

Psychosocial and psychological interventions for treating postpartum depression (Review)

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[Intervention Review]

Psychosocial and psychological interventions for treating postpartum depression

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ABSTRACT

Background

Postpartum depression is a major health issue for many women from diverse cultures. While pharmacological interventions are an effective treatment for depression, mothers are often reluctant to take antidepressant medication due to concerns about breast milk transmission or potential side-effects. It is important that non-pharmacologic interventions be evaluated for use with postpartum women experiencing depressive symptomatology.

Objectives

Primary: to assess the effects of all psychosocial and psychological interventions compared with usual postpartum care in the reduction of depressive symptomatology.

Secondary: to examine (1) the effectiveness of specific types of psychosocial interventions; (2) the effectiveness of specific types of psychological interventions; (3) the effectiveness of specific types of psychosocial interventions versus psychological interventions; (4) the effects of intervention mode (e.g., individual versus group-based interventions); and (5) the effects of sample selection criteria (e.g., targeting women with clinically diagnosed depression versus self-reported depressive symptomatology).

Search strategy

CCDANCTR-Studies and CCDANCTR-References were searched on 1/8/2007, the Cochrane Pregnancy and Childbirth Review Group trials register, CENTRAL, MEDLINE (1966 to 2006), EMBASE (1980 to 2006) and CINAHL (1982 to 2006) using various combinations of the terms 'postpartum/postnatal depression.' Secondary references and experts in the field were used to identify other published or unpublished trials.

Selection criteria

All published, unpublished, and ongoing randomised controlled trials and quasi-randomised trials of psychosocial or psychological interventions where the primary or secondary aim was a reduction in depressive symptomatology.

Data collection and analysis

Both review authors participated in the evaluation of methodological quality and data extraction. Additional information was sought from several trial researchers. Results are presented using relative risk for categorical data and weighted mean difference for continuous data.

Main results

Ten trials met the inclusion criteria, of which nine trials reported outcomes for 956 women. Any psychosocial or psychological intervention, compared to usual postpartum care, was associated with a reduction in the likelihood of continued depression, however measured, at the final assessment within the first year postpartum. Both psychosocial and psychological interventions were effective in reducing depressive symptomatology. Trials selecting participants based on a clinical diagnosis of depression were just as effective in decreasing depressive symptomatology as those that enrolled women who met inclusion criteria based on self-reported depressive symptomatology.

Authors' conclusions

Although the methodological quality of the majority of trials was, in general, not strong, the meta-analysis results suggest that psychosocial and psychological interventions are an effective treatment option for women suffering from postpartum depression. The long-term effectiveness remains unclear.

PLAIN LANGUAGE SUMMARY

Psychosocial and psychological interventions for postpartum depression

Postpartum depression affects approximately 13% of all new mothers. Many women desire to try treatment options other than medication. Results from nine trials involving 956 women found that both psychosocial (e.g., peer support, non-directive counselling) and psychological (e.g., cognitive behavioural therapy and interpersonal psychotherapy) interventions appear to be effective in reducing symptoms of postpartum depression. The long-term benefits are unknown. Larger trials evaluating psychosocial and psychological treatments for postpartum depression are needed to provide clear conclusions about specific intervention benefits.

BACKGROUND

Postpartum mood disorders are a common form of maternal morbidity following delivery (Stocky 2000). These affective disorders range in severity from the mild and transient “baby blues” experienced by 50% to 80% of women to postpartum psychosis, a serious condition that affects less than one per cent of mothers and usually requires hospitalisation (Evins 1997). Among these disorders is postpartum depression, a non-psychotic depressive episode that begins or extends into the first year postpartum. This condition often exhibits the disabling symptoms of uneasiness, irritability, confusion and forgetfulness, anhedonia, fatigue, insomnia, anxiety, guilt, inability to cope, and thoughts of suicide. Frequently exacerbating these symptoms are low self-esteem, lack of confidence, and unrealistic expectations of motherhood. The development of postpartum depression is greatest in the first 12 weeks postpartum with duration frequently dependent on severity (Cox 1993). Some residual depressive symptoms are common up to a year after delivery (Cooper 1998).

