



# Brief Psychotherapy for Depression in Primary Care: A Systematic Review of the Evidence

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## PREFACE

Health Services Research & Development Service's (HSR&D's) Evidence-based Synthesis Program (ESP) was established to provide timely and accurate syntheses of targeted healthcare topics of particular importance to Veterans Affairs (VA) managers and policymakers, as they work to improve the health and healthcare of Veterans. The ESP disseminates these reports throughout the VA.

HSR&D provides funding for four ESP Centers and each Center has an active VA affiliation. The ESP Centers generate evidence syntheses on important clinical practice topics, and these reports help:

- develop clinical policies informed by evidence,
- guide the implementation of effective services to improve patient outcomes and to support VA clinical practice guidelines and performance measures, and
- set the direction for future research to address gaps in clinical knowledge.

In 2009, an ESP Coordinating Center was created to expand the capacity of HSR&D Central Office and the four ESP sites by developing and maintaining program processes. In addition, the Center established a Steering Committee comprised of HSR&D field-based investigators, VA Patient Care Services, Office of Quality and Performance, and Veterans Integrated Service Networks (VISN) Clinical Management Officers. The Steering Committee provides program oversight, guides strategic planning, coordinates dissemination activities, and develops collaborations with VA leadership to identify new ESP topics of importance to Veterans and the VA healthcare system.

Comments on this evidence report are welcome and can be sent to Nicole Floyd, ESP Coordinating Center Program Manager, at [nicole.floyd@va.gov](mailto:nicole.floyd@va.gov).

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## EXECUTIVE SUMMARY

### BACKGROUND

The individual and societal burden of depressive disorders is widely acknowledged, but treating these disorders remains challenging. Clinical guidelines recommend that both pharmacotherapy and psychotherapy should be considered as first-line treatments. Yet, because primary care settings are often the frontline of treatment, pharmacological treatments take precedence. In part, this may be due to the perception that psychotherapy is lengthy and time intensive, with guidelines recommending 12 to 20 1-hour sessions for most evidence-based psychotherapies. However, recent evidence seems to suggest that psychotherapies that are briefer in both duration and intensity may be efficacious in acute-phase treatment. If true, these briefer psychotherapies may be more easily integrated in primary care settings. Thus, we conducted a systematic review of the peer-reviewed literature to answer the following key questions:

**Key Question 1:** For primary care patients with depressive disorders, are brief, evidence-based psychotherapies with durations of up to eight sessions more efficacious than control for depressive symptoms (i.e., on self-report and/or clinician-administered measures) and quality of life (i.e., functional status and/or health-related quality of life)?

**Key Question 2:** For primary care patients with depressive disorders treated with a brief, evidence-based psychotherapy, is there evidence that treatment effect may vary by the number of sessions delivered?

**Key Question 3:** For psychotherapies demonstrating clinically significant treatment effects, what are the characteristics of treatment providers (i.e., type of provider and training), and what are the modalities of therapy (i.e., individual/group, face-to-face/teletherapy/Internet-based)?

**Key Question 4:** How commonly reported are the key clinical outcomes of quality of life, social functioning, occupational status, patient satisfaction, and adverse treatment effects in randomized trials of psychotherapy?

This review was commissioned by the Department of Veterans Affairs' Evidence-based Synthesis Program. The topic was selected after a formal topic nomination and prioritization process that included representatives from the Office of Mental Health Services, Health Services Research and Development, the Mental Health QUERI, and the Office of Mental Health and Primary Care Integration.

### METHODS

We utilized a combined approach, identifying and evaluating existing systematic reviews and supplementing these reviews by searching for and evaluating original research not included in these reviews. First, we searched for relevant, good-quality, English-language systematic reviews in MEDLINE® (via PubMed®), Embase®, and PsycINFO® from database inception through May 2010. Two good-quality systematic reviews were identified and evaluated for this report. Second, we used a well-documented Internet-accessible database of psychotherapy trials ([www.psychotherapyrcts.org/index.php?id=3](http://www.psychotherapyrcts.org/index.php?id=3)) that was current through January 2010. We used

this database of 243 trials as a data source for original research, searching for studies coded as including adults with a mood disorder who received face-to-face psychotherapy at a dose of eight or fewer therapy sessions. Finally, we searched for English-language publications in MEDLINE (via PubMed), PsycINFO, and Embase, from January 2009 (one year prior to the search date of the online database) through August 1, 2010. We supplemented electronic searching by examining the bibliographies of included studies and review articles.

Primary research articles were included if they were RCTs and included adults with major depressive disorder (MDD), dysthymic disorder, or subthreshold (minor) depressive disorder in acute-phase treatment. Relevant psychotherapy modalities included cognitive behavioral therapy (CBT) (including cognitive therapy and behavior therapy), interpersonal therapy (IPT), problem-solving therapy (PST), mindfulness-based cognitive therapy (MBCT), cognitive behavioral analysis system of psychotherapy (CBASP), dialectical behavioral therapy (DBT), functional analytic psychotherapy (FAP), acceptance and commitment therapy (ACT), or short-term psychodynamic therapy with eight or fewer planned sessions. Eligible comparators of active treatment included waitlist control, attention control, usual care, or antidepressant medication if the intervention included a combination of psychotherapy and an antidepressant medication. Patients had to be recruited from outpatient general medical or mental health clinics located in North America, Western Europe, New Zealand, or Australia for the greatest generalizability to the Veteran population. Finally, RCTs were required to measure depressive symptoms using a validated instrument reported at 6 weeks or more after randomization.

Quality of the systematic reviews was rated using 12 design-and-reporting characteristics and summarized as “good,” “fair,” or “poor.” Quality and risk of bias of the RCTs were rated good, fair, or poor using the Agency for Healthcare Research and Quality (AHRQ) criteria. Data were synthesized both in narrative form and via updated meta-analysis where it appeared that the primary literature was sufficient to facilitate an updated effect size. All results are reported such that a negative effect size indicates greater reduction in depressive symptoms for the intervention compared to the control condition. We graded the strength of evidence for each key question using principles from the Grades of Recommendation, Assessment, Development, and Evaluation (GRADE) Working Group. This approach assesses the strength of evidence for each critical outcome by considering risk of bias, consistency, directness, precision, and publication bias. Other domains relevant to observational designs were not pertinent to our review. After considering each domain, a summary rating of “high,” “moderate,” “low,” or “insufficient” strength of evidence was assigned.

## RESULTS

Using the combined literature search, 560 potential systematic reviews were identified. From these, two eligible reviews were retained. The first review completed a good-quality meta-analysis of 15 studies that examined psychotherapeutic interventions for depression in primary care. The second review completed a good-quality meta-analysis and meta-regression of 34 studies examining the effectiveness of brief psychological therapies in primary care for anxiety disorders, depressive disorders, and mixed anxiety and depression.

Our search of the primary literature yielded 243 references from the Internet-accessible database

of psychotherapy trials and 516 citations from the search of PubMed, PsycINFO, and Embase. After excluding ineligible articles, our search identified eight unique trials from the two included systematic reviews and seven unique trials from our primary literature search. The brief therapies evaluated were PST (eight studies), CBT (six studies), and MBCT (one study). Interventions were monitored for treatment fidelity in nine studies. Study participants were predominantly middle-aged, female, and Caucasian.

**Key Question 1:** For primary care patients with depressive disorders, are brief, evidence-based psychotherapies with durations of up to eight sessions more efficacious than control for depressive symptoms (i.e., on self-report and/or clinician-administered measures) and quality of life (i.e., functional status and/or health-related quality of life)?

The systematic reviews found that, compared to control, brief psychotherapies had a small but statistically significant benefit, with effect size estimates ranging from -0.33 to -0.25. Only CBT and PST were evaluated as brief therapies. Findings from the systematic reviews were consistent with the meta-analysis that we conducted on six trials of CBT, which showed that six to eight CBT sessions were more efficacious than control (ES -0.42, 95% CI -0.74 to -0.10), but results were statistically heterogeneous ( $I^2 = 56\%$ ). A sensitivity analysis excluding a poor-quality study and one with a waitlist control showed homogeneous but smaller treatment effects (ES -0.24, 95% CI -0.42 to -0.06,  $I^2 = 0\%$ ). Health-related quality of life (HRQOL) was reported too infrequently to synthesize quantitatively.

**Key Question 2:** For primary care patients with depressive disorders treated with a brief, evidence-based psychotherapy, is there evidence that treatment effect may vary by the number of sessions delivered?

One of the systematic reviews completed a meta-analysis showing no statistically significant difference in efficacy between psychotherapies of more than six sessions (ES -0.36, 95% CI -0.54 to -0.17) compared to those of six or fewer sessions (ES -0.25, 95% CI -0.48 to -0.02). Because confidence intervals overlapped and comparisons were indirect, there remains the possibility that a true difference in efficacy between brief and standard-duration psychotherapies (i.e., 12 to 20 sessions) could exist and that it could be clinically meaningful. Current evidence is inadequate to answer this question.

**Key Question 3:** For psychotherapies demonstrating clinically significant treatment effects, what are the characteristics of treatment providers (i.e., type of provider and training), and what are the modalities of therapy (i.e., individual/group, face-to-face/teletherapy/Internet-based)?

Treatment providers and modalities varied across studies. Providers included clinical psychologists, social workers, nurses, general practitioners, and graduate students trained specifically to deliver the treatment as prescribed in the study protocol. Length of treatment varied from 3.5 hours of PST (delivered across six sessions) to 18 hours of MBCT (delivered across eight sessions). Finally, treatments were delivered primarily in individual, face-to-face sessions; however, two studies relied on group therapy, and one trial relied on telephone-based psychotherapy.

**Key Question 4:** How commonly reported are the key clinical outcomes of quality of life, social functioning, occupational status, patient satisfaction, and adverse treatment effects in randomized trials of psychotherapy?

Of the 15 RCTs evaluating brief psychotherapies, 5 reported HRQOL, 5 reported social functioning, 0 reported occupational status, 2 reported patient satisfaction with treatment, and 1 reported adverse treatment effects. The most commonly used measure of quality of life for studies that examined this clinical outcome was the SF-36. The one study that reported adverse treatment effects examined the side effects of taking psychotropic medication in tandem with psychotherapy.

## **FUTURE RESEARCH RECOMMENDATIONS**

Several questions may be answered by future studies. First, brief psychotherapies (i.e., ≤ 8 sessions) compared to standard-duration psychotherapies (i.e., 12 to 20 sessions) did not significantly differ in their effect sizes, but these comparisons were based on relatively few studies and indirect comparisons, and thus direct comparisons in RCTs would be needed to answer this question definitively. Second, our review found that brief psychotherapies have been provided by an array of trained health care professionals, including non-mental health professionals. Because descriptions of training were incomplete, the degree of training necessary to replicate findings from these studies is uncertain. Third, we discovered that effects on occupational status, patient satisfaction with treatment, and adverse treatment effects were seldom reported; HRQOL and social functioning were more commonly reported but still only considered in less than half the trials examined in this review. Therefore, future research should aim to include these secondary but important clinical outcomes. Fourth, evidence regarding brief therapies other than CBT and PST was nonexistent or sparse. Finally, further research needs to expand participants beyond the mostly middle-aged, female, Caucasian subjects included in studies to date.

## **CONCLUSIONS**

Based on our systematic review of two recent literature reviews and of seven additional RCTs, the collective evidence suggests that six to eight sessions of brief CBT or PST are more efficacious than control for the treatment of depression in primary care; however, the effects are modest (moderate strength of evidence). Current evidence suggests that these treatments might be effectively delivered by providers of various professional disciplines, provided they receive adequate training and supervision. This may be important in terms of balancing cost to the Veterans Health Administration with access to mental health treatment among Veterans. As the VA moves to the Patient-Aligned Care Team model of the patient-centered medical home, it is encouraging to find empirical evidence to support the provision of brief psychotherapy in primary care.

# EVIDENCE REPORT

## INTRODUCTION

Depressive disorders present a major public health concern. The prevalence of current depression among U.S. adults is 6.6%,<sup>1</sup> affecting up to 16 to 18% of the population over their lifetime.<sup>2</sup> High prevalence rates have also been noted in the Veteran population,<sup>3</sup> and particularly high rates have been found in primary care settings.<sup>4</sup> Although primary care physicians treat a high proportion of patients with depressive disorders,<sup>5</sup> the treatment of depression in primary care tends to be variable and suboptimal.<sup>6</sup> Because of this, it is a public health priority to identify treatments for depression that are effective, evidence-based, and suitable for dissemination in primary care.

The two evidence-based, first-line interventions for depression recommended by VA/Department of Defense (DoD) guidelines are pharmacotherapy and/or psychotherapy.<sup>7</sup> Based on several systematic reviews showing small-to-moderate benefit, the guideline recommends several classes of antidepressants as first-line therapy. Among psychotherapies, cognitive behavioral therapy (CBT), interpersonal psychotherapy (IPT) and problem-solving therapy (PST) are recommended as first-line treatment. For CBT and IPT, 16 to 20 sessions are recommended. Other psychotherapies are recommended for specific clinical situations, such as dialectical behavioral therapy (DBT), in combination with antidepressants for older adults with chronic major depressive disorder (MDD). In general, the evidence suggests that pharmacotherapy and psychotherapy are individually efficacious treatments and that there can be additive clinical benefit when these treatments are used in tandem.<sup>8,9</sup>

Despite persuasive evidence of effectiveness for both pharmacotherapy and psychotherapy in the treatment of depression, medication remains by far the most commonly utilized intervention in primary care settings.<sup>10-12</sup> However, there has been a growing interest in and commitment to the integration of psychotherapy and other mental health services into primary care settings,<sup>13-15</sup> perhaps most notably within the Veterans Health Administration.<sup>16,17</sup> Providing primary care patients with the option of receiving psychotherapy for their depression is an important objective for multiple reasons: there are many patients who, given the option, prefer psychotherapy to medication;<sup>18-21</sup> there is a need to provide alternative treatments for patients who do not improve on or cannot tolerate antidepressant medication;<sup>22,23</sup> and there may be unique benefits from psychotherapy in terms of costs<sup>24-28</sup> and relapse prevention.<sup>29-31</sup>

While there is good rationale for increasing the availability of psychological treatments for depression in primary care, there are also substantial barriers to incorporating psychotherapies into this setting. As with the prescription of antidepressant medication, there is a significant problem in delivering psychotherapy at the proper dose and with fidelity to the treatment model.<sup>6,32</sup> There are also a number of barriers to implementing psychotherapies in primary care that are distinct from barriers to providing effective pharmacological treatment. These barriers involve such pragmatic concerns as finding space in primary care clinics where psychotherapy can be provided in confidentiality and securing an adequate workforce with the proper training to meet the demand for psychotherapy.

Perhaps the most significant barrier to providing psychotherapies in primary care settings is that, unlike pharmacological treatment, many empirically supported psychotherapy treatment protocols consist of at least 12 to 16 weekly 1-hour sessions.<sup>33,34</sup> While this treatment duration is much abbreviated compared with older approaches to the provision of psychotherapy,<sup>35</sup> it is arguably still too intensive for reliable implementation in primary care settings.

Recognizing that time and resource constraints present important barriers to effectively implementing standard-duration psychotherapies (i.e., 12 to 20 sessions) for depression in primary care settings, this report evaluates whether psychotherapy for depression can be efficacious after a period of 8 or fewer sessions—what we define as brief psychotherapy. In examining the evidence on brief psychotherapies for depression, this report also aims to address issues of the amount of training necessary to deliver psychotherapeutic treatment effectively and the availability of data on key clinical outcomes like social functioning and satisfaction with treatment. Effectively treating depression in primary care patients is an important public health priority. With that in mind, this report endeavors to examine whether brief psychotherapies are often tailored specifically for primary care settings and are efficacious for the treatment of depression.

## METHODS

### TOPIC DEVELOPMENT

This review was commissioned by the Department of Veterans Affairs' Evidence-based Synthesis Program. The topic was selected after a formal topic nomination and prioritization process that included representatives from the Office of Mental Health Services, Health Services Research and Development, the Mental Health QUERI, and the Office of Mental Health and Primary Care Integration. The key research questions for this review were developed and refined after preliminary review of published peer-reviewed literature and consultation with VA and non-VA experts to select the patients and subgroups, interventions, outcomes, and settings addressed in this review.

The final key questions were as follows:

**Key Question 1:** For primary care patients with depressive disorders, are brief, evidence-based psychotherapies with durations of up to eight sessions more efficacious than control for depressive symptoms (i.e., on self-report and/or clinician-administered measures) and quality of life (i.e., functional status and/or health-related quality of life)?

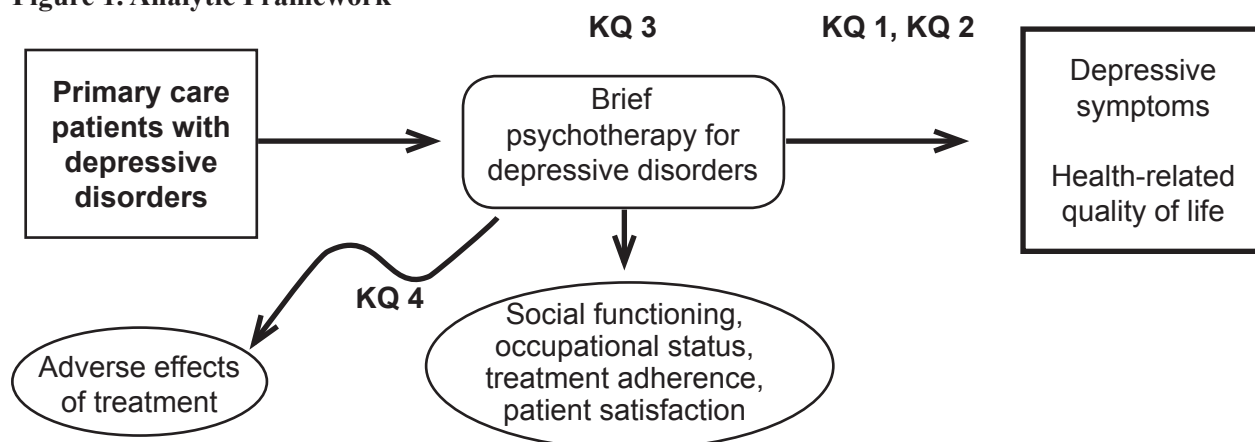
**Key Question 2:** For primary care patients with depressive disorders treated with a brief, evidence-based psychotherapy, is there evidence that treatment effect may vary by the number of sessions delivered?

**Key Question 3:** For psychotherapies demonstrating clinically significant treatment effects, what are the characteristics of treatment providers (i.e., type of provider and training), and what are the modalities of therapy (i.e., individual/group, face-to-face/teletherapy/Internet-based)?

**Key Question 4:** How commonly reported are the key clinical outcomes of quality of life, social functioning, occupational status, patient satisfaction, and adverse treatment effects in randomized trials of psychotherapy?

We developed and followed a standard protocol for all steps of this review. Our approach was guided by the analytic framework shown in Figure 1.

**Figure 1. Analytic Framework**



## OVERALL APPROACH

We utilized a combined approach, identifying and evaluating existing, good-quality systematic reviews and supplementing these reviews by searching for and evaluating original research not included in these reviews. We were guided in this process by published recommendations for conducting “complex systematic reviews,”<sup>36</sup> which integrate findings from previous systematic reviews and findings from newly identified original research.

## SEARCH STRATEGY

We conducted our search strategy using the following three complementary approaches:

1. We searched for relevant, good-quality, English-language systematic reviews in MEDLINE (via PubMed), Embase, and PsycINFO from database inception through May 2010.
2. We used a well-documented Internet-accessible database of 243 psychotherapy trials ([www.psychotherapytrials.org/index.php?id=3](http://www.psychotherapytrials.org/index.php?id=3)), current through January 2010, as a data source for original research. Using this database, we searched for studies coded as including adults with a mood disorder who received face-to-face psychotherapy at a dose of eight or fewer therapy sessions.
3. To identify any recent literature not yet catalogued in the Internet-accessible database, we searched for English-language publications in MEDLINE (via PubMed), Embase, and PsycINFO from January 2009 (one year prior to the search date of the online database) through August 1, 2010.

We developed search strategies in consultation with a master librarian. The search terms and MeSH headings for the search strategies appear in Appendix A. We supplemented electronic searching by examining the bibliographies of included studies and systematic review articles.

## STUDY SELECTION

Using prespecified inclusion/exclusion criteria, two trained researchers reviewed the list of titles and abstracts, then selected articles, identified from any of the computerized and manual searches described above, for further review. Each article retrieved was reviewed using a brief screening form to determine eligibility. Systematic reviews were evaluated as “good,” “fair,” or “poor” using quality criteria (see Quality Assessment below) adapted from a previous report,<sup>37,38</sup> and only good-quality reviews relevant to one of our study questions were retained. To be included in our evidence report, original research studies had to (1) be a randomized controlled trial (RCT), (2) compare an eligible psychotherapy of eight or fewer sessions to control, and (3) report effects on depression. Detailed eligibility criteria are described in Table 1.

