Evidence Compass

Technical Report

What are the effective psychological interventions for adults with a diagnosis of depression?

A Rapid Evidence Assessment

August 2013

Australian Government
Department of Veterans' Affairs

Disclaimer

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Please forward any comments or queries about this report to at-ease@dva.gov.au

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Executive Summary

- Depression is a serious psychological disorder and one of the most prevalent in Australia, placing significant burden on the individual and society. Effective psychological interventions for treating depression are an important focus of clinical research.
- The aim of this review was to examine the efficacy of psychological interventions for the treatment of adults with depression. The interventions of interest were cognitive behavioural therapy (CBT); rational emotive behavioural therapy (REBT); behavioural activation; problem solving therapy; couples therapy; interpersonal therapy; and short-term psychodynamic therapy.
- This literature review utilised a rapid evidence assessment (REA) methodology. As part of the REA methodology, a search was conducted for high quality treatment guidelines for psychological interventions for adults with a diagnosis of depression. The search identified "Depression: The Treatment and Management of Depression in Adults (Updated Version) National Clinical Practice Guideline 90 ('NICE Depression guidelines')[1]". As the NICE Depression guidelines utilised a systematic review that identified studies up until 2009, an additional literature search from 2009-2013 was conducted.
- Only randomised controlled trials (RCTs) or pseudo-RCTs were eligible for inclusion, reflecting the gold standard of clinical research. Taken together, the guideline recommendations and the newly identified studies for each identified psychological intervention were assessed for strength of the evidence, consistency of evidence, applicability and generalisability to the population of interest.
- These assessments were collated to determine an overall ranking of level of support for psychological interventions used in the treatment of adults with a major depressive episode. The ranking categories were 'Supported' –clear, consistent evidence of beneficial effect; 'Promising' – evidence suggestive of beneficial effect but further research required; 'Unknown' – insufficient evidence of beneficial effect; 'Not supported' – Clear, consistent evidence of no effect or negative/harmful effect.
- The search identified a total of eight studies that met inclusion criteria. Three studies (38%) assessed IPT; two assessed CBT and the remaining 3 studies (38%) comprised a single RCT for REBT; behavioural activation and short-term psychodynamic psychotherapy, respectively. No studies assessing counselling, problem-solving therapy or couples therapy met inclusion criteria.
- The studies included in the REA for both CBT and IPT reported findings consistent with the NICE Depression guidelines recommendations. Taken together, the evidence for the use of both CBT and IPT in the treatment of adult depression received a 'Supported' ranking.
- Behavioural activation and short-term psychodynamic psychotherapy received a 'Promising' ranking. These findings from the identified studies were consistent with

the NICE Depression guidelines recommendations that the evidence for these two interventions was not sufficiently robust to be recommended as a direct alternative individual treatment option to CBT or IPT.

- While no new studies were identified for couples therapy, a review of the evidence base supporting the NICE Depression guidelines identified that the evidence for couples therapy in the treatment of adult depression could be ranked according to our ranking metric as ‘Promising’. This ranking should be considered alongside the caveats made by the NICE Depression Guidelines which state that couples therapy should be only used for the treatment of depression in cases where the relationship is contributing to the depression.
- Support for REBT, counselling and problem-solving therapy received an ‘Unknown’ ranking as the evidence base identified by the NICE Depression Guidelines was limited and generally of poor quality.
- The results of this REA suggest that inclusion of therapies with strong and robust evidence bases, CBT and IPT in particular, should be made available to adults with depression.

Introduction

Depression, typically defined as a major depressive episode (MDE) or major depressive disorder (MDD), is one of the most prevalent of all medical illnesses, with a lifetime prevalence rate estimated between 4 to 10% in community settings[2]. The overall weighted prevalence of current (30-day) major depression in Australia is 3.2%, with the highest rate (5.2%) identified in women in midlife[3]. Australian prevalence rates are comparable to those from other Western countries, such as the USA and the UK[3].

Depression is characterised by low mood and/or loss of pleasure in most activities, accompanied by changes in appetite or weight, sleep difficulties, fatigue, feelings of guilt or worthlessness, poor concentration, somatic complaints and thoughts of death or suicide[4]. During an episode, these symptoms are present most of the time over a two-week period and cause significant functional impairment[4]. The impact on the individual with depression can be life-threatening, as depression leads to a four-times higher risk of suicide compared with the general population[5]. Depression places significant burden on an individual, and is ranked fourth for disability adjusted life-years (DALYs) worldwide by the World Health Organization in 2001[6]. Additionally, depression has been projected to become the second most common cause of DALYs in the world by 2020. Given the enormous impact of depression on a global and individual scale, effective and targeted interventions to treat depression have been a significant focus of researchers, clinicians and policy developers world-wide[7].

This aim of this review was to examine the efficacy of psychological interventions for the treatment of adult with depression. In consultation with the Department of Veteran's Affairs (DVA) a number of psychological interventions were identified and the evidence to support the use of these psychological interventions in the treatment of depression was reviewed. This was an iterative process between ACPMH and DVA to capture the interventions of most relevance to DVA. The interventions specifically identified were cognitive behavioural therapy; rational emotive behavioural therapy; behavioural activation; problem solving; couples therapy; interpersonal therapy; and short-term psychodynamic therapy.

A description of each of these interventions is provided below. It is important to note that the focus of this review is highly intensive psychological interventions[1]. Low-intensity psychosocial interventions[1], such as computerised cognitive behavioural therapy (without any clinician contact), guided self-help and physical activity programs were not the focus of this rapid evidence assessment.

Psychological interventions

Cognitive behavioural therapy (CBT[8]) is a type of psychological therapy which focuses on the relationship between cognitions, behaviours, and emotional responses. CBT examines the conscious thinking and reasoning styles of depressed clients and the behaviours that contribute to low mood. In CBT, the client and therapist collaborate to identify negative thinking patterns and the client is supported in recognising and evaluating these as they occur to identify new, more constructive thoughts. Problematic behaviours are exchanged for mood improving behaviours. The cognitive therapy component of CBT is based on the work of Aaron Beck.

Rational emotive behavioural therapy (REBT[9]) is a form of cognitive behavioural therapy with slightly different approach to cognitive component of the therapy based on the work of Albert Ellis.

Behavioural activation[10] is a component of CBT interventions but is also a stand-alone intervention, with an emphasis on positive reinforcement schedules[11]. Patients are encouraged to develop more rewarding and task-directed behaviours, and removing patterns of negative reinforcement[1].

Problem-solving therapy[12,13] has been developed out of a psychotherapeutic trend toward teaching psychosocial skills, and involves teaching a client how to use a step-by-step process to problem solving. The intervention examines how to apply the problem solving approach to situations in an individual's life that may be distressing[14].

Couples therapy[15,16] approaches vary, but the systemic couple therapy approach[15] or the behavioural approach[16] both aim to help couples understand the impact of their interactions on each other on the development and/or maintenance of symptoms of depression, thus encouraging a new perspective on the presenting problem, e.g. depressing behaviours.

Interpersonal therapy (IPT[17]) is a time-limited psychodynamically informed approach which is directed at symptom relief and improved interpersonal functioning, with the overall aim of improving interpersonal relationships or change expectations about them[18]. Interpersonal relationships are the focus of attention and considered to be the source to enable change[18]. The client and therapist work to identify the effects of interpersonal conflicts, role transitions, grief and loss, or social skills on symptoms, and clients are assisted in learning to cope with or resolve problem areas.

Short-term psychodynamic psychotherapy (STPP) represents a therapy derived from a psychodynamic/psychoanalytic model[1] and while there are conceptual and technical

differences in the therapeutic elements of STPP, it generally reflects a restricted time frame (i.e. 16-20 sessions), a focus on present experience, active therapists and a special focus on specific conflicts or themes and the setting of achievable goals[19].

Method

This literature review utilised a rapid evidence assessment (REA) methodology. The REA is a research methodology which uses similar methods and principles to a systematic review but makes concessions to the breadth and depth of the process, in order to suit a shorter timeframe. The advantage of an REA is that it utilises rigorous methods for locating, appraising and synthesising the evidence related to a specific topic of enquiry. To make a REA rapid, however, the methodology places a number of limitations in the search criteria and in how the evidence is assessed. For example, REAs often limit the selection of studies to a specific time frame (e.g., last 10 years), and limit selection of studies to peer-reviewed published, English studies (therefore not including unpublished pilot studies, difficult-to-obtain material and/or non-English language studies). Also, while the strength of the evidence is assessed in a rigorous and defensible way, it is not necessarily as exhaustive as a well-constructed systematic review and meta-analysis. A major strength, however, is that an REA can inform policy and decision makers more efficiently by synthesising and ranking the evidence in a particular area within a relatively short space of time and at less cost than a systematic review/meta-analysis.