Postpartum depression is a major health issue for many women

from diverse cultures (Affonso 2000). Longitudinal and epidemiological studies have yielded varying prevalence rates, ranging from 3% to more than 25% of women in the first year following delivery; these rates fluctuate due to sampling, timing of assessment, differing diagnostic criteria (major or minor depression), and whether the studies were retrospective (low rates) or prospective (6- to 10-fold higher). Frequently cited estimates range between 10% to 15% and a meta-analysis of 59 studies reported the prevalence of postpartum depression to be 13% (O’Hara 1996). It is noteworthy that the absolute difference in estimates between self-report assessments of depressive symptoms, such as the commonly used Edinburgh Postnatal Depression Scale (Cox 1987b) (that does not diagnose postpartum depression), and standardised diagnostic interviews (that do diagnose postpartum depression) was small.

This morbidity has well documented public health consequences for the mother, child, and family. While women who have suffered from postpartum depression are twice as likely to experience future episodes of depression over a five-year period (Cooper 1995), infants and children are particularly vulnerable. Postpartum

tum depression can cause impaired maternal-infant interactions (Murray 1996) and negative perceptions of infant behaviour (Mayberry 1993), that have been linked to attachment insecurity (Hipwell 2000; Murray 1992), cognitive developmental delay (Cogill 1986; Hipwell 2000) and social/interaction difficulties (Cummings 1994; Murray 1999). Infants as young as three months of age have been shown to ably detect their mothers' mood and to modify their own responses accordingly (Cohn 1983). While cognitive skills (Whiffen 1989), expressive language development (Cox 1987a), and attention (Brenzitz 1988) have been negatively influenced by postpartum depression, it has also been reported that children of depressed mothers are two to five times more likely to develop long-term behavioural problems (Beck 1999; Orvaschel 1988). Child neglect/abuse (Buist 1998) and marital stress resulting in separation or divorce (Boyce 1994) are other reported outcomes. Maternal and infant mortality are rare but real consequences of postpartum depression.

The aetiology of postpartum depression remains unclear with little evidence to support a biological basis (Cooper 1998; O'Hara 1997). Despite considerable research, no single causative factor has been isolated and a multifactorial etiology has been suggested. However, consistent findings suggest the importance of psychosocial variables (Beck 2001; O'Hara 1997). In particular, stressful life events (Bernazzani 1997; O'Hara 1991), marital conflict (Bernazzani 1997; O'Hara 1991; O'Hara 1986), and the lack of social support (Bernazzani 1997; Brugha 1998; Chen 1999; Cooper 1998; O'Hara 1986; Small 1994; Stein 1989; Stuchbery 1998) have been found to significantly increase the risk of postpartum depression. The saliency of social support was especially highlighted in a predictive study of several thousand women, in which mothers who lacked social support were approximately two times more likely to develop postpartum depression than mothers with sufficient support (Cooper 1996).

Antidepressant medication, cognitive behavioural therapy (CBT), and interpersonal psychotherapy (IPT) have been validated as effective treatments for general depression. However, mothers are often reluctant to take antidepressants due to concerns about breast milk transmission or potential side-effects (Dennis 2006a). Although there is evidence that antidepressants are relatively safe for breast fed infants and a Cochrane review has been completed examining the effectiveness of antidepressant medication for the treatment of postpartum depression (Hoffbrand 2001), the American Academy of Pediatrics classifies most antidepressants as drugs whose effect on breastfeeding infants is unknown but may be of concern. Given these considerations, it is important that non-pharmacologic interventions be evaluated for use with postpartum women. Based on the preceding risk factors, a variety of psychosocial and psychological interventions have been developed to prevent postpartum depression (Dennis 2004a) and a Cochrane systematic review was completed (Dennis 2005). The subgroup analyses results of that review suggested that preventive interventions

were more likely to be effective if they were individually based, initiated in the postpartum period, and selected 'at risk' women.

Research now indicates that psychosocial (e.g. non-directive counselling, Holden 1989) and psychological (e.g. interpersonal psychotherapy, O'Hara 2000; cognitive behavioural therapy, Appleby 1997) interventions may also be used to treat postpartum depression (Dennis 2004b). Therefore, this review examines the effectiveness of psychosocial and psychological interventions in the treatment of postpartum depression where treatment is defined as any intervention initiated among mothers after two weeks postpartum who have been identified with depressive symptomatology.