**Table 1. Summary of Inclusion and Exclusion Criteria**

| Study characteristic | Inclusion criteria                                                                                                                                                                                                                                                                                                                                                                                                                                       | Exclusion criteria                                                                                                                                                                    |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Study design         | Randomized controlled trial                                                                                                                                                                                                                                                                                                                                                                                                                              | None                                                                                                                                                                                  |
| Population           | Adults with major depressive disorder (MDD), dysthymic disorder, or subthreshold (minor) depression in acute-phase treatment                                                                                                                                                                                                                                                                                                                             | Treatment-resistant depression, postpartum depression, premenstrual dysphoric disorder, bipolar disorder, seasonal affective disorder, or double depression (i.e., MDD and dysthymia) |
| Interventions        | Cognitive behavioral therapy (CBT) (including cognitive therapy and behavior therapy), interpersonal therapy (IPT), problem-solving therapy (PST), mindfulness-based cognitive therapy (MBCT), cognitive behavioral analysis system of psychotherapy (CBASP), dialectical behavioral therapy (DBT), functional analytic psychotherapy (FAP), acceptance and commitment therapy (ACT), or short-term psychodynamic therapy with $\leq 8$ planned sessions | Generic counseling, life review therapy, psychoeducational therapy, supportive therapy, bibliotherapy, or Internet-based psychotherapies                                              |
| Comparators          | Waitlist, attention control, usual care<br><br>Antidepressant medication if intervention is psychotherapy and an antidepressant                                                                                                                                                                                                                                                                                                                          | Another psychotherapy                                                                                                                                                                 |
| Setting              | Outpatient general medical or general mental health                                                                                                                                                                                                                                                                                                                                                                                                      | Study conducted outside of North America, Western Europe, New Zealand, or Australia                                                                                                   |
| Outcome              | Depressive symptoms using a validated instrument reported at $\geq 6$ weeks after randomization                                                                                                                                                                                                                                                                                                                                                          | None                                                                                                                                                                                  |

## DATA ABSTRACTION

For each newly identified primary research study, a trained researcher abstracted data from published reports into evidence tables (Appendix B). A second reviewer overread all data abstractions. We resolved disagreements by consensus among the first and second reviewer or by obtaining a third reviewer's opinion when consensus could not be reached. For eligible trials included in the two systematic reviews, we abstracted summary data from the reviews and supplemented these data by using the original publications when the reviews had incomplete information. We abstracted the following data: (1) study design and setting, (2) eligibility criteria, (3) exclusion criteria, (4) sample size, (5) demographics, (6) duration of followup, (7) depression clinical category, (8) intervention characteristics (e.g., type of therapy, mode, frequency, therapist), (9) comparator characteristics, (10) outcome measures, (11) results, and (12) adverse effects.

## QUALITY ASSESSMENT

For systematic reviews, we assessed the comprehensiveness of the search strategy, the description and appropriateness of inclusion criteria, whether primary studies were assessed for quality and the adequacy of the quality measure, the reproducibility of methods to assess studies, whether the results of relevant studies were combined appropriately, whether heterogeneity and publication bias were assessed, and whether the conclusions were supported by the data

presented. Systematic reviews were rated “good” if the conclusions were supported by the data presented and there were no important study limitations. For original research studies, we assessed risk of bias using the key quality criteria described in the Agency for Healthcare Research and Quality (AHRQ) *Methods Guide for Effectiveness and Comparative Effectiveness Reviews*,<sup>39</sup> adapted for this specific topic. We abstracted data on adequacy of randomization and allocation concealment, comparability of groups at baseline, blinding, completeness of followup and differential loss to followup, whether incomplete data were addressed appropriately, validity of outcome measures, and conflict of interest. Using these data elements, we assigned a summary quality score of “good,” “fair,” or “poor” to individual RCTs.

## DATA SYNTHESIS

When good-quality systematic reviews were identified, we summarized the reviews’ findings in narrative form. For original research studies that were not included in the systematic reviews, results were summarized descriptively in tables that include the study sample, intervention, comparator, duration of followup, and primary outcomes. We critically analyzed these studies to compare their characteristics, methods, and findings. We then evaluated whether the new evidence was likely to change estimates from prior reviews by considering the precision and stability of estimates from the original review, the number and size of the new studies relative to studies in the original review, the quality of the new studies, and the consistency in estimates and conclusions between the new evidence and the original reviews.<sup>39</sup> After considering these issues, we updated prior meta-analyses when substantial new evidence was available and a new summary estimate might lead to different conclusions.

Because studies did not use a single common instrument to measure depression severity, our meta-analysis used effect sizes to summarize intervention effects. Effect sizes were calculated for each study by subtracting (at posttest) the average score of the control group from the average score of the experimental group and dividing the result by the pooled standard deviations (SDs) of the experimental and control groups. A negative effect size indicates a greater effect in the intervention group. For example, an effect size of -0.5 indicates that the mean decline in depression severity for the experimental group is half an SD greater than the mean decline in the control group. We applied this convention of a negative effect size indicating a greater intervention effect to our summary of existing systematic reviews, converting signs when necessary for consistency. Effect sizes are commonly interpreted as small (0.2), moderate (0.5), and large ( $\geq 0.80$ ).<sup>40,41</sup> To further aid interpretation of effect sizes, we converted these estimates to the number needed to treat (NNT) using the approach described by Kraemer.<sup>41</sup> When studies used more than one validated instrument to assess depression severity, we used the mean of the effect sizes so that each study (or control group) contributed only one effect size. When means and SDs were not reported, we used other statistics (e.g., event rates) to calculate the effect size. For studies with more than one active eligible intervention (e.g., behavioral therapy and cognitive therapy arms) compared to a single control, we combined the intervention arms to avoid lack of independence that would be created if we entered each intervention into the analysis separately.<sup>42</sup>

Because considerable heterogeneity was expected, we used a random effects model to calculate a pooled mean effect size. We used the Q statistic and the  $I^2$  statistic to assess for heterogeneity in outcomes between studies. Because the Q statistic is underpowered, we consider a  $p < 0.10$

as statistically significant. The  $I^2$  statistic is an indicator of heterogeneity in percentages. The importance of between-study heterogeneity was represented by the  $I^2$  statistic thresholds of 0% to 40% as likely not important, 30% to 60% as moderate, 50% to 90% as substantial, and 75% to 100% as considerable.<sup>43</sup> Publication bias was tested by inspecting the funnel plot of the meta-analysis. This procedure is based on the expectation that if no publication bias is present, the effect sizes will be dispersed equally on either side of the overall effect. However, this method has limited power to detect publication bias, particularly when the number of included studies is few.

We conducted preplanned subgroup analyses by study quality and type of control group. For other study characteristics (e.g., sessions delivered, type of depression), there was not sufficient variability and numbers of studies to conduct subgroup analyses. We used an influence analysis, recomputing the pooled mean effect by removing one study at a time, to determine the influence of individual studies on the overall effect. We used the computer program Comprehensive Meta-analysis, Version 2.2.021 ([www.meta-analysis.com/pages/about\\_us.html](http://www.meta-analysis.com/pages/about_us.html)), to conduct all meta-analyses.

### Grading the Evidence for Each Key Question

We graded the strength of evidence for each key question using principles from the Grades of Recommendation, Assessment, Development, and Evaluation (GRADE) Working Group.<sup>44</sup> This approach assesses the strength of evidence for each critical outcome by considering risk of bias, consistency, directness, precision, and publication bias. Other domains relevant to observational designs were not pertinent to our review. After considering each domain, a summary rating of “high,” “moderate,” “low,” or “insufficient” strength of evidence was assigned after discussion by two reviewers (Table 2).

**Table 2. Definitions for Strength of Evidence Rating**

| Strength of evidence rating | Definition                                                                                                                                   |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| High                        | Further research is very unlikely to change our confidence in the estimate of effect                                                         |
| Moderate                    | Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate               |
| Low                         | Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate |
| Insufficient                | Evidence on an outcome is absent or too weak, sparse, or inconsistent to estimate an effect                                                  |

## PEER REVIEW

A draft version of this report was sent to five peer reviewers. Their comments and our responses are presented in Appendix C.

## RESULTS

Our general approach throughout the Results section is first to describe the relevant systematic reviews and then to describe the primary literature, with syntheses of the reviews and the primary literature occurring in conjunction with descriptions of the primary literature. This approach to integrating existing systematic reviews and new primary literature into a new “complex systematic review” was adopted and implemented in accordance with the recommendations for conducting complex systematic reviews proposed by Whitlock and colleagues.<sup>36</sup>

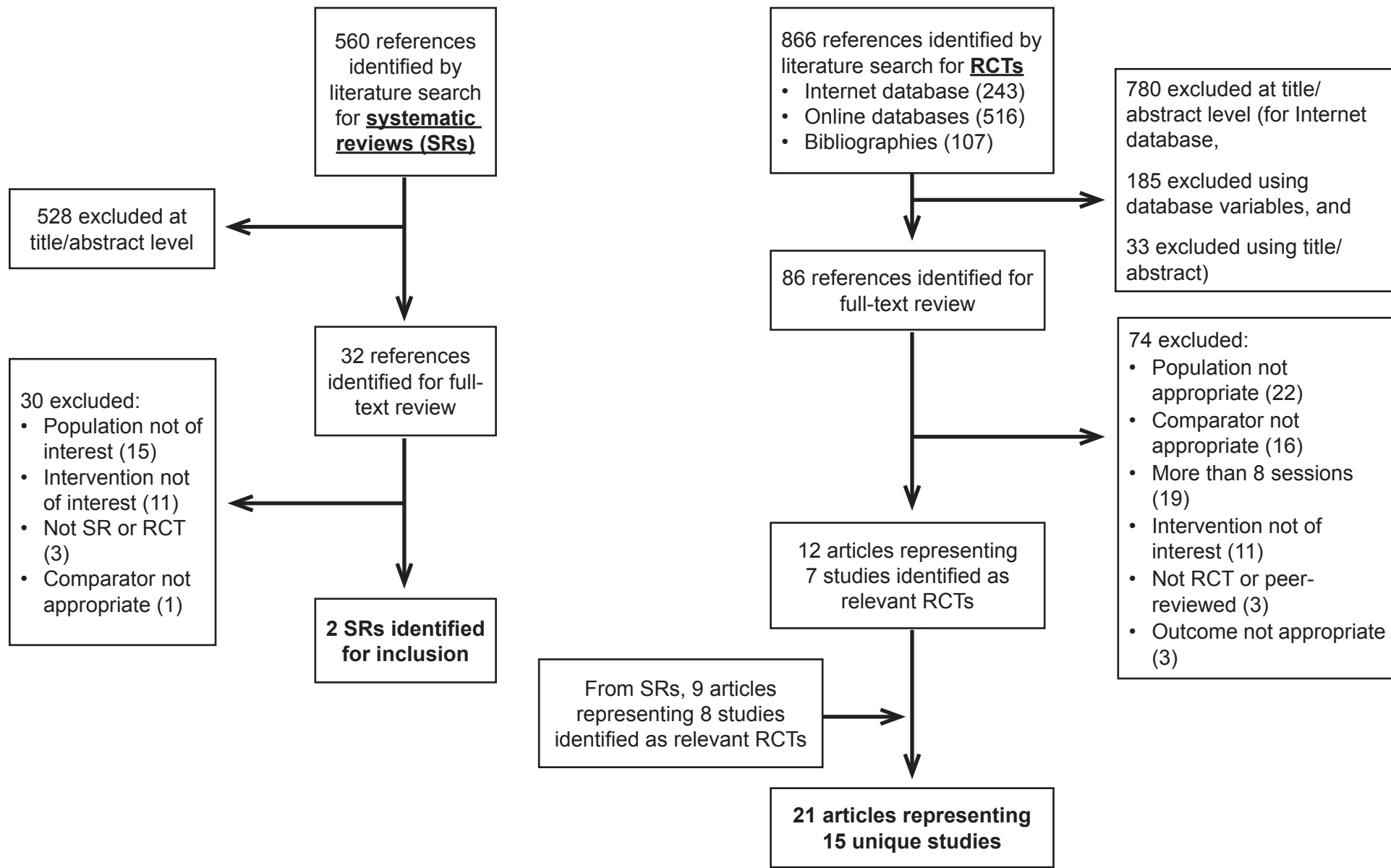
## LITERATURE SEARCH AND STUDY CHARACTERISTICS

### Systematic Reviews

Using the combined literature search of PubMed, Embase, PsycINFO, and Cochrane databases (Appendix A), we identified references for 560 potential systematic reviews (Figure 2). Of these, 528 were excluded at the title-and-abstract level, and 30 were excluded after conducting a full-text review. Two eligible reviews were retained: Cuijpers and colleagues<sup>45</sup> and Cape and colleagues.<sup>46</sup>

Cuijpers<sup>45</sup> completed a good-quality meta-analysis of 15 studies that examined psychotherapeutic interventions for depression in primary care. Studies were identified through an Internet-accessible database of psychotherapy trials<sup>47</sup> that was created by the authors via comprehensive literature searches in PubMed, PsycINFO, Embase, and the Cochrane Central Register of Controlled Trials from 1966 to December 2007. Included studies had interventions ranging in length from 6 to 16 sessions; only CBT and PST used 8 or fewer sessions. The majority of treatments were either CBT or PST, with two studies examining IPT and one study examining psychodynamic counseling. Most comparator conditions were care as usual (which was noted as being poorly described and variable in the reviewed studies), three were placebo, and two were waitlist. Half of the studies contained participants diagnosed with MDD, and the other half contained participants with other depressive conditions. Eight studies were conducted in the U.K., five in the U.S., and two in the Netherlands. The risk of bias varied across studies. Of the 15 trials, 13 assessed outcomes blind to treatment assignment, 10 were analyzed using the intent to treat principle, and dropout rates varied from 3.3 to 41.2%. The authors separated the seven studies with six or fewer sessions from the eight studies with more than six sessions; this subgroup analysis was of particular interest for the present review.

Figure 2. Literature Flow Diagram



Cape<sup>46</sup> completed a good-quality meta-analysis and meta-regression of 34 studies examining the effectiveness of brief psychological therapies in primary care for anxiety disorders, depressive disorders, and mixed anxiety and depression. Studies were identified via searches in MEDLINE, Embase, and PsycINFO databases from inception through July 2008. Included RCTs had number of sessions ranging from 2.3 to 9.8, with a median and mode of six sessions. Active treatment conditions had roughly equal distributions between studies for CBT, PST, and counseling. All comparator conditions were “general practitioner care as usual,” which was not further described. Seven studies included patients with anxiety disorders, 14 included patients with depression, and 13 included patients with mixed anxiety and depression. Of the 14 depression studies, 6 enrolled patients with MDD, 6 enrolled mixed depressive disorders including minor depression, and 2 enrolled only those with minor depression. For the 14 depression studies, 8 were analyzed using the intent-to-treat principle, and 10 had lost to followup less than 20%. The number with blinded outcome assessment was not reported. Approximately two-thirds of the studies were conducted in the U.K., with the remaining third conducted in other European countries and the U.S. The authors separately reviewed the studies of brief psychotherapy for depression, and this subgroup analysis was used in the present review.

After articles from the Cuijpers<sup>45</sup> and Cape<sup>46</sup> reviews were screened by two independent reviewers, nine articles representing eight unique studies met eligibility criteria and were retained for further analysis in tandem with the additional original research studies identified from the primary literature searches.

## Primary Literature

The combined searches for primary literature in electronic databases (MEDLINE, Embase, and PsycINFO), in a well-documented Internet-accessible database of psychotherapy trials,<sup>47</sup> and in bibliographies of included studies (Appendix A) identified 866 citations. Of these, 12 articles representing 7 unique studies met eligibility criteria (Figure 2).

Study characteristics from the 15 relevant RCTs of brief psychotherapy—8 from the Cuijpers<sup>45</sup> and Cape<sup>46</sup> reviews and 7 from the additional RCTs identified in our primary literature search—are summarized in Table 3. Characteristics of psychotherapy interventions used in the 15 RCTs of brief psychotherapy are summarized in Table 4.

Table 3. Summary of Study Characteristics

|                                       | Author, year                                                            | Depressive disorder                                      | Age mean (SD)    | % Female | % White | Setting | Recruitment                        | Most distal followup <sup>a</sup> | Depression outcomes | Quality <sup>b</sup> |
|---------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------|------------------|----------|---------|---------|------------------------------------|-----------------------------------|---------------------|----------------------|
| RCTs from systematic reviews          | Barrett et al., 2001 <sup>48</sup> and Frank et al., 2002 <sup>4</sup>  | Minor depression or dysthymia                            | 43.6 (NR)        | 67%      | 89%     | PC      | Screening and referral             | 11 weeks                          | HRSD-17; HSCL-20    | –                    |
|                                       | Dowrick et al., 2000 <sup>5</sup>                                       | MDD, dysthymia, adjustment disorder, or other depression | NR; Range: 18-65 | 66%      | NR      | PC      | Screening from census and registry | 52 weeks                          | BDI                 | –                    |
|                                       | Lynch et al., 1997 <sup>49</sup>                                        | Elevated depressive symptoms without MDD                 | 48.4 (NR)        | 86%      | NR      | PC      | Screening                          | 7 weeks                           | HRSD; BDI           | –                    |
|                                       | Lynch et al., 2004 <sup>50</sup>                                        | Elevated depressive symptoms                             | 38.5 (13.7)      | 83%      | NR      | PC      | Screening                          | 6 weeks                           | HRSD; BDI; DHP      | –                    |
|                                       | Mynors-Wallis et al., 1995 <sup>51</sup>                                | MDD                                                      | 37.1 (11.4)      | 77%      | 95%     | PC      | Referral                           | 12 weeks                          | HRSD; BDI           | –                    |
|                                       | Scott et al., 1997 <sup>52</sup>                                        | MDD                                                      | 41 (10.4)        | 67%      | NR      | PC      | Referral                           | 52 weeks                          | HRSD; BDI           | Fair                 |
|                                       | Ward et al., 2000 <sup>53</sup> and King et al., 2000 <sup>54</sup>     | Depression or mixed anxiety depression                   | 36.8 (12.2)      | 76%      | 89%     | PC      | Referral                           | 52 weeks                          | BDI-21              | Fair                 |
|                                       | Williams et al., 2000 <sup>55</sup> and Frank et al., 2002 <sup>4</sup> | Dysthymia or minor depression                            | 71 (7.1)         | 43%      | 76%     | PC      | Screening and referral             | 11 weeks                          | HSCL-D-20; HRSD     | –                    |
| RCTs from primary literature searches | Barnhofer et al., 2009 <sup>56</sup>                                    | MDD or subthreshold MDD                                  | 41.9 (10.4)      | 68%      | NR      | MH      | Advertisement and referral         | 8 weeks                           | BDI                 | Good                 |
|                                       | Laidlaw et al., 2008 <sup>57</sup>                                      | MDD                                                      | 74.0 (8.0)       | 73%      | NR      | PC      | Referral                           | 26 weeks                          | BDI; GDS; HRSD      | Fair                 |
|                                       | Mynors-Wallis et al., 2000 <sup>58</sup>                                | MDD                                                      | 34.5 (NR)        | 78%      | 93%     | PC      | Referral                           | 52 weeks                          | HRSD; BDI           | Good                 |
|                                       | Nezu, 1986 <sup>59</sup>                                                | MDD                                                      | 41.7 (12.8)      | 81%      | NR      | MH      | Advertisement                      | 26 weeks                          | BDI; MMPI-D         | Fair                 |
|                                       | Simon et al., 2004 <sup>60</sup> and Simon et al., 2009 <sup>61</sup>   | Antidepressant and depressive symptoms                   | 44.8 (15.5)      | 74%      | 80%     | PC      | Registry                           | 24 weeks                          | SCL                 | Good                 |
|                                       | Wilson, 1982 <sup>62</sup>                                              | Self-report of depression                                | 38.8 (NR)        | 66%      | NR      | MH      | Advertisement                      | 26 weeks                          | BDI                 | Poor                 |
|                                       | Wilson, 1983 <sup>63</sup>                                              | Self-report of depression                                | 39.5 (NR)        | 80%      | NR      | MH      | Advertisement                      | 8 weeks                           | BDI; HRSD           | Fair                 |

<sup>a</sup> Weeks since baseline assessment.<sup>b</sup> Quality assessments were conducted for the seven newly identified RCTs, and in order to conduct the meta-analysis on studies of brief CBT, quality assessments were completed for two studies that had been included in the systematic reviews.