Defining the research question

The components of the question for this REA were precisely defined in terms of the population, the interventions, and the outcomes (refer to Appendix 1). Operational definitions were established for key concepts, and specific inclusion and exclusion criteria were defined for screening studies for this REA. As part of this operational definition, the population of interest was defined as adults with a diagnosis of depression not currently receiving any concurrent psychological treatment for depression, the intervention was defined as one of the psychological treatments of interest (identified above), and the outcome was defined as depression symptoms. Furthermore, only studies that employed a randomised controlled trial (RCT) or pseudo-RCT methodology were eligible for inclusion. This was due to the ‘gold standard’ that RCTs possess in clinical research when attempting to determine effectiveness of psychological interventions, and because this was a well-researched area of interest. Definitions of these terms are as follows:

Randomised controlled trial

An RCT is a quantitative, comparative, controlled experiment in which the effects of intervention(s) are assessed in participants who were randomised to receive the intervention. Comparisons are made with individuals who were randomised to receive standard treatment/practice, placebo or no treatment. Randomisation requires that all participants have the same chance of being allocated into any of the trial arms and may be conducted via random sequence generation/random number tables/flipping a coin/rolling a dice.

Pseudo-randomised controlled trials

These trials may be listed as 'RCTs', but do not adhere to the randomisation procedures required to be classified as an RCT. These trials may have used 'randomising' techniques, but they do not appropriately reflect true randomisation principles, or the trials used methods which do not ensure that every participant has the same chance of allocation to one of the trial arms. Examples of pseudo-randomisation techniques include: using any date (odd or even numbers), patient file numbers (odd or even), or patient ID numbers (odd or even).

Search strategy

To identify the relevant literature, systematic bibliographic searches were performed to find relevant trials from the following databases: EMBASE, MEDLINE (PubMed), PsychINFO, Cochrane, Clinical guidelines portal (Australia), and the National Guideline Clearinghouse (USA). An example of the search strategy conducted in the Embase database appears in Appendix 2.

Note: The methodology underpinning this REA sought to identify guidelines, meta-analyses or systematic reviews for this particular topic. In searching for guidelines, systematic reviews or meta-analyses, the following procedures were taken in regards to the processing of data sources:

I. Order of precedence: guidelines > meta-analyses > systematic reviews.
II. The most recent guideline, meta-analysis or systematic review was subject to an assessment of quality. If the guideline, meta-analysis or systematic review **did not** satisfy the quality assessment (i.e. a rating of poor), then the next most recent source was assessed in reverse sequential order (e.g. most recent to oldest) until the quality assessment criteria were met.

III. The guideline, meta-analysis or systematic review that satisfied the quality assessment determined what the cutoff year would be for the primary research articles (e.g., if a meta-analysis was published in 2009, then primary research studies from 2008 and earlier would not be assessed).

Search terms

The search terms specific to depression that were included in searching the Title/s, Abstract/s, MeSH terms, Keywords lists and Chemical were: *depression, major depression, controlled clinical trial, clinical trial, controlled study, randomized controlled trial, controlled clinical trial (topic)* An example of the search strategy conducted in the Embase database appears in the Appendix 2.

Paper selection

After conducting searches, studies were evaluated according to the following inclusion and exclusion criteria:

Included:
1. Internationally and locally published peer-reviewed research studies 2. Research papers that were published from end date of systematic review, meta-analysis or guideline search (if applicable); if no systematic review, meta-analysis or guideline available, then primary sources published prior to **1st January 2000** until the time that the rapid evidence assessment is conducted (**18th April 2013**) 3. RCTs or pseudo-RCTs with outcome data that assesses a diagnosis of depression 4. Human Adults (i.e. ≥ 18 years of age) 5. English language
Excluded:
1. Non-English papers 2. Published prior to end date of systematic review, meta-analysis or guideline search (if applicable); if no systematic review, meta-analysis or guideline available, then primary sources published prior to 2000 3. Papers where a full-text version is not readily available 4. Validation study 5. Animal studies 6. Qualitative studies 7. Grey literature (e.g., media: websites, newspapers, magazines, television,

conference abstracts, theses)
8. Children (≤ 17 years of age)
9. Non-RCT or non-pseudo-RCT design
10. Less than 70% of sample with diagnosed depression
11. The sample has a primary diagnosis of health condition (e.g., HIV, cancer, epilepsy)
12. No arm of the treatment trial is a psychological intervention/therapy
13. Participants are currently receiving some other form of psychological treatment
14. Participants are currently receiving a psychological intervention, but not one of interest
15. No outcome data on depression variables

Information management

A screening process was adopted to code the eligibility of papers acquired through search strategy. The content of screening at the title and abstract screening stage is presented in Appendix 3. Papers were directly imported into EPPI-Reviewer 4 software. All records that were identified using the search strategy were screened for relevance against the inclusion criteria. Initial screening for inclusion was performed by one reviewer, and was based on the information contained in the title and abstract. Full text versions of all studies which satisfied this initial screening were obtained. In screening the full-text paper, the reviewer made the decision on whether the paper should be included or excluded, based on criteria for the specific question. If the paper met the criteria for inclusion, then it was subject to data abstraction. At this stage in the information management process, 10% of the articles being processed were randomly selected and checked by two independent reviewers. In the case of discrepancies regarding inclusion/exclusion, discussions were held and the discrepancies reconciled.

The following information was extracted from studies that met the inclusion criteria: (i) study description, (ii) intervention description, (iii) participant characteristics, (iv) primary outcome domain, (v) main findings, (vi) bias and (vii) quality assessment. Full details about all the included studies are given in Appendix 4.

Evaluation of the evidence

There were four key components that contributed to the overall evaluation of the evidence. These components were:

- The **strength of the evidence base**, in terms of the quality and risk of bias, quantity of evidence, and level of evidence (study design)
- The **consistency** of the study results
- The **generalisability** of the body of evidence to the target population (e.g. veterans)
- The **applicability** of the body of the evidence to the Australian context

The first two components provided a gauge of the internal validity of the study data in support of efficacy (for an intervention). The last two components considered the external factors that may influence effectiveness, in terms of the generalisability of study results to the intended target population, and applicability to the Australian context.

Strength of the evidence base

The strength of the evidence base was assessed in terms of the a) quality and risk of bias, b) quantity of evidence, and c) level of evidence.

a) **Quality and risk of bias** reflected how well the studies were conducted, including how the participants were selected, allocated to groups, managed and followed-up, and how the study outcomes were defined, measured, analysed and reported. The process for assessing quality and bias in individual studies and meta-analyses /systematic reviews is presented below.
   - Individual studies - an assessment was conducted for each individual study with regard to the quality and risk of bias criteria utilising a modified version of the Chalmers Checklist for appraising the quality of studies of interventions[20] (see Appendix 5). Three independent raters rated each study according to these criteria, and together a consensus agreement was reached as to an overall rating of ‘Good’, ‘Fair’, or ‘Poor’.
   - Meta-analyses and systematic reviews - in the instance that either a meta-analysis or systematic review was included in the review they were rated according to an adapted version of the NHMRC quality criteria[21] (see Appendix 6). Three independent raters rated each study according to these criteria, and together a consensus agreement was reached as to an overall rating of ‘Good’, ‘Fair’, or ‘Poor’.

b) **Quantity** of evidence reflected the number of studies that were included as the evidence base for each ranking. The quantity assessment also took into account the number of participants in relation to the frequency of the outcomes measures (i.e. the statistical power of the studies). Small underpowered studies that were otherwise sound may have been included in the evidence base if their findings were generally similar- but at least

some of the studies cited as evidence must have been large enough to detect the size and direction of any effect.

c) **Level of evidence** reflected the study design. The details of the study designs which are covered by each level of evidence are as follows:
   - Level I: A systematic review of RCTs
   - Level II: An RCT
   - Level III-1: A pseudo-randomised controlled trial (i.e. a trial where a pseudo-random method of allocation is utilised, such as alternate allocation).