OBJECTIVES

The primary objective of this review was to assess the effects of all psychosocial and psychological interventions compared with usual postpartum care in the recovery or reduction of depressive symptomatology.

Secondary objectives were to examine:

- (1) the effectiveness of specific types of psychosocial interventions (e.g., support interactions, non-directive counselling)
- (2) the effectiveness of specific types of psychological interventions (e.g., interpersonal psychotherapy, cognitive behavioural therapy)
- (3) the effectiveness of specific types of psychosocial interventions versus psychological interventions
- (4) the effects of intervention mode (e.g., individual versus group-based interventions)
- (5) the effects of sample selection criteria (e.g., targeting women with clinically diagnosed depression versus self-reported depressive symptomatology).

METHODS

Criteria for considering studies for this review

Types of studies

All published, unpublished, and ongoing randomised controlled trials and quasi-randomised trials.

Types of participants

Women with depressive symptomatology that developed within the first 12 months postpartum, who were identified either via self-report measures (e.g., Edinburgh Postnatal Depression Scale (EPDS)(Cox 1987b), Beck Depression Inventory, (BDI)(Beck 1961) or a diagnostic interview (e.g., Structured Clinical Interview for DSM-IV, (SCID) (Spitzer 1992)).

Types of interventions

Psychosocial and psychological interventions

Psychosocial and psychological interventions include psychoeducational strategies, cognitive behavioural therapy, interpersonal psychotherapy, psychodynamic therapy, non-directive counselling, various supportive interactions, and tangible assistance, delivered via telephone, home or clinic visits, or individual or group sessions in the postpartum by a health professional or lay person. Psychosocial interventions are unstructured and non-manualised. Psychological interventions include the following manualised approaches:

Cognitive behavioural therapy

CBT is an approach based on the notion that the way an individual perceives an event determines in part how they will respond, both affectively and behaviourally (Hollon 1998). According to cognitive theory, dysfunctional beliefs and maladaptive information processing lie at the core of many psychiatric disorders. As such, CBT assists individuals in identifying and correcting erroneous beliefs and systematic distortions in information processing with the hopes of reducing distress and enhancing coping efforts

Interpersonal therapy

IPT was initially formulated as a time-limited, weekly outpatient treatment for depression provided by a trained mental health professional (Klerman 1993). While this method makes no assumption about aetiology, the connection between depressive symptomatology onset and interpersonal problems is used as a treatment focus. IPT as an acute treatment that generally has three phases: (1) diagnosis evaluation, psychiatric/social history (including current social functioning and close relationships, their patterns, and mutual expectations), and linkage between the current interpersonal situation within one of the four interpersonal problem areas (i.e., grief, interpersonal role disputes, role transitions, or interpersonal deficits) to set the framework for treatment; (2) pursuit of strategies (defined in the IPT manual) that are specific to the chosen interpersonal problem area; and (3) encouragement to recognize and consolidate therapeutic gains and develop ways to identify and counter depressive symptoms should they arise again in the future.

Psychodynamic therapy

Psychodynamic therapy, also known as insight-oriented therapy, focuses on unconscious processes as they are manifested in a person's present behaviour. The goals of psychodynamic therapy are an individual's self-awareness and understanding of the influence

of the past on present behaviour. In its brief form, a psychodynamic approach enables the individual to examine unresolved conflicts and symptoms that arise from past dysfunctional relationships. Several different approaches to brief psychodynamic psychotherapy have evolved from psychoanalytic theory and have been clinically applied to a wide range of psychological disorders including depression.

Standard or usual care

Standard or usual care includes any appropriate medical care received during the course of the study, including pharmacotherapy (e.g., antidepressants) as deemed necessary by the clinician.

Treatment comparisons

The following treatment comparisons were made:

- (1) Psychosocial interventions (e.g. non-directive counselling, support groups) versus standard care or usual care
- (2) Psychological interventions (e.g. interpersonal psychotherapy, cognitive behavioural therapy) versus standard care or usual care
- (3) Psychosocial interventions versus psychological interventions

Types of outcome measures

Primary outcome measures

The primary outcome measure in this review was evidence of both recovery (dichotomous outcome) and reduction in depressive symptomatology (continuous outcome) (as variously defined and measured by trialists e.g., SCID, BDI and EPDS).