Abbreviations: BDI = Beck Depression Inventory, DHP = Diabetes Health Profile, DIS = Diagnostic Interview Schedule, GDS = Geriatric Depression Scale, GP = general practitioner, HRSD = Hamilton Rating Scale for Depression, HSCL-D = Headache Specific Locus of Control-Depression, MDD = major depressive disorder, MH = mental health, MMPI-D = Minnesota Multiphasic Personality Inventory Depression Scale, MOS-D = Medical Outcomes Study-Depression, NR = not reported, PC = primary care, PRIME-MD = Primary Care Evaluation of Mental Disorders Patient Health Questionnaire, RDC = Research Diagnostic Criteria, SADS-L = Schedule for Affective Disorders and Schizophrenia–Lifetime Version, SCAN = Schedules for Clinical Assessment in Neuropsychiatry, SCL = Symptom Checklist

Table 4. Summary of Intervention Characteristics

|                                       | Author, year                                                            | Therapy                   | # sessions | Session length | Session frequency             | Modality              | Therapist                                                   | Treatment fidelity? | Therapy completed [n (%)] | Control                                            |
|---------------------------------------|-------------------------------------------------------------------------|---------------------------|------------|----------------|-------------------------------|-----------------------|-------------------------------------------------------------|---------------------|---------------------------|----------------------------------------------------|
| RCTs from systematic reviews          | Barrett et al., 2001 <sup>48</sup> and Frank et al., 2002 <sup>4</sup>  | PST (n = 80)              | 6          | 30 min         | Ever 2 weeks                  | Individual            | PhD psychologist                                            | Yes                 | 64 (80%)                  | Placebo (n = 81)                                   |
|                                       | Dowrick et al., 2000 <sup>5</sup>                                       | PST (n = 128)             | 6          | 30 min         | NR                            | Individual            | Psychologists, nurses, allied health professionals          | Yes                 | 80 (63%)                  | Waitlist (n = 189)                                 |
|                                       | Lynch et al., 1997 <sup>49</sup>                                        | PST (n = 15)              | 6          | 20 min         | Weekly                        | Individual; telephone | Graduate students                                           | No                  | 11 (73%)                  | Usual care (n = 14)                                |
|                                       | Lynch et al., 2004 <sup>50</sup>                                        | PST (n = 18)              | 6          | NR             | Weekly                        | Individual; telephone | Nurses                                                      | Yes                 | NR                        | Usual care (n = 18)                                |
|                                       | Mynors-Wallis et al., 1995 <sup>51</sup>                                | PST (n = 30)              | 6          | 30 min         | Every 2 weeks                 | Individual            | Experienced psychiatrist and trained GPs                    | No                  | 28 (93%)                  | Placebo (n = 30)                                   |
|                                       | Scott et al., 1997 <sup>52</sup>                                        | CBT (n = 24)              | 6          | 30 min         | Weekly                        | Individual            | CBT therapist                                               | Yes                 | 18 (75%)                  | Usual care (n = 24)                                |
|                                       | Ward et al., 2000 <sup>53</sup> and King et al., 2000 <sup>54</sup>     | CBT (n = 63)              | 6          | 50 min         | Weekly                        | Individual            | Experienced psychologists                                   | Yes                 | 56 (89%)                  | Usual care (n = 67)                                |
|                                       | Williams et al., 2000 <sup>55</sup> and Frank et al., 2002 <sup>4</sup> | PST (n = 138)             | 6          | 30 min         | Every 2 weeks                 | Individual            | PhD psychologist, social workers, master's-level counselors | Yes                 | 108 (78%)                 | Medication; placebo (n = 140)                      |
| RCTs from primary literature searches | Barnhofer et al., 2009 <sup>56</sup>                                    | MBCT (n = 16)             | 8          | 2 hours        | Weekly                        | Group                 | MBCT therapists                                             | Yes                 | 14 (88%)                  | TAU (n = 14)                                       |
|                                       | Laidlaw et al., 2008 <sup>57</sup>                                      | CBT (n = 21)              | 8          | NR             | NR                            | Individual            | Master's-level psychologist                                 | Yes                 | 20 (95%)                  | TAU (n = 23)                                       |
|                                       | Mynors-Wallis et al., 2000 <sup>58</sup>                                | PST + Med. (n = 35)       | 6          | 30 min         | Every 2 weeks                 | Individual            | Research practice nurse                                     | No                  | 34 (97%)                  | Medication alone (n = 36)                          |
|                                       | Nezu, 1986 <sup>59</sup>                                                | PST (n = 12)              | 8          | 1.75 hours     | Weekly                        | Group                 | Graduate students                                           | Yes                 | 11 (92%)                  | Waitlist control (n = 9)                           |
|                                       | Simon et al., 2004 <sup>60</sup> and Simon et al., 2009 <sup>61</sup>   | CBT+TCM (n = 195)         | 8          | 35 min         | Every ≈1.5 weeks <sup>a</sup> | Individual; Telephone | Master's-level psychologist                                 | No                  | 167 (86%)                 | TCM (n = 207)                                      |
|                                       | Wilson, 1982 <sup>62</sup>                                              | CBT (n ≈ 32) <sup>b</sup> | 7          | 1 hour         | Weekly                        | Individual            | Graduate students                                           | NR                  | 21 (66%)                  | Minimal contact <sup>c</sup> (n ≈ 32) <sup>b</sup> |
|                                       | Wilson, 1983 <sup>63</sup>                                              | CBT (n = 16)              | 8          | 1 hour         | Weekly                        | Individual            | NR                                                          | No                  | 12 (75%)                  | Waitlist (n = 9)                                   |

<sup>a</sup> Weekly sessions for first 4 weeks, with frequency ranging from every 1 to 4 weeks for remaining four sessions.

<sup>b</sup> Estimate based on data provided in article.

<sup>c</sup> Minimal contact consisted of two 1-hour nondirective therapy sessions to coincide with medication refills.

Abbreviations: CBT = cognitive behavioral therapy (includes cognitive therapy and behavioral therapy), MBCT = mindfulness-based cognitive therapy, min = minutes, NR = not reported, PST = problem-solving therapy, TAU = treatment as usual, TCM = telephone case management

Of the 15 unique studies, 6 studies were conducted in the U.S., 6 in the U.K., 2 in Australia, and 1 recruited patients across several European countries. All studies were conducted with English-speaking patients. Patients were predominantly treated in primary care, with 11 trials taking place in a primary care setting, and 4 taking place in a mental health outpatient setting. Recruitment strategies varied such that participants were recruited via screening in five studies, referral from a provider in eight studies, advertisement in four studies, and registries in two studies; many trials used more than one recruitment method. Studies had varying diagnostic criteria for inclusion, with six trials specifically allowing for the inclusion of subthreshold depression (e.g., minor depression, adjustment disorder, depressive symptoms), five requiring a diagnosis of MDD, and the remaining four using other criteria (e.g., beginning antidepressant, self-report of depression).

The intervention in eight studies was PST; in six studies, CBT; and in one study, mindfulness-based cognitive therapy (MBCT). No trials of other psychotherapies using interventions of eight sessions or fewer were identified. Interventions were monitored for treatment fidelity in nine studies. Included studies most commonly measured depressive symptoms using the clinician-administered Hamilton Rating Scale for Depression (HRSD) and the self-report Beck Depression Inventory (BDI); only one study used neither of these measures. Even though no study extended treatment beyond eight sessions, followup duration was less than 6 months for seven studies and was 6 months or greater for eight studies. In all but one study, females outnumbered males by a ratio of at least 2 to 1. The average age for study participants ranged from 35 to 48 years of age in 13 of the 15 studies, with the 2 remaining studies having participants with average ages of 71 and 74 years of age. These two studies of elderly patients had mixed results: one found small to no benefit in elderly patients receiving PST for depression,<sup>55</sup> and the other found significant and sustained benefit in elderly patients receiving CBT for depression.<sup>57</sup> Most studies did not report race, and the six studies that did report race had heavily Caucasian samples. Only two study samples included any Veteran representation.<sup>48,55</sup> In both samples, Veterans composed only a portion of the overall sample, and data on Veterans were not presented separately.

Quality assessments were conducted for the seven RCTs identified in the primary literature searches—one was rated as poor, three as fair, and three as good. Fair and poor studies were often rated as such due to inadequately addressing incomplete outcome data and not having outcome assessors who were blind to treatment assignment. In order to conduct the meta-analysis on studies of brief CBT, quality assessments were completed for two studies that had been included in the systematic reviews; both were rated as fair.

**KEY QUESTION 1. For primary care patients with depressive disorders, are brief, evidence-based psychotherapies with durations of up to eight sessions more efficacious than control for depressive symptoms (i.e., on self-report and/or clinician-administered measures) and quality of life (i.e., functional status and/or health-related quality of life)?**

## Systematic Reviews

Cuijpers<sup>745</sup> systematic review of 15 RCTs found psychological treatment from a range of 6 to 16 sessions to be significantly more effective than control for treatment of depression in primary care (ES -0.31, 95% CI -0.45 to -0.17, NNT = 5.75). They found significantly larger effect sizes

for studies in which participants were referred by their general practitioner (GP) (ES -0.43, 95% CI -0.58 to -0.28, NNT = 4.20) than for studies in which participants were recruited through systematic screening (ES -0.13, 95% CI -0.34 to 0.08, NNT = 13.51). The lower effect size for brief psychotherapy in the subgroup of primary care patients recruited through systematic screening was suggested as the reason why an initial comparison favored brief psychotherapy delivered in non-primary care settings (ES -0.67, 95% CI -0.75 to -0.58, NNT = 2.75) compared to brief psychotherapy delivered in primary care settings (ES -0.31, 95% CI -0.45 to -0.17, NNT = 5.75). The authors found no significant difference between studies in which participants were diagnosed with MDD (ES -0.21, 95% CI -0.42 to 0.00, NNT = 8.47) and studies in which participants' depressive symptomatology was alternatively determined (ES -0.40, 95% CI -0.56 to -0.23, NNT = 4.50). The multiple subgroup analyses conducted in this good-quality review allowed for the authors to present both robust and nuanced findings. In regard to psychotherapies with a fewer number of sessions, the authors found that, compared to control, psychotherapies of  $\leq 6$  sessions ( $n = 7$ ) had a small but significant positive effect for the treatment of depression in primary care (ES -0.25, 95% CI -0.48 to -0.02, NNT = 7.14). HRQOL outcomes were not reported in this review.

Cape's<sup>46</sup> meta-analysis of 34 studies examined efficacy in regard to treatment type and in regard to three diagnostic categories: anxiety, depression, and mixed depression and anxiety. For certain analyses, they combined patients with diagnoses in the latter two categories. They found smaller treatment effects when CBT was used for mixed depression and anxiety (ES -0.26, 95% CI -0.44 to -0.08) than for anxiety (i.e., predominantly panic disorder and generalized anxiety disorder; ES -1.06, 95% CI -1.31 to -0.80). They found similar small effect sizes for PST for depression and mixed depression and anxiety (ES -0.21, 95% CI -0.37 to -0.05) and for counseling for depression and mixed depression and anxiety (ES -0.32, 95% CI -0.52 to -0.11). The examination of different psychotherapies in three different diagnostic groups (i.e., depression, anxiety, and mixed depression and anxiety) was a particular strength of this review. In regard to brief psychotherapies specifically for patients with depression, the authors found a significant but small effect favoring brief CBT over usual GP care for depression (ES -0.33, 95% CI -0.60 to -0.06) and found a positive but statistically nonsignificant effect for PST over usual GP care (ES -0.26, 95% CI -0.49 to 0.03). No significant differences in efficacy were found between CBT and PST. HRQOL outcomes were not reported in this review.

## Primary Literature

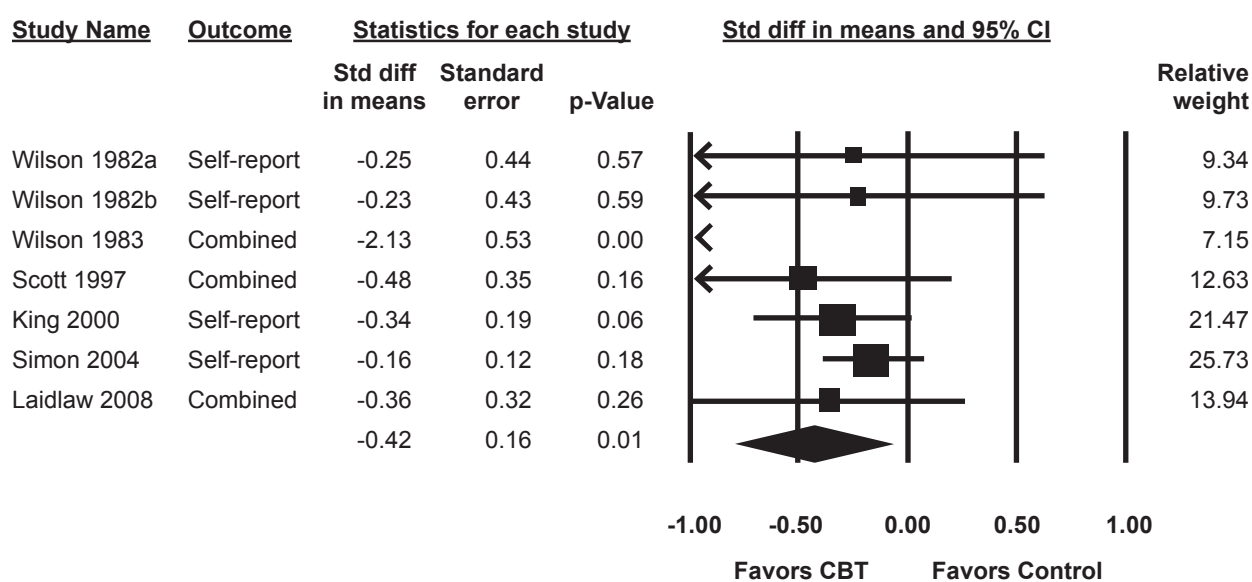
Among the seven studies that we discovered were not included in the systematic reviews were two studies of PST, one of MBCT, and four of CBT. The 4 studies of CBT randomized 535 participants to treatment or control, whereas the 2 relevant studies of brief CBT covered in the systematic reviews randomized 178 participants to treatment or control. Because of the number of CBT trials not considered in the previous 2 systematic reviews, we conducted a meta-analysis of the 6 trials involving 713 patients to evaluate the effects of brief CBT (6 to 8 sessions) for depression.

For the 6 trials, study quality was rated as good ( $n = 1$ ), fair ( $n = 4$ ), or poor ( $n = 1$ ). Studies enrolled patients with MDD ( $n = 2$ ), depressive symptoms ( $n = 2$ ), depression or mixed anxiety depression ( $n = 1$ ), or patients with depressive symptoms who were starting an antidepressant ( $n = 1$ ). Control conditions were treatment as usual in four of the six trials, and in two trials control

conditions contained an additional therapeutic component beyond usual care.<sup>60,62</sup> Care as usual in these trials was typically described as allowing the primary care provider their usual discretion in treating depression; some studies noted that this could include antidepressant medication, counseling, or referral, whereas other studies did not specify the range of options left open to providers.

Participants receiving brief CBT for depression were more likely than participants receiving a control treatment to have reduced symptoms of depression (ES -0.42, 95% CI -0.74 to -0.10), but treatment effects differed significantly across studies (Cochran  $Q = 13.74$ ,  $p = 0.03$ ,  $I^2 = 56\%$ ) (Figure 3). The ES of -0.42 corresponds to an NNT of approximately 4.5. A funnel plot did not suggest significant publication bias, but with only six studies, this method has limited power to detect publication bias. To examine the moderate level of variability present, we conducted an influence analysis. In this analysis, the summary estimate ranged from -0.24 to -0.53, with the trial by Wilson<sup>63</sup> having the greatest influence. This trial was the only one of the six CBT studies to use a waitlist control condition as the comparator. Based on a priori hypotheses of variables that might influence the effect size estimate, we conducted two sensitivity analyses: in the first, we removed poor-quality studies from the meta-analysis; in the second, we removed both poor-quality studies and studies that used nontherapeutic comparator conditions (e.g., waitlist) from the meta-analysis. In the meta-analysis with the poor-quality study removed,<sup>62</sup> brief CBT for depression continued to be significantly more effective than control (ES -0.50, 95% CI -0.91 to -0.09), but treatment effects remained significantly heterogeneous (Cochran  $Q = 13.71$ ,  $p = 0.008$ ,  $I^2 = 71\%$ ). With the poor-quality study<sup>62</sup> and the study with a waitlist comparator<sup>63</sup> removed, treatment effects of brief CBT for depression were smaller (ES -0.24, 95% CI -0.42 to -0.06) but homogeneous (Cochran  $Q = 1.44$ ,  $p = 0.70$ ,  $I^2 = 0\%$ ). This effect size corresponds to an NNT of approximately eight. These results are highly consistent with both Cuijpers<sup>745</sup> and Cape's<sup>46</sup> estimates of effect size for brief CBT for the treatment of depression.

**Figure 3. Meta-analysis of Brief CBT for Depression**



Meta Analysis

The 2 studies of PST identified in the primary literature searches and not included in the systematic reviews randomized 92 participants to treatment or control, whereas the 6 studies of PST covered in the systematic reviews randomized 881 participants. Thus, we did not conduct an updated meta-analysis for PST. The two studies of PST identified in the primary literature searches were conducted by Mynors-Wallis and colleagues<sup>58</sup> and Nezu.<sup>59</sup> In a good-quality trial involving 71 participants, Mynors-Wallis<sup>58</sup> found that adding six sessions of PST to antidepressant medication did not significantly enhance outcomes over treatment with antidepressant medication alone after 12 weeks (60% recovered versus 67%). They also found that after 12 and 52 weeks antidepressant alone was not significantly different in effectiveness from PST alone. In a small, fair-quality trial, Nezu<sup>59</sup> found eight sessions of PST to be significantly more effective in reducing depressive symptoms than either problem-focused therapy or a waitlist control at 8 weeks ( $t = 3.25$ ,  $p < .01$ ). These results are consistent with both Cape's<sup>46</sup> and Cuijpers'<sup>45</sup> conclusion that PST is an efficacious option for the treatment of depression.

No studies of MBCT were included in the systematic reviews. We identified a single good-quality study of MBCT that met our inclusion criteria.<sup>56</sup> This study randomized 30 subjects with MDD or subthreshold depression, recruited from a mental health setting, and found 8 sessions of MBCT to be more efficacious than treatment as usual at reducing depressive symptoms at 8 weeks ( $F = 13.42$ ,  $p = 0.001$ ).

Quality of life was too infrequently reported across studies to synthesize into any quantitative analyses. The two studies of CBT from the present meta-analysis that included data on quality of life did not find significant differences on quality-of-life outcomes between participants in the CBT conditions compared to participants in the control conditions.<sup>53,57</sup> No other trials from the studies identified via the primary literature searches included data on quality of life. The frequency with which data on quality of life were reported is considered in Key Question 4.

## **KEY QUESTION 2. For primary care patients with depressive disorders treated with a brief, evidence-based psychotherapy, is there evidence that treatment effect may vary by the number of sessions delivered?**

Cuijpers<sup>45</sup> found a small difference in effect size between psychotherapies of six or fewer sessions (ES -0.25, 95% CI -0.48 to -0.02) compared to psychotherapies of seven or more sessions (ES -0.36, 95% CI -0.54 to -0.17), but confidence intervals overlapped. Should a more adequately powered meta-analysis be possible in the future, the means and confidence intervals surrounding these effect sizes leave room for the possibility of a clinically significant difference between brief and standard-duration psychotherapies.

Cape<sup>46</sup> did not conduct a comparison based on number of psychotherapy sessions delivered, as their review was limited to therapies of fewer than 10 sessions in duration. Similarly, because the present review included only studies with eight or fewer sessions and there was little variability in session number (six to eight), an analysis of whether treatment effect varies by quantity of therapy sessions could not be conducted.

**KEY QUESTION 3. For psychotherapies demonstrating clinically significant treatment effects, what are the characteristics of treatment providers (i.e., type of provider and training), and what are the modalities of therapy (i.e., individual/group, face-to-face/teletherapy/Internet-based)?**

Of the 15 RCTs evaluating brief therapies, 13 used an individual psychotherapy format, and 2 relied on a group therapy format. Two of the individual PST treatments and one of the individual CBT treatments were conducted over the phone. PST treatment providers included psychologists in three studies, nurses in three studies, graduate students in two studies, and other health professionals in three studies (e.g., GPs, allied health professionals, social workers). CBT treatment providers included psychologists in three studies, graduate students in one study, and nonidentified professionals in two studies. The MBCT treatment provider had completed an internship under the supervision of an expert MBCT therapist. There was substantial variability in the level of detail provided about therapists' training. Most therapists were noted either as having previous experience in the intervention treatment model or as having been trained and supervised for study purposes by one of the study's investigators.

While the number of sessions ranged only from six to eight, there was substantial variance in the intensity at which psychotherapies were provided. The most intensive therapy, MBCT, required 2 hours per week for 8 weeks, whereas multiple PST protocols required only 30-minute sessions spaced approximately every other week. Although it would appear that the two were separated by a difference of only two sessions, the intensity was different because the MBCT protocol specified a total of 16 hours of treatment, whereas the PST protocols specified a total of only 3.5 hours (first session is typically 1 hour). Three of the CBT protocols consisted of 50- to 60-minute sessions, and two consisted of 30- to 35-minute sessions.

Quantitative syntheses to examine differences on the basis of treatment intensity, provider type, individual versus group, and telephone versus in-person could not be completed because there was not an adequate number of studies in each of these subgroups.

**KEY QUESTION 4. How commonly reported are the key clinical outcomes of quality of life, social functioning, occupational status, patient satisfaction, and adverse treatment effects in randomized trials of psychotherapy?**

Neither of the two systematic reviews reported on quality of life, social functioning, occupational status, patient satisfaction, or adverse treatment effects. Of the 15 RCTs contained in this evidence report, 5 reported HRQOL, 5 reported social functioning, 0 reported occupational status, 2 reported patient satisfaction with treatment, and 1 reported adverse treatment effects (Table 5). The most commonly used measure of quality of life for studies that examined this clinical outcome was the SF-36. The one study that reported adverse treatment effects examined the side effects of taking psychotropic medication in tandem with psychotherapy.