Overall strength

A judgement was made about the strength of the evidence base, taking into account the quality and risk of bias, quantity of evidence and level of evidence. Agreement was sought between three independent raters and consensus about the strength of the evidence based was obtained according to the categories below:

High beneficial strength
Clear evidence of beneficial effect. One or more Level I studies with a low risk of bias **OR** three or more Level II studies with a low risk of bias

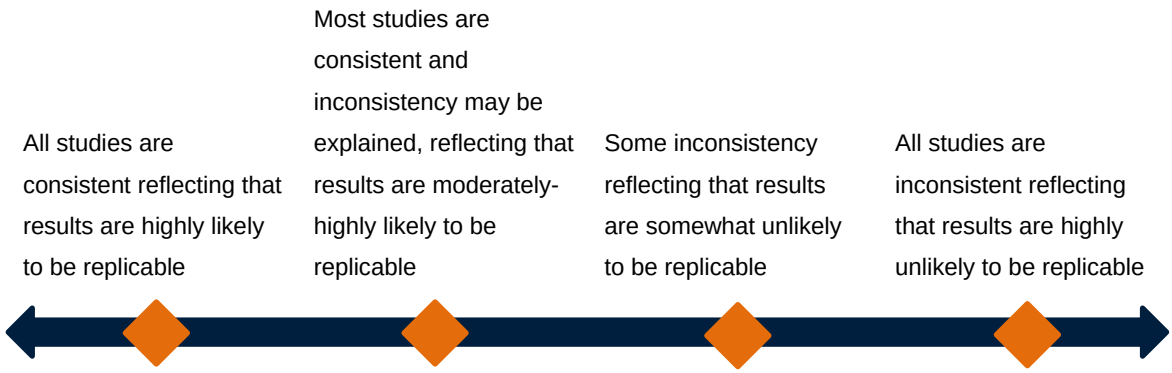
Moderate beneficial strength
*Evidence suggestive of beneficial effect***.** One or two Level II studies with a low risk of bias **OR** two or more Level III studies with a low risk of bias

Low beneficial strength
Insufficient evidence at present. One or more Level I through to Level IV study with a high risk of bias

High non-beneficial strength
No effect or a harmful effect. One or more Level I studies with a low risk of bias **OR** three or more Level II studies with a low risk of bias

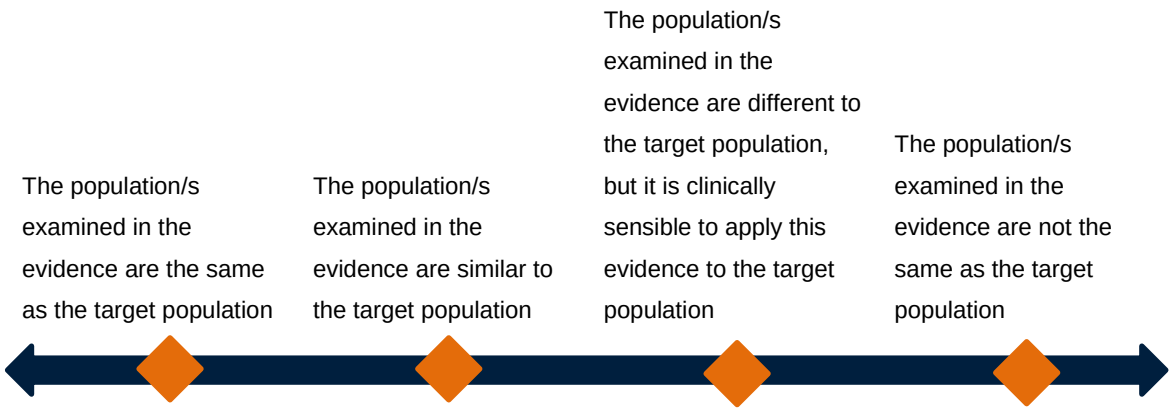
Consistency

The consistency component of the ranking system of the body of the evidence assessed whether the findings were consistent across the included studies (including across a range of study populations and study designs). It was important to determine whether study results were consistent to ensure that the results were likely to be replicable or only likely to occur under certain conditions.



Generalisability

This component covered how well the participants and settings of the included studies could be generalised to the target population. Population issues that might influence this component included gender, age or ethnicity, or level of care (e.g. community or hospital). The generalisability continuum is presented below:



Applicability

This component addressed whether the evidence base was relevant to the Australian context, or to specific local settings (such as rural areas or cities). Factors that may reduce the direct application of study findings to the Australian context or specific local settings include organisational factors (e.g. availability of trained staff) and cultural factors (e.g. attitudes to health issues, including those that may affect compliance). Applicability was ranked as following:

Ranking the evidence

On balance, taking into account the considerations of the strength of the evidence (quality and risk of bias, quantity of evidence and level of evidence), consistency, generalisability and applicability, the total body of the evidence was then ranked into one of four categories: 'Supported'; 'Promising'; 'Unknown'; or 'Not Supported' (see Figure 1). Agreement was sought between three independent raters. A brief overview of the studies that contributed to the ranking results is presented in Appendix 7.

Figure 1: Categories within the intervention ranking system

SUPPORTED	PROMISING	UNKNOWN	NOT SUPPORTED
Clear, consistent evidence of beneficial effect	Evidence suggestive of beneficial effect but more research required.	Insufficient evidence of beneficial effect. More research required.	Clear, consistent evidence of no effect or negative / harmful effect

Results

The following section presents figures pertaining to the volume of records identified at each stage of the REA (Figure 2), the source of the records and the year of publication to indicate the scope and extent of the literature that the evidence base was extracted from. The search identified the high quality guidelines for the psychological treatment of depression: "Depression: The Treatment and Management of Depression in Adults (Updated Version) National Clinical Practice Guideline 90 ("NICE Depression guidelines")[1]. As these NICE Depression guidelines reviewed the evidence for the particular psychological interventions of interest to this review, they were included in this REA. The systematic review that underpinned these guidelines had a data cut off of January 2009. As such, the search period for studies published after the identified guidelines was refined to 2009-2013. In total, from all sources searched, 8 additional papers met the inclusion criteria. Of the eight empirical research studies eligible for review, 37.5% originated from the UK (see Figure 3). Two studies (25%) were from the United States of America, and the remaining 37.5% (n = 3), representing one study each were from Sweden (12.5%), New Zealand (12.5%) and Romania (12.5%). The year in which the studies that were included in this rapid evidence assessment were published is presented in Figure 4.

Figure 2. Flowchart representing the number of records retrieved at each stage of the rapid evidence assessment