Secondary outcome measures

1. Maternal outcomes

- (a) Maternal mortality and serious morbidity including self-harm, suicide attempts
- (b) Health service utilisation, including outpatient and inpatient use of psychiatric unit, other health services
- (c) Maternal-infant attachment
- (d) Maternal attitudes towards motherhood
- (e) Anxiety (e.g., State Trait Anxiety Scale (Spielberger 1970))
- (f) Stress
- (g) Maternal confidence
- (h) Maternal competence
- (i) Self-esteem
- (j) General health
- (k) Dissatisfaction with intervention
- (l) Perceived social support

2. Infant outcomes

- (a) Breastfeeding duration (variously defined)
- (b) Breastfeeding level (exclusive, almost exclusive, high, partial, token, bottle-feeding)
- (c) Infant health parameters including immunisation, accidental injury, non accidental injury
- (d) Infant developmental assessments (variously defined)
- (e) Child abuse and/or neglect
- (f) Neonatal/infant mortality
- (g) Neonatal/infant morbidity

(h) Quality of mothering (variously defined)

3. Family outcomes

(a) Marital relationship (e.g., Dyadic Adjustment Scale)

(b) Marital separation/divorce

Outcomes were classified as final assessment carried out within the first year postpartum, and assessment carried out at post-treatment.

Search methods for identification of studies

Electronic searches

We searched the The Cochrane Collaboration Depression Anxiety and Neurosis group trials registers (CCDANCTR-Studies and CCDANCTR-References) for information on these databases please visit the CCDAN module of the Cochrane Library (<http://www.mrw.interscience.wiley.com/cochrane/clabout/articles/DEPRESSN/frame.html>)

The following search strategies were used:

CCDANCTR-Studies - searched on 1/8/2007

Diagnosis = "Depression, Postpartum" or "Depression, Antenatal" or

Diagnosis = Depress* and Comorbid Diagnosis= Pregnan*

CCDANCTR-References - searched on 1/8/2007

Keyword = Depress*

and

Freertext = postpartum or post-partum or postnatal or post-natal or puerper* or antenatal or ante-natal or pregnan*

or

Free-text = baby-blue*

In addition we searched the Cochrane Pregnancy and Childbirth Group trials register, the CENTRAL, MEDLINE (1966 to 2006), EMBASE (1980 to 2006) and CINAHL (1982 to 2006) using various combinations of the terms 'postpartum/postnatal depression.'

Handsearches

We also scanned secondary references

Personal communication

We contacted experts in the field to identify other published or unpublished trials.

Data collection and analysis

Selection of trials

Titles and abstracts of the electronic searches were reviewed and retrieved by the primary author. Trials under consideration were evaluated by both authors independently for methodological quality and appropriateness for inclusion. In the case of uncertainty regarding the appropriateness for inclusion, resolution was established through discussion and consensus.

Methodological quality assessment

Quality assessment of the trials that met the eligibility criteria were carried out by both authors using the following criteria:

(1) randomisation: A = adequate, B = unclear, C = inadequate, D = no information

(2) blinding of outcome assessor: yes, no, inadequate, no information

(3) blinding of caregivers not providing the intervention: yes, no, inadequate, unclear

(4) completeness of follow up data (including any differential loss of participants from each group): A = < 3% of participants excluded, B = 3% to 9.9% of participants excluded, C = 10% to 19.9% excluded, D = 20% or more excluded, E = unclear

(5) analysis of participants in the groups that they were randomised to (intention-to-treat analysis).

Both authors assigned a rating to each trial; results were compared and differences discussed until agreement was obtained. Reasons for exclusion of any apparently eligible trial were described. Please see table of 'Characteristics of excluded studies'.

Data extraction

Data were extracted independently from trial reports by both authors using a standardised data extraction form. Wherever necessary, unpublished or missing data were requested from the trial contact authors. Data were sought to allow an 'intention-to-treat' analysis. Double data entry was completed using Review Manager (RevMan) software.

Heterogeneity

Heterogeneity was investigated using the I-squared test.