Table 5. Key Clinical Outcome Measures

|                                       | Study                                                                   | Quality of life  | Social functioning           | Occupational status | Patient satisfaction | Adverse treatment effects    |
|---------------------------------------|-------------------------------------------------------------------------|------------------|------------------------------|---------------------|----------------------|------------------------------|
| RCTs from systematic reviews          | Barrett et al, 2001 <sup>48</sup> and Frank et al., 2002 <sup>4</sup>   | Yes, SF-36       | NR                           | NR                  | NR                   | NR                           |
|                                       | Dowrick et al., 2000 <sup>5</sup>                                       | Yes, SF-36       | NR                           | NR                  | NR                   | NR                           |
|                                       | Lynch et al., 1997 <sup>49</sup>                                        | NR               | Yes                          | NR                  | NR                   | NR                           |
|                                       | Lynch et al., 2004 <sup>50</sup>                                        | NR               | NR                           | NR                  | NR                   | NR                           |
|                                       | Mynors-Wallis et al., 1995 <sup>51</sup>                                | NR               | Yes                          | NR                  | Yes                  | NR                           |
|                                       | Scott et al., 1997 <sup>52</sup>                                        | NR               | NR                           | NR                  | NR                   | NR                           |
|                                       | Ward et al., 2000 <sup>53</sup> and King et al., 2000 <sup>54</sup>     | Yes, EuroQoL     | Yes                          | NR                  | NR                   | NR                           |
|                                       | Williams et al., 2000 <sup>55</sup> and Frank et al., 2002 <sup>4</sup> | Yes, SF-36       | NR                           | NR                  | NR                   | NR                           |
| RCTs from primary literature searches | Barnhofer et al., 2009 <sup>56</sup>                                    | NR               | NR                           | NR                  | NR                   | NR                           |
|                                       | Laidlaw et al., 2008 <sup>57</sup>                                      | Yes, WHOQOL-BREF | Yes, social relationships    | NR                  | NR                   | NR                           |
|                                       | Mynors-Wallis et al., 2000 <sup>58</sup>                                | NR               | Yes, Social Adjustment Scale | NR                  | NR                   | Yes, medication side effects |
|                                       | Nezu, 1986 <sup>59</sup>                                                | NR               | NR                           | NR                  | NR                   | NR                           |
|                                       | Simon et al., 2004 <sup>60</sup> and Simon et al., 2009 <sup>61</sup>   | NR               | NR                           | NR                  | Yes                  | NR                           |
|                                       | Wilson, 1982 <sup>62</sup>                                              | NR               | NR                           | NR                  | NR                   | NR                           |
|                                       | Wilson, 1983 <sup>63</sup>                                              | NR               | NR                           | NR                  | NR                   | NR                           |

Abbreviations: NR = not reported, WHOQOL = World Health Organization Quality of Life

## DISCUSSION

Based on our complex systematic review of two recent literature reviews and seven additional RCTs not considered in these previous reviews, the collective evidence suggests that six to eight sessions of brief CBT or PST for acute-phase treatment in primary care are more efficacious than usual care, but effects are modest. However, insofar as usual care consists of treatments that are intended to be effective and that may in some cases be “best practice” treatments, usual care could represent a more potent control condition than placebo controls used in antidepressant trials. Also, there is some evidence to indicate that brief psychotherapy may be more efficacious when patients are referred at the discretion of their primary care provider than when patients are selected for treatment on the basis of systematic depression screening. We conclude that brief psychotherapy may prove an efficacious treatment option for a number of patients with depression in VA primary care settings. Because the reviewed studies contained little Veteran representation, relied heavily on samples of predominantly middle-aged Caucasian females, and frequently excluded patients with complex or comorbid psychiatric conditions, additional research is needed to more definitively confirm the effectiveness of brief psychotherapy for depression in the Veteran population (Key Question 1).

Whether brief psychotherapies significantly differ in efficacy from standard-duration psychotherapies (12 to 20 sessions) is a question that we could not directly address given the limited range of session duration (6 to 8) in the 15 studies included in this review. Cuijpers’ (2009) review<sup>45</sup> found no statistically significant differences between psychotherapies delivered in six or fewer sessions compared to psychotherapies delivered over seven or more sessions; however, the wide confidence intervals for effect sizes of brief and standard-duration psychotherapies leave open the possibility of clinically significant differences (Key Question 2).

Our review found that brief psychotherapies have been provided by an array of trained health care professionals, including non-mental health professionals. The efficacious treatments included in this review were provided not only by psychologists but also by graduate students, nurses, general practitioners, and other allied health professionals who had received training and supervision specific to the intervention being conducted. Details about training were sparse, meaning that the degree of training necessary to replicate studies’ results is uncertain (Key Question 3). Finally, we discovered that effects on occupational status, patient satisfaction with treatment, and adverse treatment effects were seldom reported; HRQOL and social functioning were more commonly reported but still only considered in less than half the trials examined in this review (Key Question 4).

Depressive disorders cause enormous human suffering and impose a high economic burden. Ensuring access to evidence-based treatments for Veterans is critical to the VA mission. The current emphasis on evidence-based care management in the VA has the potential to significantly enhance the usual care of depression in VA primary care settings, and the Primary Care/Mental Health Integration program in the VA represents an important organizational strategy to improve access and the quality of mental health care. If the VA were to expand its capability to provide brief psychotherapy for primary care patients in the acute phase of depression, this too has the potential to improve access and quality. Fewer sessions would mean that the same workforce could provide treatment to a larger number of patients, potentially more cost-effectively. In

addition, clinicians from a variety of disciplines, if given adequate training and under appropriate supervision, may be able to provide brief therapies, further expanding access. Although the exact training was often incompletely described, many studies used focused training with non-mental health specialists, followed by fidelity monitoring to ensure quality. Fidelity monitoring may be a key component of replicating the positive treatment effects, particularly with generalist clinicians. Within the VA, a range of providers could be considered, including nurses, nurse practitioners, primary care physicians, social workers, and chaplains. However, given the current nursing shortage and high demands on primary care physicians, any change or expansion in roles would need to be considered carefully.

If non-mental health professionals were to assume the role of providing brief therapies, patients should be screened carefully for those without high complexity, and oversight should be provided by qualified mental health professionals to ensure the safety of the patient. In the VA, integrated primary care/mental health teams often consist of primary care clinicians, psychiatrists, psychologists, and nurses and may provide an ideal context and support system in which to implement such a model.

One of our key questions was to assess how frequently key clinical outcomes were assessed. Review results revealed a striking lack of consistency in assessing and reporting important outcome measures. Of the 15 RCTs contained in this review, only 5 reported HRQOL, 5 reported social functioning, 0 reported of occupational status, 2 reported patient satisfaction with treatment, and 1 reported adverse treatment effects. Evaluating the efficacy of treatment is clearly important; however, without measuring key clinical outcomes like quality of life, social functioning, and occupational functioning, we constrict ourselves to understanding only a very limited range of how psychotherapies can impact mental and physical health.

## STRENGTHS AND LIMITATIONS

Our study has a number of strengths, including a protocol-driven review, a comprehensive search, careful quality assessment, and rigorous quantitative synthesis methods. For the included systematic reviews, we verified outcomes reported and supplemented the descriptions of included trials by abstracting missing data from the primary publications. We also combined a narrative review of recent, good-quality systematic reviews with new meta-analyses when indicated. This approach allowed us to capitalize on the strengths and often detailed analyses performed in existing reviews while updating those results to include the most recent and relevant studies.

However, several questions still remain. First, the efficacy of brief psychotherapy modalities other than CBT and PST could not be determined. Although we had hoped to review a variety of interventions, CBT and PST were the only treatments in our review for which more than one trial had been completed. Second, it is not clear if efficacy differs by the number of treatment sessions. This was a key question for our review that we were unable to answer. For CBT and PST, six to eight sessions has a small, beneficial effect compared to usual care, but a lower bound or dose-response relationship could not be determined. Third, the studies included in this review were composed primarily of Caucasian, middle-aged females. This limits applicability to the VA and to many other segments of society. Research is needed to evaluate whether results are applicable across diverse populations. Fourth, it remains unclear whether the efficacy of brief

psychotherapies varies according to depression severity (i.e., mild, moderate, severe). Fifth, major intervention outcomes (e.g., quality of life, social functioning, occupational status) are measured too infrequently. While these outcomes are often considered “secondary,” they are critical in evaluating the safety and generalizability of treatments for real-world practice.

Despite these limitations, it appears that brief psychotherapy is effective in primary care settings in the acute-phase treatment of depression. Increasing the availability of psychotherapy, either through enlarging the pool of mental health professionals or by training non-mental health professionals, will advance the VA toward its mission of providing easy access to care for Veterans.<sup>64</sup>

## CONCLUSIONS

We identified two systematic reviews and 15 trials of brief psychotherapy (i.e.,  $\leq 8$  sessions) for depression, encompassing 1716 patients with MDD or depressive symptomatology. Both systematic reviews concluded that brief CBT and PST are efficacious for the acute-phase treatment of depression in primary care. This conclusion was corroborated by our analyses that included seven additional studies. Table 6 summarizes the strength of evidence for the question of whether brief psychotherapies are more efficacious than control for depressive symptoms. GRADE criteria were not applicable to the other key questions.

**Table 6. Summary of the Strength of Evidence for Key Question 1**

| Number of studies (subjects)                             | Domains pertaining to strength of evidence |             |            |                     | Magnitude of effect and strength of evidence |
|----------------------------------------------------------|--------------------------------------------|-------------|------------|---------------------|----------------------------------------------|
|                                                          | Risk of Bias: Design/Quality               | Consistency | Directness | Precision           | Standardized mean difference (95% CI)        |
| <b>Key Question 1: Efficacy of brief psychotherapies</b> |                                            |             |            |                     |                                              |
| Brief CBT<br>6 (713)                                     | RCTs/Fair                                  | Consistent  | Direct     | Some imprecision    | -0.42 (-0.10 to -0.74)<br>Moderate           |
| Brief PST<br>8 (973)                                     | RCTs/Good                                  | Consistent  | Direct     | Some imprecision    | -0.26 (-0.49 to -0.30)<br>Moderate           |
| MBCT<br>1 (30)                                           | RCT/Good                                   | NA          | Direct     | Serious imprecision | Low                                          |
| Other therapies                                          | NA                                         | NA          | NA         | NA                  | Insufficient                                 |

## FUTURE RESEARCH

The present review confirmed that brief psychotherapies (i.e.,  $\leq 8$  sessions), such as brief CBT and brief PST, are efficacious as acute-phase treatments for depression. However, many questions remain to be answered about the effectiveness of brief psychotherapy. First, future research should rigorously test whether brief psychotherapies are of comparable efficacy to standard-duration psychotherapies (i.e., 12 to 20 sessions). This question was not directly tested by any trials in our review. Hence, our analysis of this question relied on pooled comparisons of various treatment durations from different trials, a method that is vulnerable to multiple confounders. Future research should include RCTs that compare psychotherapies that differ according to the number of sessions.

Existing research has also been limited by an inadequate consideration of patient outcomes. Accordingly, we advise future researchers to assess longer term outcomes after the conclusion of brief psychotherapies (e.g., 6 months or longer). Researchers should also assess a broader set of outcomes, such as social functioning, occupational status, and quality of life, instead of solely assessing depression severity. Quality-of-life measures are especially desirable as these allow for the computation of cost-effectiveness and cost-utility ratios, which are crucial for informing policy decisions.

Another priority for future research should be to evaluate whether the administration of brief psychotherapies in primary care settings actually produces the benefits that proponents claim. These include claims that (1) brief psychotherapies provided in the primary care context reduce the stigma of receiving treatment for mental health problems, (2) providing brief psychotherapies broadens the population that will initiate and complete treatment by placing a lower time burden on patients, and (3) brief psychotherapies increase the cost-effectiveness of psychotherapy. Proponents have also claimed that brief psychotherapies can be used to prevent the development of MDD in at-risk patients, such as patients with minor depression. These hypotheses should be tested empirically.

Finally, it is crucial to assess which types of brief psychotherapies can be provided with high treatment fidelity and efficacy and by which types of providers. Additional studies are needed to determine whether brief psychotherapies other than CBT and PST are efficacious. Also, an important consideration to be assessed is patient preferences for different treatment modalities and providers. Further, more research is needed to determine which providers are best suited to provide brief therapies. In the VA, these providers could include not only mental health professionals like psychologists, psychiatrists, and social workers but also appropriately trained and supervised registered nurses, nurse practitioners, physician's assistants, primary care physicians, and chaplains.

The VA has been a leader in fostering models of integrated primary care and mental health care, and in doing so, the VA is in a unique position to address many of the previously stated research needs within the context of integrated health care teams.

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## APPENDIX A: SEARCH STRATEGY

### Primary Literature (January 2009 through July 2010)

Final limits: Human, Adult, 19+ years, English, Randomized Controlled Trial, Publication date from January 1, 2009 to July 31, 2010.

| Step                                                                        | Terms                                                                                                                                                                                                                                                      | Result |
|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1. Replication of Cuijpers database therapy terms                           | Behavior therapy OR biofeedback OR cognitive analytic therapy PR counseling OR family therapy PR marital therapy PR psychoanalytic therapy OR psychotherapy PR relaxation therapy                                                                          | 1822   |
| 2. Replication of Cuijpers database depression terms                        | “depressive disorder”[MeSH Terms] OR (“depressive”[All Fields] AND “disorder”[All Fields]) OR “depressive disorder”[All Fields] OR “depression”[All Fields] OR “depression”[MeSH Terms] OR depressive[All Fields]                                          | 1152   |
| 3. Addition of other terms for types of therapy of interest for this report | Interpersonal therapy OR problem-solving therapy OR mindfulness-based cognitive therapy OR cognitive behavioral analysis system of psychotherapy OR dialectical behavior therapy OR functional analytic psychotherapy OR acceptance and commitment therapy | 178    |
| 4. Final search                                                             | (#1 OR #3) AND #2                                                                                                                                                                                                                                          | 383    |

### Systematic Reviews

Final limits: English, All Adult: 19+ years, Systematic Reviews, Publication date from 2000.

| Step | Terms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Result |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1    | Search (“depressive symptoms”[All Fields]) OR (“Depression”[Mesh] OR “Depressive Disorder”[Mesh]) OR (depression))                                                                                                                                                                                                                                                                                                                                                                   | 51523  |
| 2    | Search (minor AND depression) OR (subthreshold AND depression) OR (subsyndromal AND depression)                                                                                                                                                                                                                                                                                                                                                                                      | 3689   |
| 3    | Search major depressive disorder[mesh]                                                                                                                                                                                                                                                                                                                                                                                                                                               | 64244  |
| 4    | Search dysthymia OR dysthymic disorder[mesh]                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2407   |
| 5    | Search adjustment disorder[mesh]                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 3615   |
| 6    | Search 1 OR 2 OR 3 OR 4 OR 5                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 69903  |
| 7    | Search ((cognitive behavioral therapy OR CBT OR cognitive therapy OR behavior therapy OR interpersonal therapy OR IPT OR problem-solving therapy OR PST OR mindfulness-based cognitive therapy OR MBCT OR (“cognitive behavioral analysis system” AND therapy) OR CBASP OR dialectical behavioral therapy OR DBT OR functional analytic psychotherapy OR FAP OR (acceptance AND commitment AND therapy) OR ACT OR short-term psychodynamic therapy) OR (psychotherapy, brief[mesh])) | 297485 |
| 8    | Search Cochrane Database Syst Rev [TA] OR search[Title/Abstract] OR meta-analysis[Publication Type] OR MEDLINE[Title/abstract] OR (systematic[Title/Abstract] AND review[Title/Abstract])                                                                                                                                                                                                                                                                                            | 159125 |
| 9    | Search 6 AND 7 AND 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 341    |

## APPENDIX B: EVIDENCE TABLES

## BRIEF PSYCHOTHERAPY FOR DEPRESSION IN PRIMARY CARE

Study ID: Barnhofer, Crane, Hargus, et al., 2009

| Study Information                                                                                                                                                                                                                                                                                                                                                                          | Participants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Interventions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Results and Adverse Effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Comments/Quality Scoring                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Geographical location:</b><br>Oxford, England<br><br><b>Recruitment method:</b><br>- Advertisement<br>- Referral<br><br><b>Recruitment setting:</b><br>- Mental health<br>- Nonclinical<br><br><b>Treatment setting:</b><br>- Mental health<br>- Academic<br><br><b>Study design:</b><br>RCT<br><br><b>Number of participants enrolled:</b> 31<br><br><b>Duration of followup:</b> 8 wk | <b>Age:</b><br>Mean (SD): 42<br>MBCT: 42.07 (11.34)<br>TAU: 41.79 (9.52)<br>Median: NR<br>Range: 18 to 65<br><br><b>Education:</b><br>Mean (SD)<br>MBCT: 16.38 (3.04)<br>TAU: 15.21 (3.19)<br><br><b>Sex:</b><br>Female n (%): 19 of 28 (68%)<br>MBCT: 10 of 14 (71%)<br>TAU: 9 of 14 (64%)<br><br><b>Race/ethnicity:</b> NR<br><br><b>Veterans:</b> NR<br><br><b>Baseline depression assessment(s):</b><br>Criterion: DSM-IV<br>Disorder: Chronic MDD n (%)<br>MBCT: 7 (50%)<br>TAU: 12 (85%)<br>Current: 100%<br>Severity score: mean (SD)<br>MBCT: 29.36 (9.66)<br>TAU: 31.32 (10.79)<br>Chronicity: 20+ years for current<br><br>Prior episodes: At least 3 prior episodes lasting 2 yr | <b>Intervention description:</b><br>RCT of 2 arms:<br>1. MBCT: 14 participants<br>2. TAU: 14 participants<br><br><b>Depression intervention(s):</b><br><u>Behavioral intervention</u><br>Type: MBCT for 8 sessions of 2-hr duration delivered via manual (Segal, 2002) modified for suicidality with homework of mindfulness practice 1 hr per day, 6 days per wk<br>Delivery: Group<br>Intensity: 8 weekly 2 hr<br>Fidelity monitoring: Yes<br><br>Other notes about intervention:<br>All on some type of antidepressant<br><br><u>Therapist</u><br>Discipline: CBT<br>Experience: NR<br>Training: internship at the Center for Mindfulness in Medicine, University of Massachusetts<br><br><b>Comparator:</b><br><u>Behavioral control</u><br>Type: TAU<br>Delivery: Mixed<br>Intensity: Mixed<br>Fidelity monitoring: No<br>Other notes about control:<br>All on some type of antidepressant<br><br><b>Cointervention—psychotropic drugs:</b> None | <b>Eligible randomized:</b> 31 of 34 (91%)<br><br><b>Followup rate:</b><br>Total: 28 of 31 (90%)<br>MBCT: 14 of 16 (86%)<br>TAU: 15 of 16 (94%)<br><br><b>Important baseline differences:</b><br>Presence of chronic depression higher in TAU (n = 12) versus MBCT (n = 7), p = 0.04<br><br><b>Depression outcomes:</b><br>BDI-II<br><br>Response rates n (%):<br>BDI fell to < 13<br>MBCT: 6 (37)<br>TAU: 1 (6)<br>P = 0.04<br><br>Change in diagnosis:<br>MBCT: 7 of 10<br>TAU: 2 of 11<br>P = 0.03<br><br>Severity score: mean (SD)<br>MBCT: 17.62 (10.94)<br>TAU: 28.86 (12.97)<br><br><b>HRQOL outcomes:</b> NR<br><br><b>Other outcomes:</b><br>Social: No<br>Occupational: No<br>Satisfaction: No<br>Suicidal ideation: Yes | <b>General comments:</b><br>Stats were LOCF – now frowned upon in favor of modeling or imputation<br><br><b>Study-level quality assessment:</b><br>Good<br><br><b>Assessment of adverse effects adequate?</b><br>Yes<br><br><b>Applicability:</b><br>- High education<br>- Mostly women |

Study ID: Barnhofer, Crane, Hargus, et al., 2009

| Study Information | Participants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Interventions | Results and Adverse Effects                                                                                                      | Comments/<br>Quality Scoring |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------|
|                   | <p><b>Comorbid psychiatric conditions:</b><br/> N (%)<br/> Alcohol/substance abuse: Excluded<br/> Anxiety disorder:<br/> MBCT: 4 (28%)<br/> TAU: 6 (42%)<br/> PTSD: NR<br/> Other:<br/> Suicide attempt: 8 (56%)<br/> MBCT: 4 (28%)<br/> TAU: 4 (28%)</p> <p><b>Comorbid chronic medical conditions:</b><br/> NR</p> <p><b>Inclusion criteria:</b><br/> 1. History of 3 episodes MDD<br/> 2. Current MDD or subthreshold MDD<br/> 3. History of suicidality<br/> 4. Absence of other severe mental health diagnosis, especially self-harm<br/> 5. Adequate written and oral English<br/> 6. Not currently in treatment<br/> 7. Ages 18 to 65</p> <p><b>Exclusion criteria:</b> NR</p> |               | <p><b>Treatment discontinuation rate:</b> 3 (9.7%)</p> <p><b>Adverse effects:</b><br/> None reported related to intervention</p> |                              |