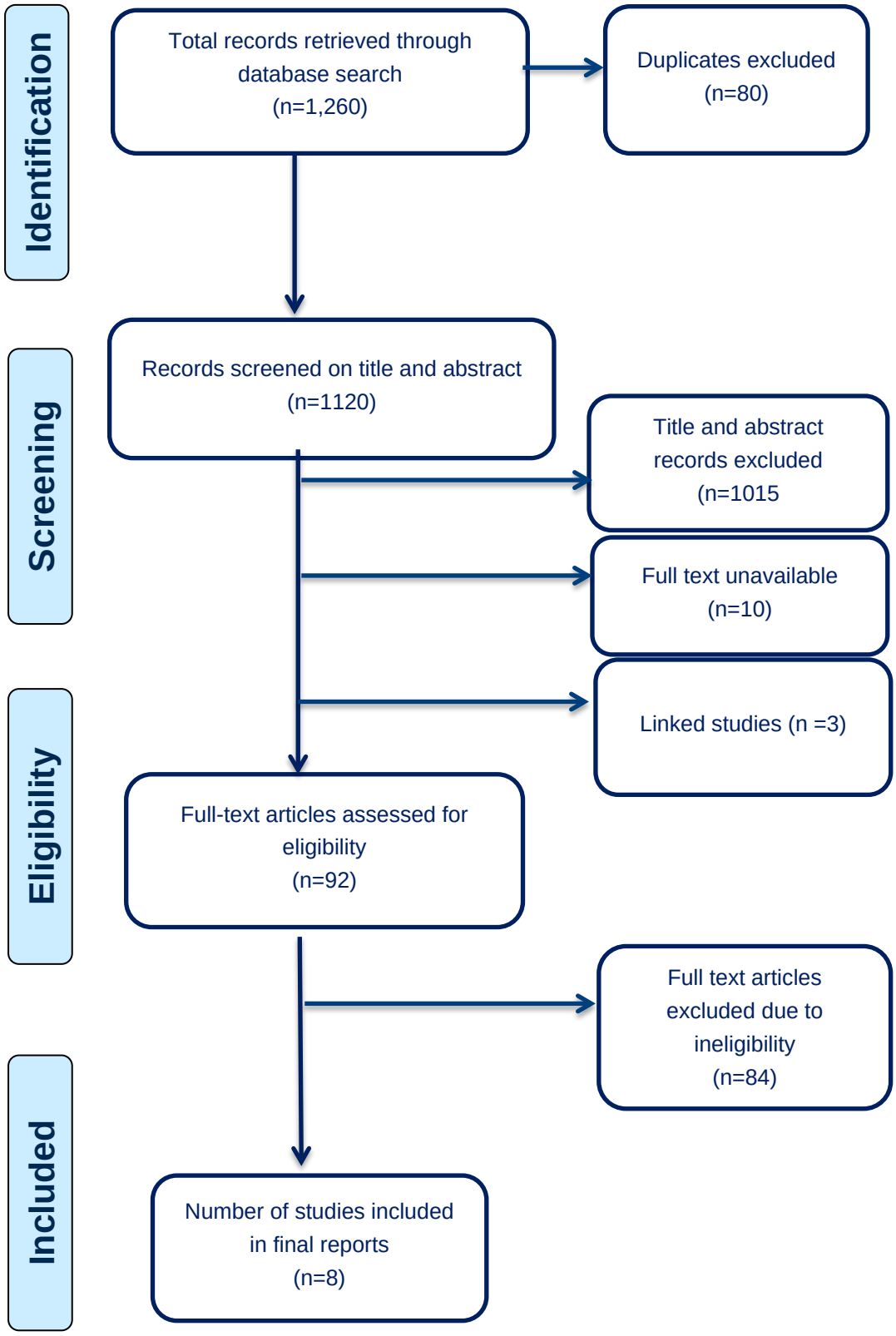


Figure 3. Origin of the studies included in the rapid evidence assessment

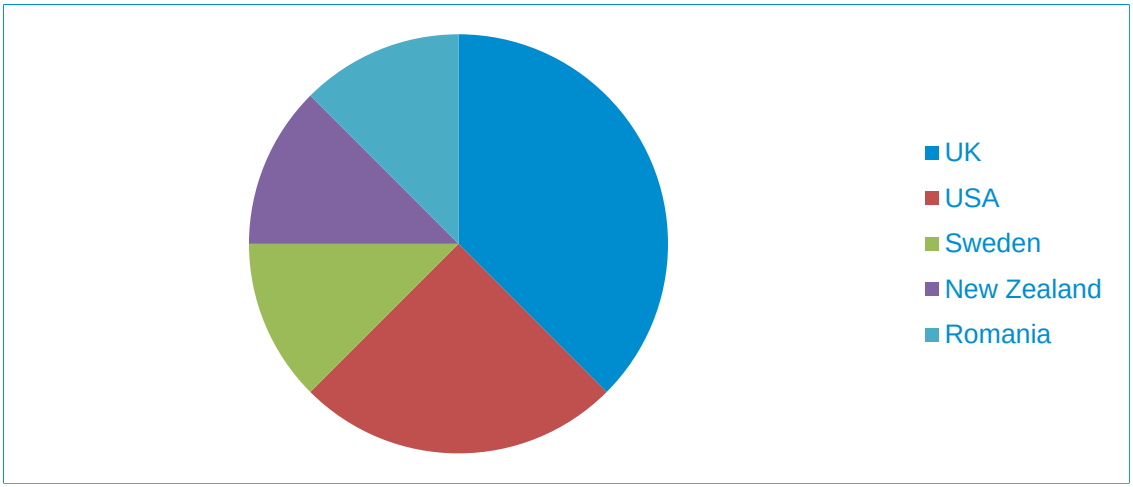
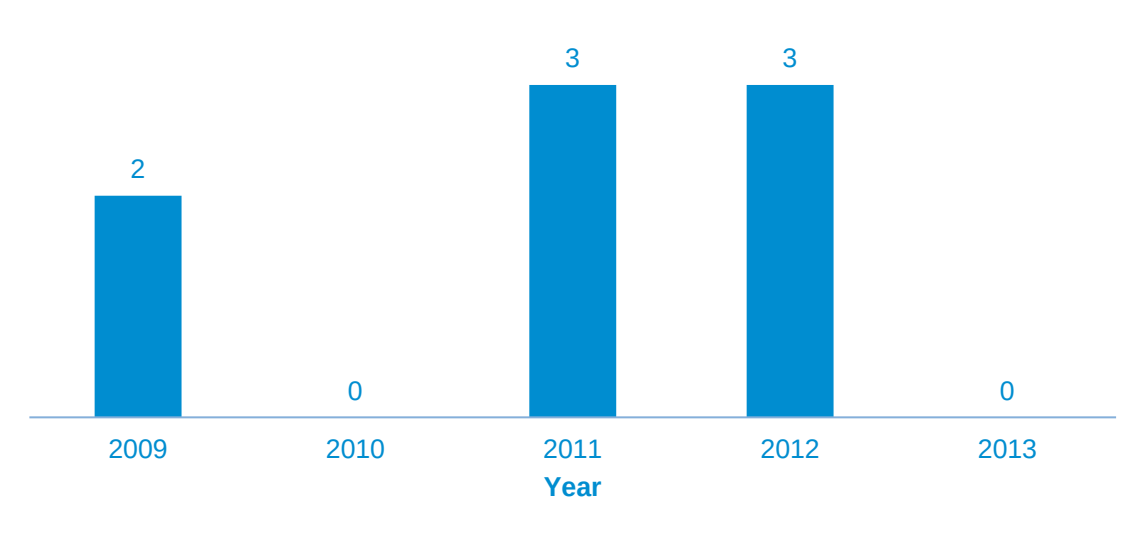


Figure 4. Year of publication of studies included in the rapid evidence assessment



Summary of the evidence

Of the eight studies identified after the closing date of the systematic review for the NICE Depression guidelines, the largest group of studies (38%, n = 3) assessed interpersonal therapy (IPT). Cognitive behavioural therapy (CBT) was assessed in two studies (25%). The remaining 3 studies (38%) comprised a single RCT for each of the following: rational emotive behavioural therapy (REBT); behavioural activation and short-term psychodynamic psychotherapy. No studies assessing counselling, problem-solving therapy or couples therapy met inclusion criteria. Detailed results for CBT, REBT, IPT, behavioural activation and short-term psychodynamic psychotherapy appear below. Details of all studies appear in Appendix 4, with a briefer overview in Appendix 8.

Cognitive Behavioural Therapy (CBT)

The NICE guidelines recommended the use of CBT as a treatment for depression in adults[1]. The guidelines showed that CBT had the largest dataset and broadest equivalence of effect across the range of severity of depression; however brief CBT was not recommended for the treatment of MDD. The REA identified two additional studies that tested the efficacy of CBT in treating depression, and results were consistent with the NICE guidelines recommendations. Both studies were RCTs. In one study the intervention group received telephone-administered cognitive behavioural therapy (T-CBT), with face-to-face CBT as the comparison group[22]. Both arms were designed to receive 18 weekly sessions of the therapy, with the therapy delivered to a sample of 325 participants with a diagnosis of MDD. The aim of the study was to determine discontinuation vs. non-discontinuation of treatment before week 18. Significantly fewer participants discontinued the T-CBT intervention (20.9%) before session 18 compared to face-to-face CBT (32.7%). Significant improvement in depression symptoms occurred in both arms of the trial, and there were no significant post-treatment differences between therapies. At six month follow-up, those who received face-to-face CBT were significantly less depressed than those who received T-CBT.

The second study assessed the efficacy of face-to-face CBT in a sample of 204 elderly participants (≥65 years)[23]. The intervention group received face-to-face CBT, while the two comparison groups received either: talking control group plus treatment as usual (TAU) or TAU with general practitioner (GP) contact. Greater post-treatment improvements were reported in the CBT group versus both the talking control + TAU and the TAU +GP contact groups. These findings were maintained at 10-month follow-up. Both RCT's describe the superiority of face-to-face CBT when compared to telephone delivered CBT or talking control + TAU, or TAU + GP contact. The efficacy of face-to-face CBT was also maintained at long-term follow up (6 or 10 months post-treatment, respectively).

When the findings from the NICE guidelines were taken together with the additional two RCTs identified by the REA, the strength of the evidence base supporting the use of CBT in the treatment of adult depression was judged to be high. In addition, the generalisability, consistency and applicability of the RCT's included in this REA were also strong. Both RCT's were consistent in direction, reporting a reduction of depression symptoms over the course of the intervention and at follow-up. The studies were conducted in the USA and the UK, making the data generalisable to an Australian context. The applicability was strong given that the therapies have been well described in both the RCT's, facilitating easy replication. Against the background of strong recommendations for efficacy and utility in the NICE

guidelines and two RCTs[22,23] with good quality, strong consistency, generalizability and applicability, the use of CBT as a treatment for adult depression was ranked as 'Supported'.

Rational Emotive Behavioural Therapy (REBT)

The NICE guidelines[1] did not include REBT in their discussion of recommendations for treatment of depression in adults, and reported on a single study[24] of REBT in which the intervention was compared to antidepressant medication. No clinically important differences in effectiveness were found comparing REBT to antidepressants.