Data synthesis

Trials using different treatment strategies were analysed separately and the results combined only if there was no reason to think that they differed in relevant ways. While the primary meta-analysis was based on the occurrence of postpartum depression or not (however measured by trialists), several depression rating scales or cut-off points were incorporated. To address the potential measurement differences, direct comparisons between trials using the same rating scale and cut-off were made using the weighted mean difference (WMD), with 95% confidence intervals. Where trials use different ways of measuring the same continuous outcome, the standardised mean difference was used (SMD). In instances where trials used two measures of the same outcome, we used the more well-validated measure in the analysis. The fixed-effect model was employed for combining data, unless high levels of heterogeneity ($I^2 > 50\%$) existed, in which case a random-effects was applied. Meta-analyses for binary outcomes were performed using relative risk as the measure of effect size, with 95% confidence intervals.

Management of skewed continuous data

The Cochrane Handbook of Systematic Reviews of Interventions states that with the more common positive skewness, presentation of a geometric mean with its 95% confidence interval is equivalent to an analysis of a log transformation of the data. However, log-transformed and untransformed data cannot be mixed in a meta-

analysis. The Handbook also states that skewness is not necessarily a problem for meta-analyses in RevMan, if the sample sizes in the individual studies are large. In instances that we had a small sample size for the specific meta-analysis and skewed data, we advised that caution should be used when interpreting the results.

Dealing with missing data

Both missing dichotomous data and missing continuous data were analysed on an endpoint basis, including only participants with a final assessment (available case analysis). It was not assumed that participants who dropped out after randomisation had a negative outcome.

Subgroup analyses

Subgroup analyses could be used to test for clinical heterogeneity. Five a priori subgroup analyses were planned:

- (1) the effectiveness of specific types of psychosocial interventions (e.g. support interactions, non-directive counselling)
- (2) the effectiveness of specific types of psychological interventions (e.g. interpersonal psychotherapy, cognitive behavioural therapy)
- (3) the effectiveness of specific types of psychosocial interventions versus psychological interventions
- (4) the effects of intervention mode (e.g. individual versus group-based interventions)
- (5) the effects of sample selection criteria (e.g. women selected based on clinically diagnosed depression versus self-reported depression).

Sensitivity analyses

We planned sensitivity analyses, excluding the trials most susceptible to bias based on the following quality assessment:

- (1) those with inadequate allocation concealment (C);
- (2) high levels of post-randomisation losses or exclusions (D); or
- (3) unblinded outcome assessment or blinding of outcome assessment uncertain.

Publication bias

The existence of publication bias was examined through the use of a funnel plot.

RESULTS

Description of studies

See: [Characteristics of included studies](#); [Characteristics of excluded studies](#); [Characteristics of ongoing studies](#).

Results of the search

Over 176 abstracts were examined to determine if they met the specified inclusion criteria. Ten trials reported between 1989 and 2006 were identified and met the inclusion criteria, of which nine trials had useable outcome data, involving 956 women. Please see table of 'Characteristics of included studies'. One trial ([Appleby 1997](#)) did not have data to contribute to the meta-analysis. The

trials were conducted in the UK ([Appleby 1997](#); [Murray 1994](#); [Holden 1989](#); [Bennett 2001](#); [Morrell 2006](#)), Canada ([Dennis 2003](#); [Misri 2004](#)), USA ([O'Hara 2000](#)), Australia ([Prendergast 2001](#)), and Sweden ([Wickberg 1996](#)).

Definition of postpartum depression

Population

Five trials selected participants based on a clinical diagnosis of depression ([Appleby 1997](#); [Holden 1989](#); [Misri 2004](#); [O'Hara 2000](#); [Wickberg 1996](#)) while five trials enrolled women who met inclusion criteria based on self-reported depressive symptomatology ([Murray 1994](#); [Dennis 2003](#); [Bennett 2001](#); [Morrell 2006](#); [Prendergast 2001](#)).