## Study ID: Laidlaw, Davidson, Toner, et al., 2008

| Study Information                                                                                                                                                                                                                                                                                             | Participants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Interventions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Results and Adverse Effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Comments/<br>Quality Scoring |     |     |      |                |            |              |           |      |          |             |           |      |              |               |           |  |     |     |      |                |             |            |           |      |          |            |            |      |             |             |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
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| <b>Geographical location:</b> UK (Fife and Glasgow)<br><b>Recruitment method:</b> Referral<br><b>Recruitment setting:</b> Primary care<br><b>Treatment setting:</b> - Unclear<br>- Nonacademic<br><b>Study design:</b> RCT<br><b>Number of participants enrolled:</b> 44<br><b>Duration of followup:</b> 6 mo | <b>Age:</b><br>Mean (SD)<br>CBT: 74 (8.39)<br>TAU: 74.05 (7.62)<br>Median: NR<br>Range: NR<br><b>Education:</b><br>Mean (SD)<br>CBT: 10.10 (1.74)<br>TAU: 9.9 (1.29)<br><b>Sex:</b><br>Female n (%):<br>CBT: 11 (60%)<br>TAU: 18 (85%)<br><b>Race/ethnicity:</b> NR<br><b>Veterans:</b> NR<br><b>Baseline depression assessment(s):</b><br>BDI ns<br>CBT: 19.6 (5.22)<br>TAU: 19.5 (5.48)<br>GDS ns<br>CBT: 7.6 (2.7)<br>TAU: 8.5 (3.55)<br>HAM-D ns<br>CBT: 11.4 (3.08)<br>TAU: 11.8 (2.84)<br>Disorder: MDD<br>Severity: NR<br>Chronicity: NR<br>Prior episodes: NR | <b>Intervention description:</b><br>Two arms:<br>1. CBT: 21 participants<br>2. TAU: 23 participants<br><br>CBT followed conceptual model and protocol developed by Beck. TAU was as close to standard care as possible. No restrictions on type of treatment; also, no treatment was allowed if GP thought appropriate.<br><b>Depression intervention(s):</b><br><u>Behavioral intervention</u><br>Type: CBT<br>Delivery: Mean 8 sessions (SD = 4.7, range 2 to 17)<br>Intensity: NR (assumed weekly since adhering to Beck's protocol)<br>Fidelity monitoring: Yes, audiotaped and rated with Cognitive Therapy Rating Scale by cognitive therapy experts<br><br>Other notes about intervention: Assumption is that the sessions were weekly given that they said they adhered to Beck's model, in which case post results should approximate 8 sessions; however, frequency of sessions not provided.<br><br><u>Therapist</u><br>Discipline: Psychology<br>Experience: NR<br>Training: Master's level (except for one who was graduate level with several years of experience) | <b>Eligible randomized:</b> 61% (based on Figure 1, 115 referred, 28 + 44 eligible, 44 randomized)<br><b>Followup rate:</b> 40 (90.9%)<br><b>Important baseline differences:</b><br>Gender (TAU had higher percentage of female; CBT had higher percentage of male)<br><b>Depression outcomes:</b><br>Response rates:<br>CBT: 20<br>TAU: 20<br><br>BDI <table><tr><td></td><td>CBT</td><td>TAU</td><td>F, p</td></tr><tr><td>Post treatment</td><td>9.4 (8.56)</td><td>13.25 (10.3)</td><td>1.65 0.21</td></tr><tr><td>3 mo</td><td>9 (8.16)</td><td>12.9 (9.34)</td><td>1.98 0.17</td></tr><tr><td>6 mo</td><td>10.55 (9.05)</td><td>15.10 (11.83)</td><td>1.87 0.18</td></tr></table><br><br>GDS <table><tr><td></td><td>CBT</td><td>TAU</td><td>F, p</td></tr><tr><td>Post treatment</td><td>3.85 (3.83)</td><td>5.3 (3.48)</td><td>1.57 0.22</td></tr><tr><td>3 mo</td><td>5 (3.71)</td><td>4.9 (3.35)</td><td>0.008 0.93</td></tr><tr><td>6 mo</td><td>5.05 (3.46)</td><td>5.75 (3.72)</td><td>0.38 0.54</td></tr></table> |                              | CBT | TAU | F, p | Post treatment | 9.4 (8.56) | 13.25 (10.3) | 1.65 0.21 | 3 mo | 9 (8.16) | 12.9 (9.34) | 1.98 0.17 | 6 mo | 10.55 (9.05) | 15.10 (11.83) | 1.87 0.18 |  | CBT | TAU | F, p | Post treatment | 3.85 (3.83) | 5.3 (3.48) | 1.57 0.22 | 3 mo | 5 (3.71) | 4.9 (3.35) | 0.008 0.93 | 6 mo | 5.05 (3.46) | 5.75 (3.72) | 0.38 0.54 | <b>General comments:</b><br>- Adequate randomization<br>- Missing data adequately addressed<br>- Blinding not possible given intervention but assessors were blinded<br>- No concerns regarding selective outcome reporting<br>- No conflicts of interest<br><b>Study-level quality assessment</b><br>Fair<br><br>Comments:<br>- Small sample size<br>- Missing information from the protocol that would allow evaluation of applicability to our question<br><b>Assessment of adverse effects adequate?</b><br>Unclear<br><b>Applicability:</b><br><u>To general population:</u> Yes<br><u>To Veterans:</u> Yes<br><br>Limitations:<br>- Not enough information on disease severity<br>- Intensity of therapy not given<br>- UK primary care may differ from US |
|                                                                                                                                                                                                                                                                                                               | CBT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | TAU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | F, p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                              |     |     |      |                |            |              |           |      |          |             |           |      |              |               |           |  |     |     |      |                |             |            |           |      |          |            |            |      |             |             |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Post treatment                                                                                                                                                                                                                                                                                                | 9.4 (8.56)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 13.25 (10.3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1.65 0.21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                              |     |     |      |                |            |              |           |      |          |             |           |      |              |               |           |  |     |     |      |                |             |            |           |      |          |            |            |      |             |             |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3 mo                                                                                                                                                                                                                                                                                                          | 9 (8.16)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 12.9 (9.34)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1.98 0.17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                              |     |     |      |                |            |              |           |      |          |             |           |      |              |               |           |  |     |     |      |                |             |            |           |      |          |            |            |      |             |             |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 6 mo                                                                                                                                                                                                                                                                                                          | 10.55 (9.05)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 15.10 (11.83)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.87 0.18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                              |     |     |      |                |            |              |           |      |          |             |           |      |              |               |           |  |     |     |      |                |             |            |           |      |          |            |            |      |             |             |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                               | CBT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | TAU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | F, p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                              |     |     |      |                |            |              |           |      |          |             |           |      |              |               |           |  |     |     |      |                |             |            |           |      |          |            |            |      |             |             |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Post treatment                                                                                                                                                                                                                                                                                                | 3.85 (3.83)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 5.3 (3.48)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1.57 0.22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                              |     |     |      |                |            |              |           |      |          |             |           |      |              |               |           |  |     |     |      |                |             |            |           |      |          |            |            |      |             |             |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3 mo                                                                                                                                                                                                                                                                                                          | 5 (3.71)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4.9 (3.35)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0.008 0.93                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                              |     |     |      |                |            |              |           |      |          |             |           |      |              |               |           |  |     |     |      |                |             |            |           |      |          |            |            |      |             |             |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 6 mo                                                                                                                                                                                                                                                                                                          | 5.05 (3.46)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 5.75 (3.72)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.38 0.54                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                              |     |     |      |                |            |              |           |      |          |             |           |      |              |               |           |  |     |     |      |                |             |            |           |      |          |            |            |      |             |             |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| Study Information | Participants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Interventions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Results and Adverse Effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Comments/<br>Quality Scoring |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
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|                   | <p><b>Comorbid psychiatric conditions:</b><br/>N (%)<br/>Alcohol/substance abuse: NR<br/>PTSD: NR<br/>Other anxiety disorder: NR<br/>Other: Axis I disorder: CBT-2 (10%), 6 (30%)</p> <p><b>Comorbid chronic medical conditions:</b><br/>Mean (SD)<br/>    CBT: 2.26 (1.2)<br/>    TAU: 2.2 (0.83)<br/>Conditions not specified</p> <p><b>Inclusion criteria:</b></p> <ol style="list-style-type: none"><li>1. Age 60 or over</li><li>2. Met DSM-IV criteria for MDD using the SADS-L structured interview</li><li>3. HAM-D = 7-24</li><li>4. BDI-II = 13 to 28</li><li>5. Can provide written consent</li><li>6. Not prescribed antidepression medication within 3 mo of referral to trial</li></ol> <p><b>Exclusion criteria:</b></p> <ol style="list-style-type: none"><li>1. Insufficient knowledge of English</li><li>2. MMSE &lt; 22</li><li>3. Received more than 6 sessions of CBT in the past or currently receiving psychological therapy</li></ol> | <p><b>Comparator:</b><br/><u>Behavioral control</u><br/>Type: TAU<br/>Delivery: Standard care<br/>Intensity: At GP's discretion<br/>Fidelity monitoring: Yes, checking GP notes at the end of study and asking participants about treatment received; however, no adherence data since there were guidelines given to GPs</p> <p>Other notes about control: 16 (80%) received medications</p> <p><b>Cointervention—psychotropic drugs:</b><br/>Drug name/dose: None provided by the study<br/>Clinician discipline: NA</p> | <p>HAM-D</p> <table><tr><td></td><td>CBT</td><td>TAU</td><td>F, p</td></tr><tr><td>Post treatment</td><td>5.25<br/>(4.48)</td><td>7.75<br/>(6.05)</td><td>2.2<br/>0.15</td></tr><tr><td>3 mo</td><td>5.15<br/>(4.75)</td><td>6.7<br/>(6.23)</td><td>.78<br/>0.38</td></tr><tr><td>6 mo</td><td>6.7<br/>(5.03)</td><td>7.55<br/>(6.13)</td><td>.23<br/>0.63</td></tr></table> <p><b>HRQOL outcomes:</b><br/>WHOQOL Physical Subscale</p> <table><tr><td></td><td>CBT</td><td>TAU</td><td>F, p</td></tr><tr><td>Post treatment</td><td>22.4<br/>(5.02)</td><td>19.85<br/>(4.34)</td><td>0.29<br/>0.59</td></tr><tr><td>3 mo</td><td>21.6<br/>(3.66)</td><td>20.75<br/>(5.3)</td><td>0.02<br/>0.9</td></tr><tr><td>6 mo</td><td>21.35<br/>(5.34)</td><td>20<br/>(5.69)</td><td>.075<br/>0.39</td></tr></table> <p>WHOQOL Psychological Subscale</p> <table><tr><td></td><td>CBT</td><td>TAU</td><td>F, p</td></tr><tr><td>Post treatment</td><td>20.65<br/>(3.13)</td><td>18.15<br/>(3.66)</td><td>0.14<br/>0.71</td></tr><tr><td>3 mo</td><td>19.65<br/>(2.62)</td><td>19.15<br/>(3.13)</td><td>0.08<br/>0.78</td></tr><tr><td>6 mo</td><td>19.2<br/>(3.43)</td><td>17.75<br/>(3.99)</td><td>2.39<br/>0.13</td></tr></table> <p><b>Other outcomes:</b><br/>Social: WHOQOL Social Relationships</p> <table><tr><td></td><td>CBT</td><td>TAU</td><td>F, p</td></tr><tr><td>Post treatment</td><td>10.05<br/>(2.66)</td><td>9.95<br/>(1.4)</td><td>1.72<br/>0.09</td></tr><tr><td>3 mo</td><td>11<br/>(1.26)</td><td>10.55<br/>(1.23)</td><td>0.35<br/>0.56</td></tr><tr><td>6 mo</td><td>10.5<br/>(1.4)</td><td>10.2<br/>(1.47)</td><td>0.77<br/>0.44</td></tr></table> |                              | CBT | TAU | F, p | Post treatment | 5.25<br>(4.48) | 7.75<br>(6.05) | 2.2<br>0.15 | 3 mo | 5.15<br>(4.75) | 6.7<br>(6.23) | .78<br>0.38 | 6 mo | 6.7<br>(5.03) | 7.55<br>(6.13) | .23<br>0.63 |  | CBT | TAU | F, p | Post treatment | 22.4<br>(5.02) | 19.85<br>(4.34) | 0.29<br>0.59 | 3 mo | 21.6<br>(3.66) | 20.75<br>(5.3) | 0.02<br>0.9 | 6 mo | 21.35<br>(5.34) | 20<br>(5.69) | .075<br>0.39 |  | CBT | TAU | F, p | Post treatment | 20.65<br>(3.13) | 18.15<br>(3.66) | 0.14<br>0.71 | 3 mo | 19.65<br>(2.62) | 19.15<br>(3.13) | 0.08<br>0.78 | 6 mo | 19.2<br>(3.43) | 17.75<br>(3.99) | 2.39<br>0.13 |  | CBT | TAU | F, p | Post treatment | 10.05<br>(2.66) | 9.95<br>(1.4) | 1.72<br>0.09 | 3 mo | 11<br>(1.26) | 10.55<br>(1.23) | 0.35<br>0.56 | 6 mo | 10.5<br>(1.4) | 10.2<br>(1.47) | 0.77<br>0.44 |  |
|                   | CBT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TAU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | F, p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
| Post treatment    | 5.25<br>(4.48)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 7.75<br>(6.05)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2.2<br>0.15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
| 3 mo              | 5.15<br>(4.75)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 6.7<br>(6.23)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | .78<br>0.38                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
| 6 mo              | 6.7<br>(5.03)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7.55<br>(6.13)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | .23<br>0.63                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
|                   | CBT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TAU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | F, p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
| Post treatment    | 22.4<br>(5.02)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 19.85<br>(4.34)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.29<br>0.59                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
| 3 mo              | 21.6<br>(3.66)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20.75<br>(5.3)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.02<br>0.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
| 6 mo              | 21.35<br>(5.34)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 20<br>(5.69)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | .075<br>0.39                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
|                   | CBT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TAU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | F, p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
| Post treatment    | 20.65<br>(3.13)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 18.15<br>(3.66)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.14<br>0.71                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
| 3 mo              | 19.65<br>(2.62)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 19.15<br>(3.13)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.08<br>0.78                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
| 6 mo              | 19.2<br>(3.43)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 17.75<br>(3.99)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2.39<br>0.13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
|                   | CBT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TAU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | F, p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
| Post treatment    | 10.05<br>(2.66)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 9.95<br>(1.4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.72<br>0.09                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
| 3 mo              | 11<br>(1.26)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 10.55<br>(1.23)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.35<br>0.56                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |
| 6 mo              | 10.5<br>(1.4)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 10.2<br>(1.47)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.77<br>0.44                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |     |     |      |                |                |                |             |      |                |               |             |      |               |                |             |  |     |     |      |                |                |                 |              |      |                |                |             |      |                 |              |              |  |     |     |      |                |                 |                 |              |      |                 |                 |              |      |                |                 |              |  |     |     |      |                |                 |               |              |      |              |                 |              |      |               |                |              |  |

Study ID: Laidlaw, Davidson, Toner, et al., 2008

| Study Information | Participants | Interventions | Results and Adverse Effects                                                                                                                                                       | Comments/<br>Quality Scoring |
|-------------------|--------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
|                   |              |               | Occupational: NR<br>Satisfaction: NR<br><br><b>Treatment discontinuation rate:</b><br>Withdrew from study at 6 mo followup:<br>CBT: 2<br>TAU: 4<br><br><b>Adverse effects:</b> NR |                              |

## Study ID: Mynors-Wallis, Gath, Day, et al., 2000

| Study Information                                                                                                                                                                                                                                                                                                                                                                               | Participants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Interventions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Results and Adverse Effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Comments/<br>Quality Scoring                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <b>Geographical location:</b><br>Oxfordshire, UK<br><br><b>Recruitment method:</b><br>Referral<br><br><b>Recruitment setting:</b><br>Primary care<br><br><b>Treatment setting:</b><br>- Primary care (i.e., patients' home or local health center)<br>- Nonacademic<br><br><b>Study design:</b> RCT<br><br><b>Number of participants enrolled:</b> 71<br><br><b>Duration of followup:</b> 52 wk | <b>Age:</b><br>Mean (SD)<br>Med: 34 (NR)<br>MedPST: 35 (NR)<br>Median: NR<br>Med range: 19 to 58<br>MedPST range: 19 to 62<br><br><b>Education:</b><br>N (%)<br>Med: 9 (25%) > 16 yr<br>MedPST: 8 (23%) > 16 yr<br><br><b>Sex:</b><br>Female n (%)<br>Med: 31 (86%)<br>MedPST: 24 (69%)<br><br><b>Race/ethnicity:</b><br>White n (%)<br>Med: 32 (89%)<br>MedPST: 34 (97%)<br><br><b>Veterans:</b> No<br><br><b>Baseline depression assessment(s):</b><br>Criterion: HRSD $\geq$ 13<br>Disorder: 71 (100%) probable or definite MDD<br><br>HRSD mean (95% CI)<br>Med: 20.2 (19.1 to 21.4)<br>MedPST: 19.8 (18.5 to 21.1)<br><br>BDI mean (95% CI)<br>Med: 30.2 (27.7 to 32.7)<br>MedPST: 30.0 (27.3 to 32.6) | <b>Intervention description:</b><br>Four arms:<br>1. Problem-solving treatment (PST) alone provided by GP (excluded from this analysis): 39 participants<br>2. PST alone provided by nurse (excluded from this analysis): 41 participants<br>3. Medication alone (Med): 36 participants<br>4. Medication + PST (MedPST) provided by nurse: 35 participants<br><br><b>Depression intervention(s):</b><br><u>Behavioral intervention</u><br>Type: MedPST; PST for use in primary care settings was added to GP prescription of fluvoxamine or paroxetine<br>Delivery: Individual<br>Intensity: 6 sessions (first session, 1 hr; rest 30 min) over 12 wk<br>Fidelity monitoring: No<br><br><u>Therapist</u><br>Discipline: Research practice nurse<br>Experience: Participated in previous study as problem-solving therapist<br>Training: Nursing; trained in PST by study investigator<br><br><b>Comparator:</b><br><u>Behavioral control</u><br>Type: Med; GP prescribed fluvoxamine or paroxetine in accordance with practice guidelines<br>Delivery: Individual<br>Intensity: NR<br>Fidelity monitoring: No | <b>Eligible randomized:</b> 83%<br><br><b>Followup rate:</b><br>N (%)<br>Med 6 wk: 34 of 36 (94%)<br>MedPST 6 wk: 34 of 35 (97%)<br><br>Med 12 wk: 34 of 36 (94%)<br>MedPST 12 wk: 31 of 35 (89%)<br><br>Med 52 wk: 30 of 36 (83%)<br>MedPST 52 wk: 30 of 35 (86%)<br><br><b>Important baseline differences:</b><br>None<br><br><b>Depression outcomes:</b><br>HRSD<br>Recovered (HRSD $\leq$ 7):<br>Med 12 wk: 24 (67%)<br>MedPST 12 wk: 21 (60%)<br><br>Med 52 wk: 20 (56%)<br>MedPST 52 wk: 23 (66%)<br><br>Severity score mean (95% CI):<br>Med 12 wk: 6.2 (3.7 to 8.6)<br>MedPST 12 wk: 7.5 (5.2 to 9.9)<br><br>Med 52 wk: 7.2 (5.1 to 9.2)<br>MedPST 52 wk: 5.7 (3.4 to 7.9)<br><br>BDI mean (95% CI)<br>Med 12 wk: 11.8 (7.8 to 15.8)<br>MedPST 12 wk: 9.3 (6.6 to 12.0)<br><br>Med 52 wk: 11.5 (6.9 to 16.2)<br>MedPST 52 wk: 8.6 (5.3 to 11.9)<br><br>CIS mean (95% CI)<br>Med 12 wk: 9.8 (6.1 to 13.5)<br>MedPST 12 wk: 9.6 (6.3 to 12.9)<br><br>Med 52 wk: 11.5 (7.3 to 5.6)<br>MedPST 52 wk: 9.7 (5.9 to 13.6) | <b>General comments:</b><br>PST alone (provided by either GP or nurse) found to be equally efficacious to medication alone, and addition of PST to medication did not result in significant benefit<br><br><b>Study-level quality assessment</b><br>Good<br><br><b>Assessment of adverse effects adequate?</b> Yes; research interviewers were blind<br><br><b>Applicability:</b><br><u>To general population:</u><br>- Comorbid conditions not reported<br>- Therapists likely more skilled than typical providers<br>- UK treatment settings different than typical US primary care<br><br><u>To Veterans:</u><br>- Patient sample predominantly female<br>- From UK<br>- Treatment often provided in home |

## Study ID: Mynors-Wallis, Gath, Day, et al., 2000

| Study Information | Participants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Interventions                                                                                                                                                                   | Results and Adverse Effects                                                                                                                                                                                                                                                                                                                                          | Comments/<br>Quality Scoring |
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|                   | <p>CIS-D mean (95% CI)<br/>Med: 29.3 (27.3 to 31.2)<br/>MedPST: 29.0 (26.5 to 31.5)<br/>Chronicity:<br/>Med 12 (33%) &gt; 6 mo<br/>MedPST: 13 (37%) &gt; 6mo<br/>Prior episodes:<br/>Med ≥ 1: 19(53%)<br/>MedPST ≥ 1: 19(54%)</p> <p><b>Comorbid psychiatric conditions:</b><br/>Alcohol/substance abuse: NR (excluded)<br/>PTSD: NR (excluded)<br/>Other anxiety disorder: NR (excluded)</p> <p><b>Comorbid chronic medical conditions:</b> NR</p> <p><b>Inclusion criteria:</b><br/>1. GP suspected MDD<br/>2. Probable or definite MDD on research diagnostic criteria<br/>3. HRSD ≥ 13<br/>4. MDD duration ≥ 4 wk</p> <p><b>Exclusion criteria:</b><br/>1. Psychiatric disorder preceding MDD onset<br/>2. Concurrent MDD treatment<br/>3. Brain damage<br/>4. Learning difficulties<br/>5. Schizophrenia<br/>6. Drug dependence<br/>7. Recent alcohol abuse<br/>8. Physical illness<br/>9. MDD with psychotic features or suicidal intent</p> | <p><b>Cointervention—psychotropic drugs :</b><br/>Drug name/dose :<br/>Fluvoxamine/initial dose 100 mg ; or<br/>paroxetine/initial dose 20 mg<br/>Clinician discipline : GP</p> | <p><b>HRQOL outcomes:</b> None</p> <p><b>Other outcomes:</b><br/>Social: Yes (social adjustment scale)<br/>Occupational: No<br/>Satisfaction: No</p> <p><b>Treatment discontinuation rate:</b><br/>Med: 6 (17%)<br/>MedPST: 6 (17%)</p> <p><b>Adverse effects:</b><br/>N (%)<br/>Med medication side effects: 2 (6%)<br/>MedPST medication side effects: 4 (11%)</p> |                              |

