight 30-minute at-home sessions with "Colour Your Life" program; no assistance; homework given after each session.	Mean age (SD) CCBT: 44.3 years (11.8) Control: 45.1 years (12.2) CCBT plus treatment as usual: 45.2 years (10.9) % Female CCBT: 52 Control: 65 CCBT plus treatment as usual: 63	Primary outcome BDI-II Secondary outcome Symptom Checklist-90, Work and Social Adjustment Scale, 36-item short form health survey, Dysfunctional Attitude Scale; and self-reported use of general practitioner care, use of antidepressants Data collected at baseline, 2 months, 3 months, and 6 months	For BDI-II scores at 2 months, 3 months, and 6 months, no statistically significant difference between the 3 groups for patients who had reliable change (9 or more point difference) or clinically significant change (a score < 12) All 3 groups had medium to large improvement effects on BDI-II At 3 months, statistically significantly greater improvement on Work and Social Adjustment Scale for CCBT plus

Table 1: Summary of Randomized Controlled Trial Findings						
Study	**Patient Population, Inclusion and Exclusion Criteria**	**Interventions Compared**	**Sessions and Duration**	**Patient Traits**	**Study Outcomes, Follow-up**	**Summary of Main Results**
						treatment as usual group, compared with CCBT alone Number needed to treat for CCBT with treatment as usual as reference group: 72 patients Number needed to treat for CCBT plus treatment as usual with treatment as usual as reference group: 25 patients CCBT less use of general practitioner services (28.5%) compared with CCBT plus treatment as usual (63.3%) and control group (63.3%), $p < 0.0001$ Control group patients accessed mental health care specialists more often (36.7%)

Table 1: Summary of Randomized Controlled Trial Findings						
Study	**Patient Population, Inclusion and Exclusion Criteria**	**Interventions Compared**	**Sessions and Duration**	**Patient Traits**	**Study Outcomes, Follow-up**	**Summary of Main Results**
						compared with CCBT plus treatment as usual (23.9%) and CCBT (23.6%), $p < 0.05$
Bilich et al.[12]	Adults (18 to 60 years) BDI-II score between 10 and 29 and interview with psychologist Mild to moderate depression	<u>Randomized</u> Control (wait-list): 40 participants Minimal contact: 23 participants Assisted self-help: 21 participants <u>At 8 weeks</u> Control (wait-list) = 25 participants Minimal contact: 17 participants Assisted self-help: 17 participants <u>At 12 weeks</u> Control (wait-list): 25 participants Minimal contact: 16 participants Assisted self-help: 16 participants	8 weeks of CBT bibliotherapy Control group told they were on a 8-week wait-list Minimal contact group received 5 minutes per week of telephone contact Assisted self-help group received 30 minutes per week of telephone contact	<u>Mean age (SD)</u> Control (wait-list): 41 years (11.4) Minimal contact: 42 years (12.8) Assisted self-help, 42 years (10.2) 79 patients (94%) previously sought help for depression	Scores on BDI-II, Depression Anxiety Stress Scales, and Kessler Psychological Distress Scale-10 Assessments conducted at pre-treatment, 8 weeks from baseline, and 12 weeks from baseline.	<u>Between groups</u> At week 8, both the minimal contact and assisted contact groups performed statistically significantly better than the control group on all measures (BDI-II, Depression Anxiety Stress Scales, Kessler Psychological Distress Scale-10). There were no statistically significant differences between the minimal contact and assisted contact groups

Table 1: Summary of Randomized Controlled Trial Findings						
Study	**Patient Population, Inclusion and Exclusion Criteria**	**Interventions Compared**	**Sessions and Duration**	**Patient Traits**	**Study Outcomes, Follow-up**	**Summary of Main Results**
						Within groups At week 8, no differences emerged for the control group At week 8, minimal contact and assisted contact groups statistically significantly improved on the BDI-II and Depression Anxiety Stress Scales

BDI = Beck Depression Inventory; CCBT = computerized cognitive behavioural therapy; DSM-IV = Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition; SD = standard deviation; STEPPS = Systems Training for Emotional Predictability and Problem Solving.

Table 2: Methods Used in Included Studies							
Study	**Adequate Allocation Concealment?**	**Blinded?**	**Validated Instruments?**	**Imbalances at Baseline?**	**Reported Sample Size Calculation?**	**Withdrawal Information Given?**	**Other Comments**
Randomized Controlled Trials							
De Graaf et al.[11,22]	Not reported (unclear)	Not reported	Yes	All baseline characteristics (e.g., age, depressive episode present), except gender, appeared equally distributed (no statistical significance reported)	Yes (84 patients per group to detect change of 5 points on BDI-II)	Authors stated that treatment adherence was low At 6 months, 14% of patients finished CCBT sessions, 26% finished CCBT plus treatment as usual ($p < 0.05$)	Included in analysis if follow-up data provided, regardless of treatment adherence; if lost to follow-up, missing data were not replaced by imputed values; no industry or manufacturer funding; sponsors not involved in project No baseline differences between participants who completed study and those who left study
Bilich et al.[12]	Not reported	Not reported	Yes	No	No	Yes Control group: 19 participants withdrew (approximately 45%) Minimal contact: 7 participants withdrew (approximately 30%) Assisted contact: 5 participants withdrew (approximately 24%)	No industry funding

BDI = Beck Depression Inventory; CCBT = computerized cognitive behavioural therapy.

Table 3: Quality Assessment of Included Evidence-Based Guidelines							
Organization	**Title**	**Quality Assessment**					**Comments**
		Objectives and Population?	**Methods?**	**Systematic Review of Literature?**	**Peer Review?**	**Level of Evidence for Recommendations?**	
National Collaborating Centre for Mental Health[15]	Depression: The Treatment and Management of Depression in Adults	Yes	Yes	Yes for clinical; no for economic	Yes	Partial; evidence-base summarized, level of evidence not provided for each recommendation	Methodological quality assessed; final draft version, not yet published*
New Zealand Guidelines Group[17]	Identification of Common Mental Disorders and Management of Depression in Primary Care	Yes	Yes	Yes	Yes	Yes (NZGG grading system)	No direct industry funding or involvement†
Malaysian Ministry of Health[16]	Management of Major Depressive Disorder	Yes	Yes	Unclear	Yes	Yes (modified from SIGN)	No industry funding or involvement

SIGN = Scottish Intercollegiate Guidelines Network; NZGG = New Zealand Guidelines Group.
*At least five authors in the guideline development group received financial support from industry for other projects.
† At least four authors in the guideline development group received financial support from industry for various events.