Outcomes

In all but two trials ([Holden 1989](#); [Wickberg 1996](#)), a self-report measure using a score above a specified cut-off point was included to assess depressive symptomatology; for half the studies the Edinburgh Postnatal Depression Scale (EPDS) was administered ([Appleby 1997](#); [Murray 1994](#); [Dennis 2003](#); [Bennett 2001](#); [Morrell 2006](#); [Prendergast 2001](#)). It is important to note that the EPDS does not diagnose postpartum depression (as this can only be accomplished through a psychiatric clinical interview) but rather it is the most frequently used instrument to assess for postpartum depressive symptomatology. Created to counter the limitations of other well-established depression scales, the EPDS has been validated by standardised psychiatric interviews with large samples and has well-documented reliability and validity in over 11 languages. Other self-report measures were also administered including the Hamilton Rating Scale for Depression (HRSD) ([Appleby 1997](#); [Misri 2004](#); [O'Hara 2000](#)) and the Beck Depression Inventory (BDI) ([O'Hara 2000](#)). Diagnostic clinical interviews were administered in several trials ([Murray 1994](#); [Holden 1989](#); [Prendergast 2001](#); [Wickberg 1996](#)) to assess for depression.

While all trials included the outcome postpartum depressive symptomatology, several studies provided data on other variables including: self-esteem ([Dennis 2003](#)), loneliness ([Dennis 2003](#)), anxiety ([Misri 2004](#)), childcare stress ([Dennis 2003](#)), social adjustment ([O'Hara 2000](#)), and relationship quality with partner ([O'Hara 2000](#)).

The timing of the final outcome assessment within the first year varied considerably between studies, ranging from immediately post-treatment ([Holden 1989](#); [Misri 2004](#); [O'Hara 2000](#); [Wickberg 1996](#)) to 4 ([Appleby 1997](#); [Dennis 2003](#)), 12 ([Appleby 1997](#)), 24 ([Bennett 2001](#); [Morrell 2006](#); [Prendergast 2001](#)) and 36 ([Murray 1994](#)) weeks post-treatment; two trials also included an 18-month assessment ([Murray 1994](#); [Morrell 2006](#)) and one trial provided a five-year assessment ([Murray 1994](#)). Several trials provided both immediate and later post-treatment assessments ([Appleby 1997](#); [Murray 1994](#); [Dennis 2003](#); [Bennett 2001](#); [Prendergast 2001](#)).

Interventions

Psychosocial interventions

Studies were subgrouped into categories to examine specific

types of psychosocial interventions such as peer support (Dennis 2003) and non-directive counselling (Murray 1994; Holden 1989; Morrell 2006; Wickberg 1996). The interventions were provided by either trained health visitors/nurses (Murray 1994; Holden 1989; Morrell 2006; Wickberg 1996) or peer volunteers (e.g., experienced mothers recruited from the community and trained) (Dennis 2003).

In the majority of studies, the control group was reported to have received usual postpartum care, which varied both between and within countries and may have included antidepressant medication. Wherever there were individual study details on care received by the control group, these are presented in the table of included studies. All psychosocial interventions were individually-based.

Psychological interventions

The studies were also subgrouped into categories to examine specific types of psychological interventions, such as cognitive behavioural therapy (Appleby 1997; Murray 1994; Bennett 2001; Misri 2004; Morrell 2006; Prendergast 2001), interpersonal psychotherapy (O'Hara 2000), and psychodynamic therapy (Murray 1994). All the interventions were provided by health professionals and only one was group-based (Bennett 2001).

Excluded and ongoing studies

Thirty-nine studies were excluded from this review for the following reasons: (1) not an experimental design, (2) did not include a psychosocial or psychological intervention, (3) methodologically weak, (4) study did not focus on postpartum depression treatment, or (5) not all study participants were experiencing postpartum depressive symptomatology. Please see table of 'Characteristics of excluded studies'.

In addition, six ongoing trials were found evaluating a psychosocial or psychological intervention for the treatment of postpartum depression. These trials are being conducted in the United States (Clarke; Stuart), Canada (Dennis; Letourneau), Australia (Reay), and the UK (Sharp). Two of the trials are evaluating interpersonal psychotherapy either via telephone (Dennis) or in a clinic setting (Stuart); one trial is evaluating interpersonal psychotherapy in a group format (Reay). The other three trials are evaluating the treatment effect of (1) home-based peer support (Letourneau), (2) community-based psychosocial support versus antidepressant medication (Sharp), and (3) mother-infant psychotherapy versus interpersonal psychotherapy (Clarke). Please see table of 'Characteristics of ongoing studies'.