## Study ID: Nezu, 1986

| Study Information                                                                                                                                                                                                                                                                                                                                                                                    | Participants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Interventions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Results and Adverse Effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Comments/<br>Quality Scoring                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Geographical location:</b> USA<br><br><b>Recruitment method:</b> Advertisement<br><br><b>Recruitment setting:</b> Nonclinical (ad)<br><br><b>Treatment setting:</b> - Mental health<br>- Academic (university psychology clinic)<br><b>Study design:</b> RCT<br><br><b>Number of participants enrolled:</b> 21<br><br><b>Duration of followup:</b> - 8 wk for PST vs WLC<br>- 6 mo for PST vs PFT | <b>Age:</b><br>Mean (SD): 41.73 (12.81)<br>Median: NR<br>Range: NR<br><br><b>Education:</b><br>Mean (SD): 15.96 (2.59) yr<br><br><b>Sex:</b><br>Female n (%)<br>PST: 10 (83%)<br>WLC: 7 (78%)<br><br><b>Race/ethnicity:</b> NR<br><br><b>Veterans:</b> No<br><br><b>Baseline depression assessment(s):</b><br>Criterion: Research Diagnostic Criteria<br>Disorder: 21 (100%) MDD<br><br>BDI<br>PST: 23.91 (7.09)<br>WLC: 20.67 (5.39)<br><br>MMPI-D<br>PST: 81.36 (8.12)<br>WLC: 78.76 (7.05)<br><br>Chronicity: NR<br>Prior episodes: NR<br><br><b>Comorbid psychiatric conditions:</b><br>Alcohol/substance abuse: NR (exclusion criterion)<br>PTSD: NR<br>Other anxiety disorder: NR<br>Other: NR | <b>Intervention description:</b><br>Three arms:<br>1. Problem-focused therapy (PFT) (excluded from this analysis): 11 participants<br>2. Problem-solving therapy (PST): 12 participants<br>3. Waitlist control (WLC): 9 participants<br><br><b>Depression intervention(s):</b><br><u>Behavioral intervention</u><br>Type: PST based on D'Zurilla and Nezu's (1982) five-component model<br>Delivery: Group<br>Intensity: 8 weekly 1.5 to 2 hr sessions<br>Fidelity monitoring: Partial (weekly supervision to ensure adherence to relevant treatment manuals)<br><br>Other notes about behavioral intervention: Therapist allegiance very likely a confound for PST vs PFT but not for PST vs waitlist<br><br><u>Therapist</u><br>Discipline: Two psychology graduate students<br>Experience: Average 4.5 years supervised psychotherapy experience<br>Training: Prior training in group therapy and PST model; weekly supervision from author during treatment period | <b>Eligible randomized:</b> 78%<br><b>Followup rate:</b> N (%)<br>PST 8 wk: 11 of 12 (92%)<br>WLC 8 wk: 6 of 9 (67%) (3 excluded because entered therapy in interim)<br>PST 6 mo: 10 of 12 (83%)<br><br><b>Important baseline differences:</b> None<br><br><b>Depression outcomes:</b><br>BDI<br>PST 8 wk: 9.82 (4.71)<br>WLC 8 wk: 21.00 (6.27)<br>PST 6 mo: 9.50 (3.64)<br><br>MMPI-D<br>PST 8 wk: 54.27 (4.62)<br>WLC 8 wk: 76.33 (4.89)<br>PST 6 mo: 52.50 (6.89)<br><br><b>HRQOL outcomes:</b> None<br><br><b>Other outcomes:</b><br>Social: No<br>Occupational: No<br>Satisfaction: No<br><br><b>Treatment discontinuation rate:</b><br>PST: 1 (8%)<br><br><b>Adverse effects:</b> NR | <b>General comments:</b><br>Therapist allegiance to and experience in PST both very high<br><br><b>Study-level quality assessment</b><br>Fair<br><br>Comments:<br>- 33% of WLC excluded from analysis because sought treatment<br>- Outcome assessors were not blind (although clinical interview not used as outcome measure)<br>- Therapist allegiance to PST likely very high<br><br><b>Assessment of adverse effects adequate?</b> No<br><br><b>Applicability:</b><br><u>To general population:</u><br>- Patients recruited through newspaper ads<br>- Therapist skill in and adherence to PST higher than typical clinician<br>- Intensive treatment for PC setting |

## Study ID: Nezu, 1986

| Study Information | Participants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Interventions                                                                                                                                                                                                                                      | Results and Adverse Effects | Comments/<br>Quality Scoring                                                                                                                                                                                   |
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|                   | <p><b>Comorbid chronic medical conditions:</b> NR</p> <p><b>Inclusion criteria:</b></p> <ol style="list-style-type: none"> <li>1. Responded to advertisement</li> <li>2. BDI <math>\geq</math> 16</li> <li>3. Depressive episode <math>\geq</math> 4 weeks</li> <li>4. Meet Research Diagnostic Criteria for MDD</li> <li>5. MMPI-D T score &gt; 70</li> </ol> <p><b>Exclusion criteria:</b></p> <ol style="list-style-type: none"> <li>1. Mental retardation</li> <li>2. Psychotic symptomatology</li> <li>3. Active substance use</li> <li>4. Organic brain syndrome</li> <li>5. Current MDD treatment</li> </ol> | <p><b>Comparator:</b><br/><u>Behavioral control</u><br/>Type: WLC invited to receive treatment at the end of 8-wk program<br/>Delivery: NA<br/>Intensity: NA<br/>Fidelity monitoring: No</p> <p><b>Cointervention—psychotropic drugs:</b> None</p> |                             | <p><u>To Veterans:</u></p> <ul style="list-style-type: none"> <li>- Patient sample predominantly female</li> <li>- Comorbid conditions not reported</li> <li>- University psychology clinic setting</li> </ul> |

Study ID: Simon, Ludman, Tutty, et al., 2004, and Simon, Ludman, and Rutter, 2009

| Study Information                                                                                                                                                                                                                                                                                                                                                                                                  | Participants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Interventions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Results and Adverse Effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Comments/<br>Quality Scoring                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <b>Geographical location:</b><br>Washington State and Northern Idaho, USA<br><br><b>Recruitment method:</b><br>Registry (Group Health Cooperative membership)<br><br><b>Recruitment setting:</b><br>Primary care<br><br><b>Treatment setting:</b><br>Primary care<br><br><b>Study design:</b><br>RCT<br><br><b>Number of participants enrolled:</b> 600<br><br><b>Duration of followup:</b> 6 wk, 12 wk, and 24 wk | <b>Age:</b><br>Mean (SD)<br>Usual care: 44.0 (16.0)<br>Care management (CM): 44.9 (15.3)<br>Psychotherapy + CM: 44.7 (15.7)<br>Median: NR<br>Range: NR<br><br><b>Education:</b><br>College graduate: 39.3%<br><br><b>Sex:</b><br>Female: 74.33%<br><br><b>Race/ethnicity:</b><br>White: 80%<br><br><b>Veterans:</b> NR<br><br><b>Baseline depression assessment:</b><br>Criterion: Hopkins Symptom Checklist (SCL)<br>Disorder: NR<br>Severity: mean (SD)<br>Usual Care: 1.55 (0.62)<br>CM: 1.54 (0.61)<br>Psychotherapy + CM: 1.52 (0.59)<br>Chronicity: NR<br>Prior episodes: NR<br><br><b>Comorbid psychiatric conditions:</b> NR<br>Alcohol/substance abuse: NR<br>Anxiety disorder: NR<br>PTSD: NR<br>Other: NR | <b>Intervention description:</b><br>Three arms:<br>1. Telephone-based psychotherapy (CBT) + CM: 195 participants<br>2. Telephone CM: 207 participants<br>3. Usual care: 195 participants<br><br><b>Depression intervention(s):</b><br><u>Behavioral intervention</u><br>Type: CBT; 8 sessions structured assessment, motivational enhancement, behavioral activation, cognitive restructuring, self-care plan<br>Delivery: Telephone<br>Intensity: 8 sessions 30 to 40 min; first four sessions every wk, second four 1 to 4 wk apart<br>Fidelity monitoring: No<br><br>Other notes about intervention:<br>Psychotherapy was in addition to CM<br><br><u>Therapist</u><br>Discipline: Master's-level psychologist<br>Experience: At least 1 yr clinical experience<br>Training: 12 hr didactic and role play, observation, and audiotaping of 6 sessions each, 1 hr weekly supervision, twice monthly motivational interviewing seminar | <b>Eligible randomized:</b> 95%<br><br><b>Followup rate:</b><br>N (%)<br>578 (96%) had 1 followup<br>532 (89%) completed 6 month followup<br><br>CM:<br>97% had 1 contact<br>85% had 3 contacts<br><br>Psychotherapy + CM:<br>14 (7%) had no sessions<br>2 (1%) had 1 session only<br>167 (84%) had ≥ 4 sessions<br>125 (25%) had ≥ 7 sessions<br><br><b>Important baseline differences:</b><br>None<br><br><b>Depression outcomes:</b><br>6-mo followup using SCL (50% reduction)<br><br>Response rates n (%):<br>Usual care: 76 of 176 (43%)<br>CM: 94 of 184 (51%)<br>Psychotherapy + CM: 100 of 172 (58%)<br><br>Severity score: NR | <b>General comments:</b><br>None<br><br><b>Study-level quality assessment:</b><br>Good<br><br>Comments:<br>- Comparable groups<br>- Little missing data<br>- Outcome assessors blinded<br>- Not free of selective outcome reporting<br>- PHQ results not reported<br>- SCL scores at outcome not reported<br><br><b>Assessment of adverse effects adequate?</b> NR<br><br><b>Applicability:</b><br>-Severity of baseline depression, chronicity and comorbid condition not given<br>- Sample was from a group model primary care clinic who did not want referral to mental health clinic<br>- CM involved significant outreach (at least 5 phone calls) per participant, which is not routine clinical practice |

Study ID: Simon, Ludman, Tutty, et al., 2004, and Simon, Ludman, and Rutter, 2009

| Study Information | Participants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Interventions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Results and Adverse Effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Comments/<br>Quality Scoring |
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|                   | <p><b>Comorbid chronic medical conditions:</b> NR</p> <p><b>Inclusion criteria:</b></p> <ol style="list-style-type: none"> <li>1. Beginning antidepressant</li> <li>2. SCL Score &gt; 0.5</li> </ol> <p><b>Exclusion criteria:</b></p> <ol style="list-style-type: none"> <li>1. Not a new episode of antidepressant treatment</li> <li>2. Bipolar</li> <li>3. Schizophrenia</li> <li>4. Planning or receiving psychotherapy</li> <li>5. Cognitive, language, or hearing impairment</li> </ol> | <p><b>Comparator 1:</b></p> <p><b>Behavioral control</b><br/>Type: Usual care; any treatment normally available including primary care physician visits and referral to mental health<br/>Delivery: NR<br/>Intensity: NR<br/>Fidelity monitoring: No</p> <p><b>Comparator 2:</b><br/><u>Behavioral control</u><br/>Type: Telephone CM; assessment of depression, antidepressant use, and adverse effects. Scripts for addressing concerns and motivational enhancement. Primary care physicians received summary and computer-generated recommendations. Also care coordination, outreach, and as-needed crisis intervention.<br/>Delivery: Telephone<br/>Intensity: Wk 4, 12, 20<br/>Fidelity monitoring: No</p> <p><b>Cointervention—psychotropic drugs:</b> NR</p> | <p><b>HRQOL outcomes:</b> NR</p> <p><b>Other outcomes:</b><br/>NNT 6.4 for 50% reduction in SCL psychotherapy + CM versus usual care</p> <p>Social: NR<br/>Occupational: NR</p> <p>Satisfaction: Self-rated “very satisfied”—<br/>Usual care: 50 of 176 (29%)<br/>CM: 85 of 184 (47%)<br/>Psychotherapy + CM: 101 of 172 (59%)</p> <p>Self-rated “much improved”—<br/>Usual care: 97 of 176 (55%)<br/>CM: 121 of 184 (66%)<br/>Psychotherapy + CM: 100 of 172 (58%)</p> <p>Total depression costs:<br/>\$ Mean (SD)<br/>Usual care: 1020 (1009)<br/>CM: 1485 (1258)<br/>Psychotherapy + CM: 1670 (1110)</p> <p>Total health care costs<br/>\$ Mean (SD)<br/>Usual care: 9406 (10554)<br/>CM: 10268 (9773)<br/>Psychotherapy + CM: 9334 (8432)</p> <p><b>Treatment discontinuation rate:</b><br/>N (%)<br/>14 (7%) had no sessions<br/>2 (1%) had 1 session only<br/>167 (84%) had ≥ 4 sessions<br/>125 (25%) had ≥ 7 sessions</p> <p><b>Adverse effects:</b> NR</p> |                              |

## Study ID: Wilson, 1982

| Study Information                                                                                                                                                                                                                                                                                                                                               | Participants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Interventions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Results and Adverse Effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Comments/<br>Quality Scoring                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Geographical location:</b> Sydney, Australia<br><b>Recruitment method:</b> Advertisement<br><b>Recruitment setting:</b> Mental health<br><b>Treatment setting:</b> Academic<br><b>Study design:</b> RCT, stratified by sex<br><b>Number of participants enrolled:</b> 97; 64 analyzed<br><b>Duration of followup:</b><br>- 8 wk<br>- 6 mo posttrial followup | <b>Age:</b><br>Mean (SD): 38.8 (NR)<br>Median: NR<br>Range: 20 to 55<br><b>Education:</b> NR<br><b>Sex:</b><br>Female: 42 (65.6%)<br><b>Race/ethnicity:</b> NR<br><b>Veterans:</b> None<br><b>Baseline depression assessment(s):</b><br>Criterion: BDI<br>Disorder: NR<br>Severity:<br>Amitriptyline +task assignment: 26.08 (7.61)<br>Amitriptyline + relaxation therapy: 23.10 (3.51)<br>Amitriptyline+ minimal contact: 25.8 (5.12)<br>Placebo +task assignment: 27.22 (4.87)<br>Placebo+ relaxation therapy: 25.82 (4.47)<br>Placebo + minimal contact: 25.00 (5.77)<br>Chronicity: NR<br>Prior episodes: "Past psychological issues in 86%"<br><b>Comorbid psychiatric conditions:</b> NR<br><b>Comorbid chronic medical conditions:</b> NR | <b>Intervention description:</b><br>Patients randomly allocated within sex to:<br>1. Amitriptyline +task assignment<br>2. Amitriptyline + relaxation therapy<br>3. Amitriptyline+ minimal contact<br>4. Placebo +task assignment<br>5. Placebo+ relaxation therapy<br>6. Placebo + minimal contact<br><b>Depression intervention(s):</b><br><u>Behavioral intervention</u><br>Type: Behavioral therapy, 7 sessions over 1 hr<br>Delivery: Individual<br>Intensity: NR<br>Fidelity monitoring: NR<br>Other notes about intervention:<br>Adapted from MacPhillamy and Lewinsohn therapy<br><u>Therapist</u><br>Discipline: Psychology<br>Experience: Graduate students<br>Training: Previous experience with behavioral treatments (experimental and clinical) not specified further<br><b>Comparator:</b><br><u>Behavioral control</u><br>Type: Minimal contact, participants described their problems, nondirective and no specific suggestions<br>Delivery: Individual<br>Intensity: Two 1-hr sessions<br>Fidelity monitoring: NR | <b>Eligible randomized:</b> 97; 64 analyzed in completers analysis<br><b>Followup rate:</b> 64 (65.9%)<br><b>Important baseline differences:</b> None<br><b>Depression outcomes:</b><br>8 wk:<br>Placebo +task assignment: 11.89 (10.87)<br>Placebo+ relaxation therapy: 16.55 (10.36)<br>Placebo + minimal contact: 14.67 (11.12)<br>6 mo:<br>Placebo +task assignment: 10.00 (8.14)<br>Placebo+ relaxation therapy: 11.27 (7.98)<br>Placebo + minimal contact: 15.18 (10.86)<br>Response rates: NR<br>Severity score: NR<br><b>HRQOL outcomes:</b> NR<br><b>Other outcomes:</b><br>Social: No<br>Occupational: No<br>Satisfaction: No<br><b>Treatment discontinuation rate:</b> NR<br><b>Adverse effects:</b> NR | <b>General comments:</b> None<br><b>Study-level quality assessment</b><br>Poor<br>Comments:<br>- Unclear randomization<br>- Unclear allocation concealment<br>- Incomplete data not addressed<br>- Unclear blinding (not blinded to drug)<br>- Selective outcome reporting<br><b>Assessment of adverse effects adequate?</b> No<br><b>Applicability:</b><br><u>To general population:</u><br>- Done in Australia<br>- University setting<br>- Recruitment via advertising<br><u>To Veterans:</u><br>- 65% women<br>- Comorbidities NR<br>- Chronicity NR |

## Study ID: Wilson, 1982

| Study Information | Participants                                                                                                                                                                                                                                                                                                                                                                                                                                             | Interventions                                                                                                                                                                                                                                                                                                                                            | Results and Adverse Effects | Comments/<br>Quality Scoring |
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|                   | <b>Inclusion criteria:</b> <ol style="list-style-type: none"> <li>1. BDI <math>\geq</math> 20</li> <li>2. Depression <math>\geq</math> 2 months (self-report)</li> </ol> <b>Exclusion criteria:</b> <ol style="list-style-type: none"> <li>1. No other major psychiatric disorders</li> <li>2. Not getting any psychological or pharmacological treatments (apart from minor tranquilizers)</li> <li>3. No contraindications to amitriptyline</li> </ol> | <p>Other notes about control: Described as a way for subjects to talk about their problems and see a solution to it themselves</p> <p><b>Cointervention—psychotropic drugs:</b><br/> Drug name/dose: Randomized to drug or placebo. Amitriptyline 50 mg titrated to 150 mg over 6 wk and then titrated off over 6 days<br/> Clinician discipline: NR</p> |                             |                              |

## Study ID: Wilson, 1983

| Study Information                                                                                                                                                                                                                                                                                                                                                                                                                     | Participants                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Interventions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Results and Adverse Effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Comments/<br>Quality Scoring                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Geographical location:</b> Sydney, Australia<br><b>Recruitment method:</b> Advertisement<br><b>Recruitment setting:</b><br>- Mental health, primary care, mixed<br>- Nonclinical<br><b>Treatment setting:</b><br>- Mental health outpatient<br>- Academic<br><b>Study design:</b> RCT<br><b>Number of participants enrolled:</b> 25<br><b>Duration of followup:</b><br>- 8 wk<br>- Naturalistic followup of interventions at 30 wk | <b>Age:</b><br>Mean : 39.5<br>Median: NR<br>Range: 20 to 58<br><b>Education:</b><br>19 (76%) completed at least lower secondary school<br><b>Sex:</b><br>Female: 20 (80%)<br><b>Race/ethnicity:</b> NR<br><b>Veterans:</b> No<br><b>Baseline depression assessment(s):</b><br>- 7 participants had past hospitalization<br>- 2 on antidepressants<br>- 3 on minor tranquilizers<br>Behavioral therapy arm<br>Criterion: BDI<br>Disorder: NR<br>Severity: 21.13 (7.62)<br>Chronicity: At least 3 mo<br>Prior episodes: NR<br>Criterion: HAM-D (17 item)<br>Disorder: NR<br>Severity: 13.89 (3.22)<br>Chronicity: at least 3 mo<br>Prior episodes: NR | <b>Intervention description:</b><br>1. Behavioral therapy: 8 participants<br>2. Cognitive therapy: 8 participants<br>3. Waitlist: 9 participants<br><b>Depression intervention 1:</b><br><u>Behavioral intervention</u><br>Type: Behavioral activation based on Lewinsohn et al. To increase the frequency, quality, and range of activities and social interactions; mood record also maintained.<br>Delivery: Individual<br>Intensity: Eight 1-hr weekly sessions<br>Fidelity monitoring: No<br><b>Depression intervention 2:</b><br><u>Cognitive intervention</u><br>Type: Cognitive restructuring based on Beck et al. Negative cognitive distortions and irrational beliefs evaluated and positive thought schedule developed for 3 times a day use; thought record also maintained.<br>Delivery: Individual<br>Intensity: Eight 1-hr weekly sessions<br>Fidelity monitoring: No<br><u>Therapist</u><br>Discipline: NR<br>Experience: NR<br>Training: NR<br><b>Comparator:</b><br><u>Behavioral control</u><br>Type: Waitlist only; no interaction<br>Delivery: None<br>Intensity: None<br>Fidelity monitoring: No<br><b>Cointervention—psychotropic drugs:</b> NR | <b>Eligible randomized:</b> 29<br><b>Followup rate:</b> NA;<br>3 participants in behavioral treatment and 1 in cognitive treatment dropped out and were replaced by new participants<br><b>Important baseline differences:</b> NR<br><b>Depression outcomes:</b><br>Response rates: NR<br>Severity scores:<br>BDI<br>Behavioral therapy<br>Pre Rx: 21.13 (7.62)<br>Post Rx: 7.50 (4.55)<br>Cognitive therapy<br>Pre Rx: 27.25 (3.80)<br>Post Rx : 9.00 (6.82)<br>Waitlist<br>Pre Rx : 23.66 (7.45)<br>Post Rx: 21.44 (5.52)<br>HAM-D<br>Behavioral therapy<br>Pre Rx: 13.89 (3.22)<br>Post Rx: 5.25 (3.46)<br>Cognitive therapy<br>Pre Rx: 13.62 (2.40)<br>Post Rx: 5.88 (5.01)<br>Waitlist<br>Pre Rx: 13.22 (4.08)<br>Post Rx: 14.78 (5.96)<br><b>HRQOL outcomes:</b> NR<br><b>Other outcomes:</b><br>Social: No<br>Occupational: No<br>Satisfaction: No | <b>General comments:</b><br>None<br><b>Study-level quality assessment</b><br>Fair<br>Comments:<br>- Unclear randomization<br>- Unclear allocation concealment<br>- Unclear blinding<br>- No selective outcome reporting<br>- Patients who dropped out were replaced; possibly not randomized<br>- Comorbidities NR<br>- Limited information reported, but an old study<br><b>Assessment of adverse effects adequate? No</b><br><b>Applicability:</b><br><u>To general population:</u><br>- Recruited via advertising<br>- Treated in Australia<br>- Treatment in a university setting<br><u>To Veterans:</u><br>- 80% women<br>- No comorbidities reported including substance abuse<br>- Dropouts replaced |

## Study ID: Wilson, 1983

| Study Information | Participants                                                                                                                                                                                                                                                    | Interventions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Results and Adverse Effects                                                                                                                                                                                               | Comments/<br>Quality Scoring |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
|                   | Cognitive therapy arm<br>Criterion: BDI<br>Disorder: NR<br>Severity: 27.25 (3.80)<br>Chronicity: At least 3 mo<br>Prior episodes: NR<br>Criterion: HAM-D (17 item)<br>Disorder: NR<br>Severity: 13.62 (2.40)<br>Chronicity: At least 3 mo<br>Prior episodes: NR | Waitlist<br>Criterion: BDI<br>Disorder: NR<br>Severity: 23.66 (7.45)<br>Chronicity: at least 3 mo<br>Prior episodes: NR<br>Criterion: HAM-D (17 item)<br>Disorder: NR<br>Severity: 13.62 (4.08)<br>Chronicity: At least 3 mo<br>Prior episodes: NR<br><br><b>Comorbid psychiatric conditions:</b><br>Excluded<br>Alcohol/substance abuse: NR<br>PTSD: NR<br>Other anxiety disorder: NR<br>Other: NR<br><br><b>Comorbid chronic medical conditions:</b> NR<br><br><b>Inclusion criteria:</b><br>1. BDI $\geq$ 17<br>2. Frequent episodes of depression (self-report)<br>3. Depression for at least 3 mo (self-report)<br><br><b>Exclusion criteria:</b><br>1. Previous/concurrent use of major tranquilizers or lithium<br>2. No other major physical or psychiatric disorders<br>3. No suicidal ideation | <b>Treatment discontinuation rate:</b><br>3 of 8 (37.5%) participants in behavioral treatment and 1 of 8 (12%) in cognitive treatment dropped out and were replaced by new participants<br><br><b>Adverse effects:</b> NR |                              |

Abbreviations: AE = adverse effects, BDI-II = Beck Depression Inventory-II, CBT = cognitive behavioral therapy, CES-D = Center for Epidemiologic Studies-Depression Scale, CI = confidence interval, DIS = Diagnostic Interview Schedule, HDRS = Hamilton Depression Rating Scale, MDD = major depressive disorder, n = number, NA = not applicable, NR = not reported, ns = not significant, OR = odds ratio, p = probability, PHQ = Patient Health Questionnaire, RCT = randomized controlled trial, SD = standard deviation, SE = standard error, ST = standard treatment, vs = versus, wk = week/weeks, yr = year/years

## LIST OF INCLUDED STUDIES FROM PRIMARY LITERATURE IN ALPHABETICAL ORDER

Barnhofer T, Crane C, Hargus E, et al. Mindfulness-based cognitive therapy as a treatment for chronic depression: A preliminary study. *Behav Res Ther* 2009;47(5):366-73.