This REA identified one additional study assessing the efficacy of REBT in treating adult depression[25]. The study was conducted by the same team of researchers who completed the trial study[24] included in the NICE guidelines, and used the same data set. The study was an RCT with three arms, assessing the cost-effectiveness and cost-utility of REBT versus cognitive therapy (CT) versus pharmacotherapy (antidepressant) plus brief weekly psychiatrist appointments. The REBT group received an average of 18 (with a maximum of 20) 50-minute therapy sessions over 14 weeks. All three arms of the trial reported improved depression scores at post-treatment and six month follow-up. There was no difference in effect across trials. The cost-effectiveness data suggested that psychotherapy had better cost-utility than pharmacotherapy.

The RCT included in this REA was conducted in Romania, which limits the generalisability of the data. The applicability to an Australian context was considered to be moderate as familiarity with REBT may be lower than with CBT. Against the background of fair quality, reasonable consistency, low generalisability and moderate applicability, and taken together with the fact that and there was no statements regarding the use of REBT for depression in adults from the NICE guidelines[1] (and that the additional study was the same 2008 trial included in the guidelines), the use of REBT for treating depression in adults was ranked 'Unknown'.

Interpersonal Psychotherapy (IPT)

The NICE Depression guidelines[1] recommend the use of IPT as a treatment for depression in adults. The guidelines reported that IPT is an appropriate alternative to CBT for many patients with mild to moderate depression, noting that the dataset for IPT is not as large as CBT, thus the recommendations made were not as broad in scope as those for CBT.

This REA also identified three additional RCTs that assessed the efficacy of IPT. Two studies compared IPT to CBT, while one study assessed efficacy of IPT versus TAU. Of the

two studies assessing IPT compared to CBT, one study[26] had up to 19 weekly sessions of IPT (minimum of eight) in the treatment arm and the same number of sessions in the comparison CBT arm. The results indicated no significant differences in the mean pre-treatment, post-treatment and per cent improvement on depression outcome by treatment type. The second study[27] compared IPT (16 sessions) to CBT (12-16 sessions) and also included a TAU (GP contact) arm. Depression scores improved for all three treatment groups, but IPT and CBT performed better than TAU. Furthermore, in some analyses IPT was found to outperform CBT. At follow-up, there were no differences between groups. Both studies included a reasonable sample size (n=177 and n=125, respectively).

A third study[28] assessed IPT versus TAU, where TAU included bi-weekly individual sessions of various psychological therapies (type of therapy was at the discretion of the therapist). The sample consisted of 70 women with histories of childhood sexual abuse and a current diagnosis of depression. In this study the participants were offered up to 16 sessions of IPT over 36 weeks. Women who received IPT had a greater reduction in depression symptoms at post-treatment than those who received TAU.

The quality of the three IPT studies varied, but they did meet the minimum criteria to be considered as a strong evidence base. The findings were generally consistent across studies, with results suggesting greater or equal efficacy of IPT compared to other treatments assessed. Moreover, the studies were considered broadly generalisable to adult Australians with depression, with special consideration regarding the fact that one study included women with sexual abuse histories, who do not represent the ‘otherwise healthy’ patient with depression. The findings across studies were considered to be applicable to the Australian context with few caveats.

Against the background of strong recommendations for efficacy and utility of IPT in the NICE Depression guidelines[1] and the good quality, consistency, generalisability and applicability of findings from the three studies assed in this study, the use of IPT as a treatment for adults with depression was ranked as ‘Supported’.

Behavioural Activation

The NICE Depression guidelines[1] considered behavioural activation as an option for treating adults with depression, but warned that the evidence was not sufficiently robust so as to recommend behavioural activation as a direct alternative individual treatment option compared to CBT or IPT. The guidelines also stressed that healthcare professionals should be made aware of the more limited evidence base for behavioural activation, compared to CBT, IPT and couples therapy, when considering therapeutic interventions.

This REA identified one additional RCT assessing the efficacy of behavioural activation in treating adult depression[29]. The behavioural activation group had significantly decreased depression symptoms compared to the TAU group at post-treatment. The sample size was small (n=47), and there was evidence of possible risk of bias. The data from the NICE Depression guidelines is consistent with the findings of the RCT included in this REA.

The RCT was conducted in the UK, which suggests the findings are generalisable to Australia. The applicability to an Australian context was considered to be high, given it was judged to be relatively easy to replicate this therapy. The NICE Depression guidelines[1] recommended the use of behavioural activation for treating depression in adults, with caveats warning that the evidence was not sufficiently robust for behavioural activation to be used as a direct alternative individual treatment option compared to CBT or IPT. The additional RCT that was included in this REA was of fair quality. When the factors of the guidelines recommendations, the quality of the RCT, the consistency between the trials, generalisabilty and applicability are taken together, behavioural activation received a 'Promising' ranking.

Short-term Psychodynamic Psychotherapy (STPP)

The NICE Depression guidelines[1] considered STPP as a consideration for those patients who have declined pharmacotherapy, CBT, IPT, behavioural activation or behavioural couples therapy. The guidelines stress that there is limited evidence for the therapy, and that this limited evidence base should be drawn to the attention of the healthcare professional in their therapy decision making process.

One additional study assessing the efficacy of STPP in treating adult depression met the inclusion criteria for this REA[30]. The STPP group received internet-delivered self-help treatment, offered in nine modules with weekly contact with a therapist over ten weeks. The comparison group received structured support (psychoeducation) and weekly online contact. The sample included 92 adults with current acute episode of depression or an episode in partial remission. Authors report that the internet-based psychodynamic guided self-help therapy group made large, significant improvements compared with the active control condition. The quality of the study reflected low risk of bias.

The RCT was conducted in Sweden, and considered to have good generalisability and applicability to the Australian context. Against the background of the data and the restricted recommendations on STPP in the NICE guidelines[1], and the good quality, consistency, generalisability and applicability of the RCT included in this REA, this intervention was ranked 'Promising'.

Couples Therapy

There were no RCTs investigating couples therapy published since the NICE Depression guidelines that met inclusion criteria for this REA. The NICE Depression guidelines reported that couples therapy was associated with beneficial effects in couples where one of the couple was experiencing depression[1]. This was especially the case for the interventions that adopted a behavioural approach to treatment. Couples therapy (based on a behavioural model) received a recommended rating from the guidelines, but the recommendation was qualified with the caveat that it was not appropriate to offer couples therapy as a direct alternative to CBT or IPT that rather, it should be focused on those patients in established relationships where the relationship may play a role in the development, maintenance or resolution of depression.

Recommendations made by the guidelines were considered within the context of the REA approach. As our REA identified no new studies for couples therapy, and the recommendation made by the NICE Depression guidelines was qualified, a review of the studies identified by the NICE Depression guidelines was made. The guidelines reported on six RCTs, of which two were high quality, with moderate beneficial strength and of similar consistency overall. The applicability to the Australian population was considered high however, the generalisability was low as the majority of the studies utilised married couples experiencing relationship distress. Taken together, couples therapy was ranked as 'Promising' according to the ranking criteria utilised by this REA. This ranking should be considered alongside the caveats from the NICE Depression Guidelines highlighted above

Problem Solving Therapy

There were no RCTs investigating problem solving therapy published since the NICE Depression guidelines that met inclusion criteria for this REA. In an earlier issue of NICE Depression guidelines, problem solving therapy was recommended as a separate intervention; however, in the more recent NICE Depression guidelines problem solving therapy was not recommended as a separate intervention[1]. This was due in part to limited evidence available and that no new studies were identified at the time of the revised NICE Depression guidelines.

Recommendations made by the NICE Depression guidelines were considered within the context of the REA approach. As our REA identified no new studies for problem solving therapy, and the recommendation made by the NICE Depression guidelines was qualified, a review of the studies identified by the NICE Depression guidelines was made. The

guidelines reported on two RCTs, one of moderate quality and one of low strength. The absence of any high quality RCTs resulted in an 'Unknown' ranking for problem solving therapy as an effective intervention for the treatment of depression in adults according to the ranking criteria utilised by this REA.

Counselling

There were no RCTs investigating counselling published since the NICE Depression guidelines that met inclusion criteria for this REA. The NICE Depression guidelines[1] decided to remove the previous recommendation for the use of counselling in mild to moderate depression due to increased evidence in support of a range of other interventions and group CBT. The guidelines suggested that counselling may be considered for people with mild to moderate depression who have declined pharmacotherapy, CBT, IPT, behavioural activation or couples therapy, but felt that the limited evidence should be drawn to the attention of the healthcare professional.

Recommendations made by the guidelines were considered within the context of the REA approach. As our REA identified no new studies for problem solving therapy, and the recommendation made by the NICE Depression guidelines was qualified, a review of the studies identified by the NICE Depression guidelines was made. Of the five RCTs included in the guidelines for counselling, all were of low quality. For this reason, and due to a lack of additional evidence found since the NICE Depression guidelines were published, counselling as an intervention for treating depression received an 'Unknown' ranking.