Laidlaw K, Davidson K, Toner H, et al. A randomised controlled trial of cognitive behaviour therapy vs treatment as usual in the treatment of mild to moderate late life depression. *Int J Geriatr Psychiatry* 2008;23(8):843-50.

Mynors-Wallis LM, Gath DH, Day A, et al. Randomised controlled trial of problem solving treatment, antidepressant medication, and combined treatment for major depression in primary care. *BMJ* 2000;320(7226):26-30.

Nezu AM. Efficacy of a social problem-solving therapy approach for unipolar depression. *J Consult Clin Psychol* 1986;54(2):196-202.

Simon GE, Ludman EJ, Tutty S, et al. Telephone psychotherapy and telephone care management for primary care patients starting antidepressant treatment: a randomized controlled trial. *JAMA* 2004;292(8):935-42.

Simon GE, Ludman EJ, Rutter CM. Incremental benefit and cost of telephone care management and telephone psychotherapy for depression in primary care. *Arch Gen Psychiatry* 2009;66(10):1081-9.

Wilson PH. Combined pharmacological and behavioural treatment of depression. *Behav Res Ther* 1982;20(2):173-84.

Wilson PH. Comparative efficacy of behavioral and cognitive therapies of depression. *Cognit Ther Res* 1983;7(2):111-124

## APPENDIX C: REVIEWER COMMENTS AND RESPONSES

| Reviewer                                                                                     | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Response                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Question 1: Are the objectives, scope, and methods for this review clearly described?</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1                                                                                            | No – I can't follow the literature review here or in the text. KQ 1 involves evaluation of "brief therapies" which seem to be defined as 8 or fewer sessions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | We have added further explanation to both the Methods and Results sections of our overall approach and more explanation of what constitutes a "complex systematic review." We have also clearly delineated that, for the purposes of this review, $\leq 8$ sessions are defined as "brief," 12 to 20 sessions are described as "standard," and psychotherapies of other durations are specifically designated. |
|                                                                                              | In general, I just don't get the Results for KQ1. I wonder if organizing your results by type of therapy might be more helpful. For example, "We identified X articles evaluating CBT: X were from the primary literature review and X were identified from the systematic reviews.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | We have further clarified our overall approach and portions of KQ 1 to make apparent our structure of discussing systematic review findings prior to primary literature findings.                                                                                                                                                                                                                              |
|                                                                                              | Results: I have read this 3 times and still cannot follow the flow of literature. This needs to be clarified. Figure 2 also could be clarified by adding 2 boxes below the one describing the 2 SR's which shows how many articles come from each of the SR's and then connecting it to the very bottom box.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | We have altered the literature flow figure to better indicate how we used the primary literature and systematic reviews.                                                                                                                                                                                                                                                                                       |
|                                                                                              | Nice summary and discussion.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Thank you.                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                                                                              | I think the important point that most of these studies involve women deserves more than a line in the limitations section. This is a huge issue for the VA. Were you able to tease out any gender sub-analyses from the SR's or the original articles?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | We agree and have added consideration of this point to the discussion section. While we agree that a subanalysis would be interesting, we have not conducted such an analysis because the data are not adequate or appropriate, and AHRQ guidelines recommend against such analyses.                                                                                                                           |
| 2                                                                                            | Unsure – Overall, the objectives, scope, and methods are clearly described. However, it is recommended that additional specificity be provided in references to "brief" versus "longer duration" psychotherapies throughout the manuscript, including the executive summary (e.g., p. 1, lines 14-15: "First, brief psychotherapies compared to longer duration psychotherapies had similar effect sizes.") The reference "longer duration" is often used in the report to refer to psychotherapy lengths that are still quite brief (e.g., 7-8+ sessions). Because this term is typically associated with psychotherapies of longer lengths (e.g., 12-16+ sessions), it would likely be helpful to be specific in such references to avoid confusion. Furthermore, there was a finding of a larger effect for the somewhat longer duration EBPs, though overlapping confidence intervals led to the conclusion that the evidence was inadequate to make a definitive determination. Thus, it is somewhat unclear what led to the statement above of similar effect sizes for brief vs. "longer" duration psychotherapies. | We have now clearly delineated that, for the purposes of this review, $\leq 8$ sessions are defined as "brief," 12 to 20 sessions are described as "standard," and psychotherapies of other durations are specifically designated. We have also clarified our interpretation of overlapping confidence intervals for "brief" versus "standard" length psychotherapy.                                           |
| 3                                                                                            | Yes – No comment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Acknowledged                                                                                                                                                                                                                                                                                                                                                                                                   |
| 4                                                                                            | Yes – The rationale for focusing the review on brief (8 or fewer sessions) is clear. The methodology employed in the review is well described. It was somewhat surprising that there was not a key question included that focused on a comparison of brief versus slightly longer standard psychotherapy (e.g., 12 to 16 sessions) in primary care. The authors note on Page 1, line 10 that there are guidelines recommending 12 to 16 one-hour sessions. For this reviewer, this number of sessions is the usual "gold standard" for clinical treatment and for clinical research in this area. Thus it would have been helpful to have a sense whether there is evidence that briefer treatment (8 or fewer sessions) is as efficacious as longer treatment.                                                                                                                                                                                                                                                                                                                                                            | The review that we originally proposed to conduct would have made this comparison. However, a variety of reasons contributed to our VA stakeholders recommending against conducting this comparison. Fortunately, the Cuijpers' systematic review addresses this comparison and allows us to make some tentative conclusions about comparative efficacy.                                                       |
| 5                                                                                            | Yes – The objectives and scope are very clearly described and this review adheres nicely to its objectives and scope. The description of the search strategy (page 14) was somewhat confusing, particularly with regards to the selection of the specific dates to include in the Jan 2009-Aug 2010 search of MEDLINE, PsycINFO, Embase. After reading it a few times, I think I understand why those dates were chosen, but am still not entirely confident.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | We have reworked this section to provide clarification on our search strategy.                                                                                                                                                                                                                                                                                                                                 |

| Reviewer                                                                                                                                                  | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Question 2: Is there any indication of bias in our synthesis of the evidence?</b>                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1                                                                                                                                                         | Not answered but no comments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Acknowledged                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 2                                                                                                                                                         | No – no comment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Acknowledged                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 3                                                                                                                                                         | No – no comment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Acknowledged                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 4                                                                                                                                                         | No – This appears to be an exhaustive search of the literature, and the synthesis of the available data is excellent.                                                                                                                                                                                                                                                                                                                                                                                                   | Thank you.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 5                                                                                                                                                         | No – no comment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Acknowledged                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Question 3: Are there any studies of interest to the VA that we have overlooked?</b>                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1                                                                                                                                                         | Not answered but also not addressed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Acknowledged                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 2                                                                                                                                                         | No – no comment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Acknowledged                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 3                                                                                                                                                         | No – no comment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Acknowledged                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 4                                                                                                                                                         | No – None that this reviewer is aware of.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Acknowledged                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 5                                                                                                                                                         | No – no comment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Acknowledged                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Question 4: Please write additional suggestions or comments below. If applicable, please indicate the page and line numbers from the draft report.</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 1                                                                                                                                                         | On page 5 lines 6 and 7. 15 articles are described.                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | We have clarified the number of articles being described.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                           | Next, on page 5 line 16 is a description of findings from the systematic reviews of 6-16 sessions but I thought the focus was on brief interventions?                                                                                                                                                                                                                                                                                                                                                                   | The reference to 6-16 sessions has been deleted so that the focus of this section of the Executive Summary is exclusively on brief psychotherapies.                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                                                                                                                                           | Line 21 then talks about a meta-analysis of 6 trials. Where did 6 come from?                                                                                                                                                                                                                                                                                                                                                                                                                                            | This sentence was reworded to indicate that the 6 trials were a subset of CBT trials that we examined.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                           | Line 8 page 6—What about the other systematic review? Any data on number of sessions from it?                                                                                                                                                                                                                                                                                                                                                                                                                           | The other systematic review was limited exclusively to brief psychotherapies, so no comparison could be made between brief psychotherapies and standard-length psychotherapies.                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                           | Page 8, lines 2 and 3 contain information that should be presented earlier in the Results section (perhaps page 5 first paragraph). This limitation should still be discussed in the conclusions.                                                                                                                                                                                                                                                                                                                       | This information is now also presented early in the Results section of the Executive Summary.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                           | Methods: Page 14 lines 9 on—This paragraph needs to be clearer and for clarity, each search strategy should probably have its own paragraph. I believe lines 11-14 belong in the Results section.                                                                                                                                                                                                                                                                                                                       | Separate paragraphs have been created to enhance clarity, and the referenced lines have been moved to appropriate places in the Results section.                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                           | Methods: Data Synthesis—Clarify what you mean in line 20 page 17. Which findings are you summarizing—the unique studies or the reviews findings?                                                                                                                                                                                                                                                                                                                                                                        | We have clarified that we summarize in narrative form the systematic review findings.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                                                                                                                                           | On page 22 line 5 the 2 systematic reviews are described and the authors identify 7 articles that are relevant to the review. Next, on page 24 line 1, the authors describe a systematic review including 34 studies but imply, not clearly however, that 14 of them contribute to the KQ addressed in this review. How did you get from 34 articles to the 9 articles described on page 23 and in Figure 2? How many came from the Cape review? The entire paragraph describing the Cape review needs to be clarified. | The reason for this discrepancy is that the Cuijpers review was described on page 22, while the Cape review was described on page 24. We have made changes throughout the document to more fully describe the “complex systematic review” that we conducted, including why we report on reviews that cover some articles that did not meet our inclusion criteria for individual studies (i.e., a systematic review could meet our inclusion criteria for systematic reviews even if not every article covered in a review met our inclusion criteria for primary literature). |
|                                                                                                                                                           | Page 25. Lines 3-6 are already in Methods.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | This section has been modified to parallel our description results for the systematic review search.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                           | Lines 9-12 on page 25 are helpful.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Acknowledged                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                           | Page 29 line 1. It would be helpful to begin, “Of the 15 unique studies, six studies...” so that it is clear where you are going with this paragraph.                                                                                                                                                                                                                                                                                                                                                                   | Change made as suggested.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| Reviewer  | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| 1 (cont.) | Page 29 line 11—I would begin a new paragraph with, “The intervention...”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Change made as suggested.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|           | Page 30 line 17—Why 15 RCT’s? I thought you only found 8? Help! Why are you reporting the findings from their review when it does not address KQ1 dealing with brief therapies? This is confusing!                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Please see above response for how we clarified this apparent discrepancy.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|           | Page 31 line 7—34 studies? You just talked for a few pages about how you got to 15. Clarify.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Please see above response for how we clarified this apparent discrepancy.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|           | Page 32—lines 3-9 need to be clarified. Perhaps using subtitles such as CBT or MBCT would be helpful?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | We have altered the position of CBT in the initial sentence to help clarify that this paragraph is exclusively about CBT.                                                                                                                                                                                                                                                                                                                                                                                                            |
|           | Page 36 line 20—? 9 sessions?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | We have changed “fewer than 9” to “≤ 8.”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|           | If you have data on medical therapy among the controls in the 15 studies this would be very helpful. Were most of the controls treated with medicine or just followed? Since this is the comparison most people are interested in, it seems to me that it deserves more discussion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | For the purposes of this review, we intentionally excluded trials that used standardized medication protocols (i.e., what we considered a separate active treatment condition). Many of the control groups were “usual care,” which could possibly entail patients receiving medication, but usual care was highly variable.                                                                                                                                                                                                         |
| 2         | The conclusion that brief EBPs are efficacious is somewhat tenuous, given the limited state of the research in this area and the limitations of many of the studies (e.g., many low quality studies, high heterogeneity, limited definition of usual care comparison groups, small effect sizes), methodology required for the review (pooled comparisons), and significant differences between the samples included in the reviewed studies and the Veteran population. While the report notes many of these limitations, it is recommended that the conclusion in the Discussion (p. 40, lines 2-3; “We conclude that brief psychotherapy is an efficacious treatment option for patients with depression in VA primary care settings”) be qualified somewhat. Further, in the Cuijpers review, the finding of a significant effect for brief EBPs was only seen for studies in which patients were referred by their GP for treatment but not for those recruited through systematic screening. Given the magnitude of the differential effect, it may be worth noting this more directly in response to Question 1 in the Discussion. Moreover, while it may very well be that brief EBP is an efficacious treatment option for VA primary care settings, the reviewed studies were conducted overwhelmingly on non-Veterans. Perhaps more significant, many of the studies had diagnoses commonly seen in Veteran primary care patients as exclusionary criteria (e.g., substance abuse, psychosis, suicidality). This is worth explicitly noting in the context of discussing and perhaps qualifying the conclusions somewhat. There is brief, one-sentence mention in the Limitations section that the studies in the review was composed primarily middle-aged, Caucasian females, which does not seem sufficient. | We concur with many of these points and have qualified the statement. We have now commented on the differential effect between GP referral and systematic screening in the Discussion of KQ 1. We have more overtly acknowledged the limitations for the Veteran population, including the low representation of Veterans in the studies we reviewed, lack of comorbidity, and overrepresentation by middle-aged Caucasian females.                                                                                                  |
|           | It seems difficult to make highly meaningful interpretations of the results of many of the treatment group comparisons (e.g., brief EBP vs. usual care), since usual care was poorly described and variable in the reviewed studies. Furthermore, it is safe to assume that care as usual in many of most of the reviewed studies did not consist of evidence-based “care management,” as is now implemented in most VA primary care settings. It would likely be valuable to note this in the Discussion.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | We have commented on the VA’s commitment to evidence-based care management in the Discussion. To our knowledge, the data remain out on whether VA’s investment in evidence-based care management has in practice resulted in significantly better usual care than was received in the studies we reviewed.                                                                                                                                                                                                                           |
|           | Given the lack of research comparing brief EBPs with full course EBPs, it is important that the implementation of brief EBPs not come at the expense or replacement of full course EBPs (which could occur due to local leadership perception that brief EBPs are effective and a desire for efficiency). The report notes that a comparison of brief EBPs with full course EBPs was not directly tested in the studies included in the review and suggests this, appropriately so, as an area of future inquiry. While direct comparison of brief vs. full course EBPs was not tested in the studies included in the review, it might be valuable to note the effect sizes commonly found in reviews of full course CBT and PST, or to consider this separately.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | We sympathize with these concerns. After careful consideration, we have decided not to cite effect sizes for evidence-based psychotherapies from other reviews, as these effect sizes could be misleading should the reader compare them to the effect sizes we report for brief psychotherapy. Fortunately, the Cuijpers review makes this comparison in a subset of carefully selected trials, and we have elaborated on the caution warranted in interpreting their comparison because it is indirect and large Cis are involved. |

| Reviewer  | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Response                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 (cont.) | P. 40, lines 11-12: There does not seem to be sufficient evidence to support the conclusion that “broad training in mental health may not be necessary to provide these therapies.” It is noted in the manuscript that some of the studies included therapists who were “graduate students, nurses, general practitioners, and other allied health professionals.” It is further suggested that “Within the VA, a range of providers could be considered, including nurses, nurse practitioners, primary care physicians, social workers, and chaplains” to deliver brief EBPs. However, the inclusion of some non-MH providers in some studies does not seem sufficient for determining that individuals without background in mental health could deliver these treatments effectively (or as effectively) as mental health professionals, and there is no data to indicate the extent to which mental health training had an impact on, or moderated, outcomes. In fact, because the results were pooled across different provider types, it is quite possible that effects would have been higher if the treatments were delivered by mental health providers. It is also possible that there was not a significant effect for CBT or PST when delivered by non-MH providers. Were results of the studies available by provider-type? In addition, GPs and others noted above were identified in some of the PST studies; were these provider-types also included for CBT? Furthermore, VA patients are typically more complex and often have comorbidities (substance abuse, suicidality, psychosis) that were excluded in many of the reviewed studies and would often require a higher level professional to monitor and sometimes adapt treatment for. In addition, several of provider-types noted above are not locally credentialed to deliver brief EBPs in VHA. It is also worth noting that graduate students and clinical social workers (as well as nurses with background in mental health) are considered mental health providers in VHA and often do deliver EBPs, along with psychologists and psychiatrists. | We have tempered our statements regarding necessary training and emphasized the need for more research on the use of “non-mental health professionals” to provide brief EBPs.                                                                                                                                                                                                                                                  |
|           | EBPs have often been shown to more efficacious in treating major depression than dysthymia. It may be useful to break out results for different types of depression to the extent that this is possible (i.e., if there are sufficient number of studies/participants without mixed diagnostic groups).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | We have now included in our KQ 1 Results information from the Cuijpers review on MDD versus “other” diagnoses.                                                                                                                                                                                                                                                                                                                 |
|           | The finding of Cape of a large effect size for treatment of anxiety is interesting and significantly higher than the effect-sizes for mixed anxiety and depression and depression only. Although anxiety is beyond the scope of the current review, it would be interesting to know what type of anxiety this included (e.g., generalized anxiety or other specific forms of anxiety?). Might this finding be an artifact of the research (e.g., smaller sample size), rather than the being a true differential effect for this condition?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | We now note that “anxiety” refers predominantly to diagnoses of panic and generalized anxiety disorder. Although we do not expound on this finding because it is beyond the scope of this review, we would caution interpretation of the difference due to the indirect comparison methodology, but we would also suggest that the finding may represent a true difference and is of value as a hypothesis generating finding. |
| 3         | This is a well done review. Methods used to identify studies were appropriate. Decision to review previously published reviews and add additional studies not included in those reviews seems a good one.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Thank you.                                                                                                                                                                                                                                                                                                                                                                                                                     |
|           | Tables 3 and 4 do a nice job of summarizing the included studies – they are well organized and easy to understand.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           | The moderate effect size in relation to usual care was noted. I wonder if an analysis could be done to see if there is an association between depression severity and effect size. I would hypothesize that psychotherapy would be most effective for those with moderate symptoms, less effective for those with mild symptoms, and least effective (at least as monotherapy) for those with severe symptoms. It would be useful to know if the literature supports targeting any subgroups of patients as the best candidates for brief psychotherapy.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Such an analysis was not possible with the data obtained from the primary literature. However, we have added as a limitation our inability to answer this question.                                                                                                                                                                                                                                                            |
| 4         | Given the large numbers of older veterans receiving care in the VA system, some mention of acceptability and efficacy of brief psychotherapies in older adults would help the discussion. Several of their cited studies include or are entirely focused on older adults, so some specific comment on this population would help. This is particularly relevant since older white males have among the highest rates of completed suicide, and studies have shown that a large proportion of completed suicide victims in this age group have recently seen a primary care physician. In sum, the inclusion of a discussion of the relevance of depression in older veterans would add much to the report.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | The 2 out of 15 studies that contained elderly participant samples are now separately examined in the Results. Also, additional mention on lack of data in Veteran samples (or male/elderly samples) is now made in the Discussion.                                                                                                                                                                                            |