Discussion

The results of this REA build upon the data reviewed and the recommendations made by the NICE Depression Guidelines[1]. Taken together, this REA concluded that CBT and IPT had the most research support for their use in the treatment of adult depression. The data from the REA specific search found evidence that face-to-face CBT is superior to telephone-delivered CBT, TAU or GP contact. Additional evidence for the efficacy of IPT was identified in three RCTs published since the guidelines[26-28]. One RCT found IPT outperformed TAU[28], where TAU was defined as various psychological therapies. The remaining two RCTs[26,27] compared IPT to CBT with inconsistent results, reporting either no clinical benefit of IPT over CBT[26], or limited evidence for IPT outperforming CBT, with all differences lost at follow up[27]. These findings are consistent with the NICE Depression guidelines[1], with additional evidence that there may be instances where IPT outperforms CBT. These data require further research to determine the generalisability of these findings.

Studies investigating behavioural activation, STPP and REBT were limited, with one RCT for each therapy meeting inclusion criteria for this REA. Of note, the data available on behavioural activation suggested efficacy over TAU, but was based on a small (n=47) RCT[29]. Additional studies are needed to determine whether the trend towards significance withstands larger study samples and comparison to therapies with strong efficacy evidence bases, such as CBT. One RCT[30] on STPP met inclusion criteria for this REA. The data from this study suggested that internet-based psychodynamic guided self-help therapy was more effective than an active control condition, where participants received scheduled online weekly psychoeducation[30]. While this data suggests that STPP may be effective, the results require replication in a larger study, with comparison against therapies with strong efficacy evidence bases, such as CBT.

The single RCT[25] for REBT identified by the REA was authored by the same group whose previous RCT on REBT[24] was considered in the NICE Depression Guidelines[1]. Importantly this study utilised the same intervention data as the previous study. The data from this RCT identified no difference in effect across trials between REBT and CT, with improved depression scores post-treatment and at follow-up in both. The cost-effectiveness data reported benefit of REBT or CT when compared to pharmacotherapy. While REBT received an ‘Unknown’ ranking in this REA, it is important to note that one or two well conducted RCT studies that showed consistent beneficial effects may see this intervention move into the ‘Promising’ ranking. However, given the findings are so strong for CBT and IPT, it would take many trials for it to be recommended as a first line psychological intervention in the treatment of depression.

This REA was not designed to determine comparative efficacy between therapies. While the NICE Depression Guidelines noted that cognitive behavioural therapy had the largest evidence base supporting its use, it also recognised IPT as an effective treatment for depression. As new studies are published that examine the efficacy of IPT the question of which is the better treatment is raised. Interestingly, this REA identified two studies that tested IPT against CBT. Generally, the findings were that they both resulted in significant improvements in depression scores, and that there were no significant differences in scores between the two conditions. This question, however, would be better answered by a meta-analysis comparing the available data on therapies of interest taking into account the new studies identified in this REA.

It is important to note that as the evidence base for some psychological interventions increases (CBT or IPT) it becomes increasingly difficult to justify conducting trials for lesser supported interventions. For example, the NICE Depression Guidelines point out that

problem solving therapy is essentially a smaller component of other psychological interventions, and that the rationale for conducting RCTs on such a specific component is limited. It would be very difficult to justify a case to a funding body of the need to test problem solving as a stand-alone intervention especially given CBT and IPT have such strong evidence bases. A dismantling study may be one way to examine the efficacy of smaller components of a larger intervention if there was a strong rationale to do so.

Fitting the findings of this REA within the framework of the most recent guidelines for psychological treatment of adults with depression is essential. The NICE Depression Guidelines[1] made recommendations to focus research initiatives addressing psychological therapies and antidepressants as treatment for adult depression. While research recommendations regarding pharmacotherapy are beyond the scope of this REA, some of the research recommendations for psychological therapies of relevance to this REA included: assessing the cost effectiveness of combined antidepressants and CBT compared with sequenced treatment for moderate to severe depression; the efficacy of short-term psychodynamic psychotherapy compared with CBT and antidepressants; determining the efficacy of and cost effectiveness of different systems for the organization of care for people with depression; the efficacy and cost effectiveness of CBT, IPT and antidepressants in prevention of relapse in people with moderate to severe recurrent depression. None of the RCTs included in this REA reflected these initiatives. While one RCT did assess efficacy of STPP, it did not compare this therapy to CBT or antidepressant use. Although the research recommendations from the NICE Depression guidelines are not the only directives for research in this field, it is interesting to note that in the three years since the publication of these guidelines, there did not seem to be a move towards investigation of these key areas in the form of RCTs. Of course, this statement is contextualised by the limitations imposed in this REA, and future studies may wish to assess the quantity and quality of research addressing these important research topics.

Implications

The results of this REA suggest that inclusion of therapies with strong and robust evidence bases, CBT and IPT in particular, should be made available to all adults with depression. There may be a need for IPT training programs to address the potential competency gap in clinicians, who may have more extensive training in a CBT model. Opportunities for development and participation in online training programs for IPT, with modules for adult depression and veteran-specific depression represent an interesting and innovative new research direction. The results also point to competencies regarding treatment selection and provision of therapies for adults with depression. The decision making process and priority of

treatments represents an important area for clinician training. Online teaching modules may be an interesting approach to assessing and training accuracy of therapeutic selections in clinicians.

Limitations of the rapid evidence assessment

The findings from this REA should be considered alongside its limitations. In order to make this review 'rapid', some restrictions on the methodology were necessary. These limitations included: the omission of potentially relevant papers that were published prior to or after the defined search period; the omission of non-English language papers; and reference lists of included papers not hand-searched to find other relevant studies. Furthermore, although we did evaluate the evidence in terms of its strength, consistency, generalisability and applicability, these evaluations were not as exhaustive as a systematic review methodology. Finally, this REA utilised a treatment guideline and we only ran the search from the time not included in the guideline. Thus, if the guideline missed any important papers, our review would also not have included these papers. The information presented in this REA is a summary of information presented in available papers. We recommend reader's source the original papers if they would like to know more about a particular area.

Conclusion

The findings of this REA build upon the data represented in the 2010 NICE Depression Guidelines[1], outlining the effective treatments for depression in adults. The evidence from this REA was consistent with the guidelines, finding additional data detailing the efficacy of CBT and IPT in the treatment of adult depression. Additional data for behavioural activation, short-term psychodynamic psychotherapy and REBT were limited, with one RCT for each therapy meeting inclusion criteria for this REA. Additional studies are needed to determine whether the trends identified in these RCTs will withstand larger study samples and comparison to therapies with strong efficacy evidence bases, such as CBT. No RCTs assessing the efficacy of couples therapy, counselling or problem-solving therapy for treatment of adult depression met the inclusion criteria for this REA. Future research may wish to assess the efficacy of these therapies when compared against those therapies with strong evidence bases, such as CBT.

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Appendix 1

PICO

The question was formulated within a Population Intervention Comparison Outcome (PICO) framework. Application of a PICO framework helps to structure, contain and set the scope for the research question. Inclusion of intervention and comparison components is dependent on the question asked, and may not be appropriate for all question types.

- **What are the effective psychological interventions for adults with a diagnosis of depression?**
    - **PICO format:** In adults with diagnosed major depression (MDE), have cognitive behavioural therapy, behavioural activation, interpersonal psychotherapy, problem-solving therapy, short-term psychodynamic psychotherapy or couples therapy (NICE Guidelines) been shown to be effective in RCT or pseudo-RCT in reducing the symptoms of depression?

P Patient, Problem, Population	**I** Intervention	**C** Comparison (*optional*)	**O** Outcome *when defining "more effective" is not acceptable unless it describes **how** the intervention is more effective*
AGE ≥ 18 GENDER (no specification) DIAGNOSED MDE Not undergoing any other psychological treatment for depression (treatment naive)	Effectiveness as defined within the methodological constraints of each RCT or pseudo-RCT Interventions via NICE Guidelines Therapies: • Cognitive behavioural therapy • Behavioural activation • Interpersonal psychotherapy • Problem-solving therapy • Counselling • Short-term psychodynamic psychotherapy • Couples therapy • Rational emotive behavioural therapy		Reduction in depression symptoms on measures included in the RCT or pseudo-RCT

Appendix 2

Information retrieval/management

The following is an example of the search strategy conducted in the Embase database:

Step	Search Terms	No of records
S1	depression/ or major depression/	260531
S2	*controlled clinical trial/ or *clinical trial/ or *controlled study/ or *randomized controlled trial/ or *"controlled clinical trial (topic)"/	28160
S3	(depression or MDE).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	49836
S4	1 or 3	260981
S5	2 and 4	400
S6	limit 5 to yr="2009 -Current"	195
S7	limit 6 to english language	195
S8	limit 7 to human	115

Appendix 3

Screening form

The screening form was designed to be used to code the eligibility of references acquired through search paradigms. The content of the screening form at the title and abstract screening stage was as follows:

Screen on title & abstract

1. EXCLUDE Language: *Exclude if non-English*
2. EXCLUDE Date: *Exclude if published prior to 2009*
3. EXCLUDE Study Type: *Exclude if validation study, animal study, review paper, meta-analysis, systematic review, not RCT or Pseudo RCT, technical report, stand-alone methods paper*
4. EXCLUDE Publication Type: *Exclude if it is not a peer-reviewed article, e.g., media, newspapers, magazines, television, conference abstracts, theses, editorial, book chapter, book review, book chapter review*
5. EXCLUDE Age: *Exclude if mean age of participants < 18*
6. EXCLUDE Sample: *Exclude if sample ≤ 70% patients have diagnosed depression*
7. EXCLUDE Sample: *Exclude if sample has primary diagnosis of health condition, e.g. HIV, TBI, cancer, epilepsy, musculoskeletal trauma and primary diagnosis is not depression*
8. EXCLUDE Sample: *Exclude if sample is receiving another form of psychological therapy for depression*
9. EXCLUDE Sample: *Exclude if no arm of the RCT is a psychological intervention/therapy*
10. Exclude Sample: *Exclude if psychological therapy being received is not one of the following: CBT, behavioural activation, interpersonal psychotherapy, problem-solving therapy, counseling, short-term psychodynamic psychotherapy, couples therapy, rational emotive behavioural therapy*
11. EXCLUDE Disorder: *Exclude if outcome data does not report on depression*
12. EXCLUDE Unavailable: *Exclude if full-text version is not readily available*
13. INCLUDE based on title & abstract: *Cannot be excluded so is marked as INCLUDE. Will require retrieval of full paper.*

Appendix 4

Evidence Profile

Authors & year	Design	Intervention (I) and Comparison (C)	Country	Intervention Delivery methods, frequency, duration, (delivered to)	Depression Diagnosis	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))	Characteristics of Sample	Participants	
									I	C
COGNITIVE THERAPIES										
Cognitive Behavioural Therapy (CBT)										
GUIDELINES: CBT effective; *CBT has the largest dataset and shows broad equivalence of effect across the range of severity of depression; however brief CBT not recommended* (NICE, 2010)										
Mohr, C.; Ho, Duffecy, Reifler, Sokol, Burns, Jin & Siddique, 2012	RCT	(I): Telephone-administered cognitive behavioural therapy (T-CBT) (C): Face-to-face cognitive behavioural therapy (CBT)	USA	18 weekly sessions. T-CBT patients attended significantly more sessions (mean 16) than those receiving CBT (mean 14) (Individual)	Met criteria for MDD and scored ≥16 on Ham-D	Discontinuation vs. non-discontinuation of treatment before week 18	Depression symptoms (HRSD; PHQ-9)	N = 325	N = 163 age (M=48, SD=14) 77% female	N = 162 age (M= 48, SD=13) 78% female
Significantly fewer participants discontinued T-CBT (20.9%) before session 18 compared with CBT (32.7%). Participants showed significant improvement in depression symptoms across both treatments, but there were no significant post-treatment differences between treatments. At six-months follow-up, participants who had received CBT were significantly less depressed than those who had received T-CBT. No harm or adverse effects were reported										
Serfaty, Haworth, Blanchard, Buszewicz, Murad & King, 2009	RCT	(I): Cognitive behavioural therapy (CBT) + TAU (GP contact) (C): Talking control group + TAU (GP	UK	Up to 12 (average of seven) 50 minute sessions (Individual)	Geriatric Mental State Diagnosis of Depression	Depression symptoms (BDI-II)	Anxiety (BAI) Social functioning (SFQ) Quality of life (Euroqol)	N = 204 Aged ≥65	N = 70 age (M=74, SD=8) 84% female	N = 67 (Talking control group + TAU) age (M=75, SD=7)

Authors & year	Design	Intervention (I) and Comparison (C)	Country	Intervention Delivery methods, frequency, duration, (delivered to)	Depression Diagnosis	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))	Characteristics of Sample	Participants	
									I	C
		contact) (C): TAU (GP contact)								75% female N = 67 (TAU) age (M=73, SD=6) 79% female
Greater post-treatment improvements in BDI-II scores were found for the CBT group relative to both the talking control + TAU group and the TAU only group, and these findings were maintained at 10 months post-commencement. No harm or adverse effects were reported.										
Rational Emotive Behavioural Therapy (REBT)										
GUIDELINES: ***REBT no commentary towards recommendations stated ; one RCT on REBT (REBT vs. antidepressant) included in guidelines, no other information is provided regarding REBT; (NICE, 2010)***										
Sava, Yates, Lupu, Szentagotai & David, 2009	RCT	(I): Rational emotive behavioural therapy (REBT) (I): Cognitive therapy (CT) (C): Fluoxetine and brief weekly psychiatrist appointments	Romania	An average of 18 (maximum of 20) 50-minute therapy sessions over 14 weeks (Individual)	Met criteria for MDD on DSM-IV and ≥20 on BDI and ≥14 on HRSD	Depression symptoms (BDI; HRSD)		N = 170 68% female	N = 57 (REBT) age (M=35, SD=13) N = 56 (CT) age (M=39, SD=10)	N = 57 (fluoxetine) age (M=37, SD=2)
Depression scores had improved for all three groups at post-treatment. All three treatments performed equally well, and effects were maintained at six months follow-up. No harm or adverse effects were reported.										
INTERPERSONAL PSYCHOTHERAPY										
GUIDELINES: IPT effective; ***"for many patients with mild to moderate depression IPT is an appropriate alternative to CBT" (pp. 294); dataset not as large as that for CBT; recommendations not as broad in scope as for CBT (NICE, 2010)***										
Carter, Luty, McKenzie, Mulder, Frampton & Joyce, 2011	RCT	(I): Interpersonal psychotherapy (IPT) (I): Cognitive behavioural therapy	New Zealand	Up to 19 weekly sessions, with a minimum of eight.	Principal current diagnosis of MDD via DSM-	Patient predictors of response to CBT and IPT	NA	N = 177	N = 91 (IPT) age (M=35, SD= 11) 76% female	

Authors & year	Design	Intervention (I) and Comparison (C)	Country	Intervention Delivery methods, frequency, duration, (delivered to)	Depression Diagnosis	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))	Characteristics of Sample	Participants	
									I	C
		(CBT)		(Individual)	IV	for depression (MADRS)			N = 86 (CBT) age (M=35, SD=10) 69% female	
There were no significant differences in the mean pre-treatment, post-treatment and percent improvement on the MADRS by therapy modality. No harm or adverse effects were reported.										
Power & Freeman, 2012	RCT	(I): Cognitive-behavioural therapy (CBT) (I): Interpersonal psychotherapy (IPT) (C): TAU (GP contact)	UK	16 sessions (IPT) 12-16 sessions (CBT) (Individual)	DSM SCID Diagnosis of Depression	Depression symptoms (BDI-II; HRSD)		N = 125	N = 46 (CBT) N = 54 (IPT)	N = 25
Depression scores had improved for all three groups at post-treatment. IPT and CBT performed better than TAU. In some analyses IPT performed slightly better than CBT. There were no differences between groups in depression symptoms five months post-treatment. No harm or adverse effects were reported.										
Talbot, Chaudron, Ward, Duberstein, Conwell, O'Hara, Tu, Lu, He & Stuart, 2011	RCT	(I): Interpersonal psychotherapy (IPT) (C): TAU (biweekly individual sessions using a variety of interventions including supportive, cognitive–behavioural or dialectical–behavioural, integrated/eclectic and client-centred approaches)	USA	Up to 16 sessions (average of 13) over 36 weeks (Individual)	Structured clinical interview for Axis-I DSM-IV Disorders	Depression symptoms (HRSD; BDI-II)	PTSD symptoms (Modified PSS-SR) Mental health-related functioning (SF-36) Social functioning (SAS-SR) Shame (DES)	N = 70 Women with histories of childhood sexual abuse	N = 37 age (M=39, SD=11)	N = 33 age (M=34, SD=8)