| Reviewer | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Response                                                                                                                                                                                                                                                                                                                                                                                |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5        | This is a very clearly written report that does a nice job utilizing the available research literature to address the key questions it sets out to answer. The ability of this review to identify and outline some shortcomings in our current knowledge base will provide an important foundation for future research on brief psychotherapies for depression and the use of psychotherapy in primary care settings. A study characteristic that is not addressed in this review, but may be useful to consider, or at least mention, is treatment dropout rate.                                  | Thank you. We have revised a column heading in Table 4 to “Therapy completed” to indicate the number patients retained in the treatment condition (i.e., those that did not dropout).                                                                                                                                                                                                   |
|          | The remainder of my comments consist of minor wording suggestions or clarifications:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | “Veteran” and “Veterans” have been capitalized throughout.                                                                                                                                                                                                                                                                                                                              |
|          | Throughout the document, the word “Veteran” should be consistently capitalized. I would also suggest consistency in whether quality of life has hyphens between the words (i.e. quality-of-life) or not (i.e. quality of life).                                                                                                                                                                                                                                                                                                                                                                    | The phrase “quality of life” appears with hyphens when used as a unit modifier, as in “quality-of-life measures.” Most instances in the report are not this usage, so we have left those without hyphens.                                                                                                                                                                               |
|          | P 7, line 17 and p 40, line 11: the suggestion that “broad” training in mental health may not be necessary. I would guess that all of the other non-mental health specialists being discussed here probably do in fact have “broad” training in mental health, but may not have “extensive” or “specialized” training in mental health, so there may be a more accurate way to capture what you are trying to say here.                                                                                                                                                                            | We have tempered our statements to more strictly state what we found in the review and to emphasize the need for more research on the use of “non-mental health professionals” to provide brief EBPs.                                                                                                                                                                                   |
|          | Page 11, line 7 – suggest using “intensive” rather than “demanding”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Changed as suggested.                                                                                                                                                                                                                                                                                                                                                                   |
|          | Page 11, lines 14-17 – the wording of this sentence is awkward and therefore does not convey the importance of this review as clearly and strongly as possible.                                                                                                                                                                                                                                                                                                                                                                                                                                    | The sentence has been split into two sentences and reworded.                                                                                                                                                                                                                                                                                                                            |
|          | Page 21 and 22 – in the description of the Cuijpers review, p21, line 17 refers to 15 studies, but p 22, line 5 says, “Of the 16 trials...”                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 16 was a mistake; we have changed to 15.                                                                                                                                                                                                                                                                                                                                                |
|          | Page 24, lines 13-14 – the sentence about what countries the studies were conducted in is confusing. Throughout most of this paragraph the authors are talking about the “14 depression studies” but then say that only one in seven were conducted in the US. Does this mean 2 of the 14 were conducted in the US?                                                                                                                                                                                                                                                                                | Yes, that is what was meant. We have reworded the sentence to enhance clarity.                                                                                                                                                                                                                                                                                                          |
|          | Table 3: Does “most distal follow up” time period refer to the length of time between baseline and most distal follow up or between the end of treatment and the most distal follow up? It would be helpful to clarify this in the table (even if it is described in the text).                                                                                                                                                                                                                                                                                                                    | A footnote has been added to the table for clarification.                                                                                                                                                                                                                                                                                                                               |
|          | Table 4: I would suggest moving the sample size to Table 3, since it seems more like a characteristic of the study than of the intervention. I would also suggest using “intervention n” or “treatment n” (and then define what this means) for that column rather than “completed n” and “control n”. It would make sense to keep the completion rates for the intervention arm as a column in Table 4. The therapy intensity column of Table 4 is a little difficult to digest. Perhaps having separate columns for session length and frequency of sessions would make it easier to understand? | We have split the therapy intensity column into two columns as suggested and have changed the column heading for “completed n.” We concur with the reviewer’s sentiment that sample size is more a characteristic of the study than the intervention, but we decided not to move this information in order to consolidate information in Table 4 and to cut down on clutter in Table 3. |
|          | Page 29, lines 17-18 – I would suggest re-wording this sentence to something like, “Follow-up duration was less than 6 months for 7 studies 6 months or greater for 8 studies.”                                                                                                                                                                                                                                                                                                                                                                                                                    | Sentence has been reworded as suggested.                                                                                                                                                                                                                                                                                                                                                |
|          | Page 29, line 21 refers to the fact that only 2 study samples included any Veteran representation. It might be helpful to add a little more detail about what proportion of the samples were Veterans in those 2 studies, or if they were studies specifically of Veterans, etc.                                                                                                                                                                                                                                                                                                                   | Additional detail has been added here and throughout the report.                                                                                                                                                                                                                                                                                                                        |
|          | In the Cuijpers review, was the ES for $\leq 6$ sessions smaller than it was for interventions that included more than 6 sessions? Page 31, line 3, reports that brief psychotherapies had a small but significant positive effect for treatment of depression in primary care – did Cuijpers examine whether this ES of -0.25 was statistically smaller than that for the full range of studies they looked at (ES -0.31 reported on page 30, line 19)?                                                                                                                                           | The Cuijpers review does make a comparison between $\leq 6$ sessions and $> 6$ sessions, and they did not find a statistically significant difference. We report these findings in KQ 2 because the comparison between brief and standard-duration psychotherapies is the focus of KQ 2.                                                                                                |
|          | In the Cape meta analysis, is the ES of -0.21 reported on page 31, line 11 referring to the combined ES for depression AND mixed anxiety and depression?                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes. We have clarified by identifying the different diagnostic categories from the outset of this paragraph and by pointing out that the authors combined diagnostic categories for some of their analyses.                                                                                                                                                                             |

| Reviewer  | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Response                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5 (cont.) | Page 31, lines 16-18 – The sentences describing the ES for brief psychotherapies specifically for depression is somewhat contradictory. On the one hand, the authors report a “slightly smaller” effect for PST over usual GP care (as compared to the effect for CBT over usual GP care), but then report “no significant differences in efficacy between CBT and PST. This could possibly be re-worded to say that the ES was slightly smaller, but not significantly different, for PST, but even this is still somewhat contradictory. (i.e. if it’s not statistically significantly smaller, can it be called smaller?) | The issue here is that at the $p = 0.05$ level, CBT demonstrated statistical significance and PST did not. Because there was no statistically significant difference between CBT and PST, because CBT narrowly demonstrated statistical significance at the $p = 0.05$ level, and because PST would demonstrate statistical significance at a slightly more lenient $p$ level (e.g., $p = 0.06$ or $0.07$ ), we feel that it would be misleading to draw too much attention to the fact that CBT achieved significance (narrowly) at the arbitrary 0.05 mark and PST did not (narrowly). We have reworded this sentence to remove the contradiction. |
|           | Page 32, line 11: I would suggest replacing “judged to” with “rated as”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Changed as suggested.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           | Page 32, line 14: Do you want to add ( $n=1$ ) after the word antidepressant?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Yes, changed as suggested.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|           | Page 33, line 9: I am unsure of exactly what the term “irregular comparator condition” means.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | We have clarified this sentence by replacing the term “irregular comparator” with a more accurate description of the control condition.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|           | Figure 3: In the labels under the Sd diff in means and 95% CI, do the authors intentionally use “Favours” in stead of “Favors”?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | The British spelling has been changed to “Favors.”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|           | Page 35, lines 12-14: Stating that “These results are consistent with both Cape’s and Cuijpers’ conclusion that PST is an efficacious option for the treatment of depression.” may be slightly overstating it, since one of the 2 studies did find a difference and the other did not, especially since the better quality trial did not find that PST improved outcomes.                                                                                                                                                                                                                                                    | We have altered a sentence to clarify that although the Mynors-Wallis study found PST+Med no better than Med alone, they also found that PST alone was equally as effective as Med alone. On this basis, we still conclude that the results are consistent with the conclusion that PST is an efficacious treatment option.                                                                                                                                                                                                                                                                                                                          |
|           | Page 37, lines 10-13: The authors could put the number of studies with each type of provider in parentheses (e.g. $n=3$ ), as they did on page 32 (lines 11-14)                                                                                                                                                                                                                                                                                                                                                                                                                                                              | We retained the sentence structure to avoid ambiguity (e.g., $n = 3$ could be interpreted as 3 studies or as 3 psychologists).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|           | On page 38, I would suggest adding a sentence after line 3 noting that the numbers of studies in each subgroup were too small to conduct quantitative analyses of provider type, individual vs. group, telephone vs. in person or treatment intensity. Though this is fairly obvious, it would make it explicit and also make it consistent with other sections of the review in which similar decisions were made.                                                                                                                                                                                                          | Changed as suggested.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           | On page 40, line 1-2, I would suggest saying more about the statement, “However, usual care may represent a more potent control condition than placebo controls used in antidepressant trials.” What do the authors mean? What makes them think this could be the case?                                                                                                                                                                                                                                                                                                                                                      | We have expounded on this statement to describe that it may be the case that usual care is more effective than placebo control because patients treated with usual care are receiving what is intended to be an active treatment and could even be a “best practice” treatment.                                                                                                                                                                                                                                                                                                                                                                      |
|           | Page 40, line 14 – I would suggest changing the phrase “appropriate training and supervision” to something like “training and supervision specific to the intervention being conducted”. Since many studies do not give much detail about the training provided, and since we really don’t have data that tells us how much or what kind of training is needed to implement these interventions, I’m not sure it can be deemed “appropriate” (or inappropriate) based on the information provided in each study.                                                                                                             | Changed as suggested. We have also tempered our statements to more strictly state what we found in the review and to emphasize the need for more research on the use of “non-mental health professionals” to provide brief EBPs.                                                                                                                                                                                                                                                                                                                                                                                                                     |
|           | Page 41, line 16 – suggest using the term “screened” rather than “selected” in reference to identifying patients who would be appropriate for brief psychotherapy                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Changed as suggested.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|           | Page 42, line 11 – I would suggest replacing “appropriate” (in reference to the quantitative synthesis methods) with something like “rigorous” or “robust” to convey that you not only chose analyses that were appropriate, but that you chose the best available methods. This is indeed a strength of this review and even that slight wording change conveys that in a stronger manner.                                                                                                                                                                                                                                  | Changed as suggested.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## APPENDIX D: EXCLUDED STUDIES

All studies listed below were reviewed in their full-text version and excluded for the reason indicated. An alphabetical reference list follows the table.

| Reference                | Population not appropriate | Intervention not of interest | Comparator not appropriate | Not SR or RCT | > 8 therapy sessions planned | Main outcome not of interest |
|--------------------------|----------------------------|------------------------------|----------------------------|---------------|------------------------------|------------------------------|
| Abbass-Allen, 2006 (535) | X                          |                              |                            |               |                              |                              |
| Abraham, 1992 (656)      |                            |                              |                            |               | X                            |                              |
| Alexopoulos, 2003 (657)  |                            |                              |                            |               | X                            |                              |
| Anonymous, 2010 (733)    |                            |                              |                            | X             |                              |                              |
| Arean, 1993 (658)        |                            |                              |                            |               | X                            |                              |
| Barrera, 1979 (685)      |                            |                              | X                          |               |                              |                              |
| Bedi, 2000 (686)         |                            |                              | X                          |               |                              |                              |
| Bee, 2010 (708)          | X                          |                              |                            |               |                              |                              |
| Bell, 2009 (458)         | X                          |                              |                            |               |                              |                              |
| Beutler, 1987 (659)      |                            |                              |                            |               | X                            |                              |
| Boer, 2005 (575)         | X                          |                              |                            |               |                              |                              |
| Bortolotti, 2008 (71)    |                            | X                            |                            |               |                              |                              |
| Campbell, 1992 (660)     |                            |                              |                            |               |                              | X                            |
| Catalan, 1991 (661)      | X                          |                              |                            |               |                              |                              |
| Ciechanowski, 2004 (662) |                            |                              | X                          |               |                              |                              |
| Coelho, 2007 (447)       | X                          |                              |                            |               |                              |                              |
| Cole, 2008 (74)          | X                          |                              |                            |               |                              |                              |
| Comas-Diaz (702)         |                            |                              | X                          |               |                              |                              |
| Cuijpers, 2008 (469)     | X                          |                              |                            |               |                              |                              |
| Cuijpers, 2010 (31)      |                            | X                            |                            |               |                              |                              |
| Cuijpers, 2010 (467)     |                            | X                            |                            |               |                              |                              |
| Cuijpers, 2007 (137)     | X                          |                              |                            |               |                              |                              |
| Cuijpers, 2008 (76)      |                            |                              |                            | X             |                              |                              |
| Cuijpers, 2007 (462)     | X                          |                              |                            |               |                              |                              |
| de Mello, 2005 (355)     |                            |                              |                            |               | X                            |                              |
| Dhooper, 1993 (736)      |                            | X                            |                            |               |                              |                              |
| Doorenbos, 2005 (663)    | X                          |                              |                            |               |                              |                              |
| Dozios, 2009 (709)       |                            |                              |                            |               | X                            |                              |
| Driessen, 2010 (510)     | X                          |                              |                            |               |                              |                              |
| Ekers, 2008 (345)        | X                          |                              |                            |               |                              |                              |
| Fleming, 1980 (687)      |                            |                              | X                          |               |                              |                              |
| Floyd, 2004 (665)        |                            |                              |                            |               | X                            |                              |
| Fry, 1984 (737)          |                            |                              |                            |               | X                            |                              |

| Reference                   | Population not appropriate | Intervention not of interest | Comparator not appropriate | Not SR or RCT | > 8 therapy sessions planned | Main outcome not of interest |
|-----------------------------|----------------------------|------------------------------|----------------------------|---------------|------------------------------|------------------------------|
| Fuchs, 1997 (688)           |                            | X                            |                            |               |                              |                              |
| Gardner, 1981 (689)         |                            |                              | X                          |               |                              |                              |
| Godbole, 1973 (667)         | X                          |                              |                            |               |                              |                              |
| Hamdan-Mansauer, 2009 (711) |                            |                              |                            |               | X                            |                              |
| Haringsma, 2006 (668)       |                            |                              |                            |               | X                            |                              |
| Hegerl, 2010 (713)          |                            |                              |                            |               | X                            |                              |
| Hogg, 1988 (744)            |                            |                              | X                          |               |                              |                              |
| Holland, 2009 (714)         | X                          |                              |                            |               |                              |                              |
| Hsu, 2009 (715)             |                            | X                            |                            |               |                              |                              |
| Huffziger, 2009 (716)       |                            |                              |                            |               |                              | X                            |
| Hynninen, 2010 (718)        | X                          |                              |                            |               |                              |                              |
| Jarvik, 1982 (669)          |                            |                              | X                          |               |                              |                              |
| Kanter, 2010 (719)          |                            |                              |                            |               | X                            |                              |
| Katon, 2004 (672)           | X                          |                              |                            |               |                              |                              |
| Konnert, 2009 (720)         | X                          |                              |                            |               |                              |                              |
| Kotova, 2005 (342)          |                            |                              |                            |               | X                            |                              |
| LaPointe, 1980 (748)        | X                          |                              |                            |               |                              |                              |
| Latour, 1994 (738)          |                            | X                            |                            |               |                              |                              |
| Lichtenberg, 1996 (739)     | X                          |                              |                            |               |                              |                              |
| Lynch, 2010 (33)            | X                          |                              |                            |               |                              |                              |
| Mackin, 2005 (177)          |                            | X                            |                            |               |                              |                              |
| Mazzuchelli, 2009 (368)     |                            |                              | X                          |               |                              |                              |
| McCurren, 1999 (673)        |                            | X                            |                            |               |                              |                              |
| McKnight, 1992 (740)        |                            | X                            |                            |               |                              |                              |
| McNaughton, 2009 (21)       |                            | X                            |                            |               |                              |                              |
| Miranda, 2003 (691)         |                            |                              | X                          |               |                              |                              |
| Mohr, 2008 (498)            |                            | X                            |                            |               |                              |                              |
| Montgomery, 2010 (372)      | X                          |                              |                            |               |                              |                              |
| Mynor-Wallis, 1997 (674)    | X                          |                              |                            |               |                              |                              |
| Nezu, 1989 (678)            |                            |                              |                            |               | X                            |                              |
| Nezu, 2003 (677)            | X                          |                              |                            |               |                              |                              |
| Oranta, 2010 (722)          | X                          |                              |                            |               |                              |                              |
| Pace, 1993 (704)            | X                          |                              |                            |               |                              |                              |
| Parker, 2007 (517)          |                            |                              |                            | X             |                              |                              |
| Pecher, 1984 (706)          |                            |                              | X                          |               |                              |                              |
| Peden, 2000 (697)           | X                          |                              |                            |               |                              |                              |
| Peng, 2009 (19)             |                            |                              |                            |               | X                            |                              |

| Reference              | Population not appropriate | Intervention not of interest | Comparator not appropriate | Not SR or RCT | > 8 therapy sessions planned | Main outcome not of interest |
|------------------------|----------------------------|------------------------------|----------------------------|---------------|------------------------------|------------------------------|
| Petersen, 2010 (734)   | X                          |                              |                            |               |                              |                              |
| Pigeon, 2009 (723)     | X                          |                              |                            |               |                              |                              |
| Powers, 2009 (358)     | X                          |                              |                            |               |                              |                              |
| Reynolds, 1999 (680)   | X                          |                              |                            |               |                              |                              |
| Sallis, 1983 (741)     |                            |                              |                            |               | X                            |                              |
| Serfaty, 2009 (724)    |                            |                              |                            |               | X                            |                              |
| Shaw, 1977 (698)       |                            | X                            |                            |               |                              |                              |
| Sirey, 2005 (692)      |                            | X                            |                            |               |                              |                              |
| Stulz, 2010 (728)      |                            |                              |                            | X             |                              |                              |
| Taylor, 1977 (707)     |                            |                              | X                          |               |                              |                              |
| Thompson, 1984 (742)   |                            |                              |                            | X             |                              |                              |
| Thompson, 1987 (743)   |                            |                              |                            |               | X                            |                              |
| Tsang, 2008 (93)       |                            | X                            |                            |               |                              |                              |
| Uebelacker, 2009 (729) |                            |                              |                            | X             |                              |                              |
| Unutzer, 2002 (681)    |                            |                              | X                          |               |                              |                              |
| Van Calker, 2009 (730) | X                          |                              |                            |               |                              |                              |
| Watkins, 2009 (693)    |                            | X                            |                            |               |                              |                              |
| Watkins, 2009 (732)    |                            | X                            |                            |               |                              |                              |
| Warmerdam, 2010 (731)  |                            | X                            |                            |               |                              |                              |
| Wierzbicki, 1987 (746) |                            |                              | X                          |               |                              |                              |
| Wood, 1997 (682)       | X                          |                              |                            |               |                              |                              |
| Yang, 2009 (696)       | X                          |                              |                            |               |                              |                              |
| Zerhusen, 1991 (683)   |                            |                              |                            |               | X                            |                              |

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## APPENDIX E: ACRONYMS AND ABBREVIATIONS

|        |                                                        |          |                                                                     |
|--------|--------------------------------------------------------|----------|---------------------------------------------------------------------|
| ACT    | acceptance and commitment therapy                      | N or n   | number                                                              |
| AE     | adverse effects                                        | NA       | not applicable                                                      |
| BDI-II | Beck Depression Inventory-II                           | NNT      | number needed to treat                                              |
| CBASP  | cognitive behavioral analysis system of psychotherapy  | NR       | not reported                                                        |
| CBT    | cognitive behavioral therapy                           | NS or ns | not significant                                                     |
| CES-D  | Center for Epidemiologic Studies-Depression            | OR       | odds ratio                                                          |
| CI     | confidence interval                                    | p        | probability                                                         |
| CM     | care management                                        | PC       | primary care                                                        |
| DBT    | dialectical behavioral therapy                         | PFT      | problem-focused therapy                                             |
| DHP    | Diabetes Health Profile                                | PHQ      | Patient Health Questionnaire                                        |
| DIS    | Diagnostic Interview Schedule                          | PRIME-MD | Primary Care Evaluation of Mental Disorders                         |
| DSM-IV | Diagnostic and Statistical Manual of Mental Disorders  | PST      | problem-solving treatment                                           |
| FAP    | functional analytic psychotherapy                      | PTSD     | posttraumatic stress disorder                                       |
| GP     | general practitioner                                   | RCT      | randomized controlled trial                                         |
| HAM-D  | Hamilton Depression Scale                              | RDC      | Research Diagnostic Criteria                                        |
| HRSD   | Hamilton Rating Scale for Depression                   | Rx       | medicine prescription                                               |
| HSLC-D | Headache Specific Locus of Control-Depression          | SADS-L   | Schedule for Affective Disorders and Schizophrenia-Lifetime Version |
| IPT    | interpersonal therapy                                  | SCAN     | Schedules for Clinical Assessment in Neuropsychiatry                |
| LOCF   | last observation carried forward                       | SCL      | Symptom Checklist                                                   |
| MBCT   | mindfulness-based cognitive therapy                    | SD       | standard deviation                                                  |
| MDD    | major depressive disorder                              | SE       | standard error                                                      |
| MDE    | major depressive episode                               | ST       | standard treatment                                                  |
| MH     | mental health                                          | TAU      | treatment as usual                                                  |
| MMPI-D | Minnesota Multiphasic Personality Inventory-Depression | vs       | versus                                                              |
| MMSE   | Mini Mental State Examination                          | WHOQOL   | World Health Organization Quality of Life                           |
| MOS-D  | Medical Outcomes Study-Depression                      | wk       | week or weeks                                                       |
|        |                                                        | WLC      | waitlist control                                                    |
|        |                                                        | yr       | year or years                                                       |