Authors & year	Design	Intervention (I) and Comparison (C)	Country	Intervention Delivery methods, frequency, duration, (delivered to)	Depression Diagnosis	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))	Characteristics of Sample	Participants	
									I	C
Compared with women assigned to TAU, women who received IPT had greater reductions in depressive symptoms on both measures at post-treatment. No harm or adverse effects were reported.										
BEHAVIOURAL ACTIVATION										
GUIDELINES: ***"The GDG decided that although the evidence was not sufficiently robust to recommend behavioural activation as a direct alternative individual treatment option to CBT or IPT, it could be considered an option" (pp. 293; NICE, 2010)***										
Ekers, Richards, McMillan, Bland & Gilbody, 2011	RCT	(I): Behavioural activation delivered by a non-specialist (C): TAU (GP or primary care mental health worker)	UK	Twelve 1-hour sessions over three months (48% received all 12 sessions) (Individual)	Clinical Interview Revised (CISR) to confirm an ICD-10 Diagnosis of Depression	Depression symptoms ((BDI-II)	Functioning (WSAS); satisfaction (CSQ-8)	N = 47	N = 23 age (M=46, range 24-63) 65% female	N = 24 age (M=43, range 28-63) 58% female
BDI-II scores for the BA group had decreased significantly compared to the control group at post-treatment. No harm or adverse effects were reported.										
SHORT-TERM PSYCHO-DYNAMIC PSYCHOTHERAPY										
GUIDELINES: : "*…short-term psychodynamic psychotherapy may be considered for people with mild to moderate depression who have declined an antidepressant, CBT, IPT, behavioural activation or behavioural couples therapy, that that the limited evidence should be drawn to the attention of the healthcare professional." (pp. 296; NICE, 2010)*										
Johansson, Ekbladh, Hebert, Lindström, Möller, Petitt, Poysti, Larsson, Rousseau, Carlbring, Cuijpers & Andersson, 2012	RCT	(I): Internet-based psychodynamic guided self-help treatment (C): Structured support intervention (psychoeducation and weekly online contact)	Sweden	Nine modules, including weekly contact with therapist, over ten weeks. 78% of participants completed all modules. (Individual)	15-35 on self-rated Montgomery-Asberg Depression Rating Scale (MADRS-S) and Diagnosis of MDD on DSM-IV with current acute	Depression symptoms (BDI-II)	Depression symptoms (MADRS-S; PHQ-9). Anxiety (BAI; GAD-7). Quality of life (QOLI). Global improvement (CGI-I)	N = 92 (75% female)	N = 46 age (M=46, SD=15) 80% female	N= 46 age (M=46, SD=13) 70% female

Authors & year	Design	Intervention (I) and Comparison (C)	Country	Intervention Delivery methods, frequency, duration, (delivered to)	Depression Diagnosis	Primary Outcome domain (Measure(s))	Secondary Outcome domain (Measure(s))	Characteristics of Sample	Participants	
									I	C
					episode of depression OR an episode in partial remission					
The intervention group displayed continuous within-group improvements throughout the trial. The effect size between the groups at post-treatment was large .Mixed-effect model analyses showed a significant interaction effect of group and time. No harm or adverse effects were reported										

Appendix 5

Quality and bias checklist

Checklist for appraising the quality of studies of interventions

Completed		
Yes	No	
		1. **Method of treatment assignment**
		• Correct, blinded randomisation method described OR randomised, double-blind method stated AND group similarity documented
		• Blinding and randomisation stated but method not described OR suspect technique (eg allocation by drawing from an envelope)
		• Randomisation claimed but not described and investigator not blinded
		• Randomisation not mentioned
		2. **Control of selection bias after treatment assignment**
		• Intention to treat analysis AND full follow-up
		• Intention to treat analysis AND <25% loss to follow-up
		• Analysis by treatment received only OR no mention of withdrawals
		• Analysis by treatment received AND no mention of withdrawals OR more than 25% withdrawals/loss-to-follow-up/post-randomisation exclusions
		3. **Blinding**
		• Blinding of outcome assessor AND patient and care giver (where relevant)
		• Blinding of outcome assessor OR patient and care giver (where relevant)
		• Blinding not done
		• Blinding not applicable
		4. **Outcome assessment (if blinding was not possible)**
		• All patients had standardised assessment
		• No standardised assessment OR not mentioned
		5. Additional Notes
		• Any factors that may impact upon study quality or generalisability

Appendix 6

Meta-analyses and systematic reviews checklist

Study Type				Systematic review	Error Categories
Citation:					
Y	N	NR	NA	Quality Criteria	
				A. Was an adequate search stragegy used?	
				• Was a systematic search streagy reported?	I
				• Were the databases search reported?	III
				• Was more than one database searched?	III
				• Were search terms reported?	IV
				• Did the litarature search include hand searching?	IV
				B. Were the inclusion criteria apprpriate and applied in an unbiased way?	
				• Were inclusion/exclusion criteria reported?	II
				• Was the inclusion criteria applied in an unbiased way?	III
				• Was only level II evidence included?	I=IV
				C. Was a quality assessment of included studies undertaken?	
				• Was the quality of the studies reported?	III
				• Was a clear, pre-determined strategy used to assess study quality?	IV
				D. Were the characteristics and results of the individual studies appropriately summarised?	
				• Were the characteristics of the individual studies reported?	III
				• Were baseline demographic and clinical characteristics reported for patients in the individual studies?	IV
				• Were the results of the individual studies reported?	III
				E. Were the methods for pooling the data appropriate?	
				• If appropriate, was a meta-analysis conducted?	III-IV
				F. Were the sources of heterogenity explored?	
				• Was a test for heterogeneity applied?	III-IV
				• If there was heterogeneity, was this discussed or the reasons expored?	III-IV
Comments					
Quality raitng: [Good/Fair/Poor]				Systematic review:	
				Included studies:	

Note: Quality criteria adapted from NHMRC (2000) How to use the evidence: assessment and application of scientific evidence. HNMRC, Canberra.

[a] Assess criterion using Y (yes), N(no), NR (not reported) or NA (not applicable).

[b] Error categories as follows: (I) leads to exclusion of the study; (II) automatically leads to a poor rating; (III) leads to a one grade reduction in quality rating (eg, good to fair, or fair to poor); and (IV) errors that may or may not be sufficient to lead to a decrease in rating.

[c] Where applicablem provide clarification for any of the criteria, particularly where it may results in downgrading of the study quality. For quality assessment of systematic reviews, this should include a statement regarding the methodologcal quality of the studies included in the systematic review.

[d] Quality ratings are good, fair, or poor.

Appendix 7

Citation list by ranking

Type of Intervention	Included Studies
Supported	
• CBT • IPT	• Mohr, Ho, Duffecy, Reifler, Sokol, Burns, Jin, & Siddique, 2012 • Serfaty, Haworth, Blanchard, Buszewicz, Murad, & King, 2009 • Carter, 2011, Luty, McKenzie, Mulder, Frampton, & Joyce, 2011 • Power, & Freeman, 2011 • Talbot, Chaudron, Ward, Duberstein, Conwell, O'Hara, Tu, Lu, He, & Stuart, 2011
Promising	
• Behavioural activation • Short-term psychodynamic psychotherapy • Couples therapy	• Ekers, Richards, McMillan, Bland, & Gilbody, 2011 • Johansson, Ekbladh, Hebert, Lindström, Möller, Petitt, Poysti, Larsson, Rousseau, Carlbring, Cuijpers, & Andersson, 2012 • No new studies
Unknown	
• REBT • Problem-solving • Counselling	• Sava, Yates, Lupu, Szentagotai & David, 2009 • No new studies • No new studies
Not Supported	

Appendix 8

Evidence Map

		High ← Strength of study design → Low									
Interventions	**Study n**	**Guidelines[1]/[2] Systematic review/ Meta-analysis**	**RCT**	**Pseudo-RCT**	**Cohort studies N/A**	**Case-controlled N/A**	**Pre – Post N/A**	**Case series N/A**	**Cross-sectional N/A**	**Case reports N/A**	**Other N/A**
Cognitive Behavioural Therapy (CBT)											
Telephone CBT vs Face-to-Face CBT	2	1	1								
CBT vs Treatment as usual vs Talking control with GP contact	2	1	1								
Rational Emotive Behaviour Therapy (REBT)											
REBT vs Cognitive Therapy vs Fluoxetine + weekly brief psychiatry	2	1	1								
Interpersonal Psychotherapy (IPT)											

[1] All guidelines included in this REA were underpinned by a systematic review

[2] Guideline coverage applies to the therapies considered, but may not have included the therapy-specific modality, e.g. telephone vs. face-to-face CBT

IPT vs CBT	3	1	2								
IPT vs Treatment as Usual	2	1	1								
Behavioural Activation											
Behavioural Activation vs Treatment as Usual	2	1	1								
Short-Term Psychodynamic Psychotherapy											
Internet-based psychodynamic guided self-help vs Structured support intervention (psychoeducation + weekly online contact)	2	1	1								