Risk of bias in included studies

Generally, the methodological quality of the trials was not strong. Method of allocation was adequate (consecutively-numbered, sealed, opaque envelopes containing randomly-generated numbers) in only one trial (Dennis 2003) and unclear in seven trials. Two trials used inadequate methods. In one trial (Murray 1994), allocation was performed by selecting one of four coloured balls

from a bag, and in the other trial (Wickberg 1996) alternate allocation was used.

Use of self-report measures such as the EPDS precluded blinded outcome assessment in most trials, although the person administering the measures (e.g., outcome assessor) was blinded to group allocation in seven of the nine trials. In one trial (Holden 1989), the outcome was assessed by a psychiatrist blinded to group allocation. In four trials, the caregivers (individuals providing healthcare but not the intervention) were blinded to the participants' study groups (Appleby 1997; Dennis 2003; Holden 1989; Wickberg 1996). In two trials it was unclear if caregivers were blinded (Bennett 2001; Murray 1994), and in two trials blinding of caregivers was not possible as they were involved in the intervention (Misri 2004; Prendergast 2001).

In regard to completeness of follow up data (includes dropout rates), three trials were classified as "A," two trials as "B," and three trials as "C" (see table 'Characteristics of included studies'). One trial (Appleby 1997) that met inclusion criteria contributed no data to the review; it was classified as "D" because outcome data were unavailable for 30% of those randomised and this trial did not include a true control group that provided standard care. Analysis of participants according to their original study group allocation (intent-to-treat analysis) was reported in all included trials.

It is important to note that there is considerable variability in the trial settings and samples (see table 'Characteristics of included studies').

Effects of interventions

Ten trials met the inclusion criteria, of these nine trials reported useable outcomes for 956 women (Murray 1994; Dennis 2003; Holden 1989; Bennett 2001; Misri 2004; Morrell 2006; O'Hara 2000; Prendergast 2001; Wickberg 1996).

Comparison 1 (main comparison): All psychosocial and psychological interventions versus usual care - all trials (Graphs 01.01 - 01.09)

Most trials reported only on the outcome of depressive symptomatology. All other outcomes were reported by single, small trials. No trials provided data related to infant outcomes.

Maternal outcomes

01.01 Depressive symptomatology at final assessment within the first year postpartum (variously defined)

Any psychosocial or psychological intervention, compared to usual postpartum care (variously defined), was associated with a reduction in the likelihood of depressive symptomatology, however measured, at the final assessment within the first year postpartum (nine trials; n=956, relative risk (RR) = 0.70, 95% confidence interval (CI) 0.60 to 0.81). There was no significant heterogeneity among these trials ($I^2 = 23.5\%$).

01.02 Mean EPDS score at final assessment within first year

In the two small trials (n=81) that used the EPDS score >12 as the indicator of depressive symptomatology a similar beneficial effect was found (RR=0.44, 95% CI 0.24 to 0.80). In the three trials (n=238) that reported comparisons of mean EPDS scores, the weighted mean difference (WMD) was not statistically significant (WMD=-0.46, 95% CI -1.87 to 0.95).

01.03 Depressive symptomatology at assessment immediately post-treatment (variously defined)

Any psychosocial or psychological intervention, compared to usual postpartum care, was associated with a reduction in the likelihood of depressive symptomatology immediately post-treatment (eight trials, n=555; RR=0.68, 95% CI 0.58 to 0.79) .

01.04 Maternal self-esteem

One small trial (n=41) reported no statistically significant effects on maternal self-esteem (WMD = 1.43, 95% CI -1.04 to 3.90).

01.05 Maternal loneliness

One small trial (n=41) reported lower mean scores on a scale of maternal loneliness (WMD=-3.54, 95% CI -7.00 to -0.08).

01.06 Maternal anxiety

One small trial (n=35) reported a reduction in the number of mothers who were anxious (RR=0.77, 95% CI 0.48 to 1.24).

01.07 Childcare stress

One small trial (n=41) reported effects on mothers' perceptions of stress associated with child care; the difference was not statistically significant (WMD=-1.53, 95% CI -3.48 to 0.42).

01.08 Maternal social adjustment

One trial (n=99) reported an improvement in maternal social adjustment (WMD = -0.42, 95% CI -0.58 to -0.26).

Family outcomes

01.09 Relationship with partner

One trial (n=99) reported an improvement in the relationship with partner (WMD = 12.50, 95% CI 2.93 to 22.07).

Comparison 2: Psychosocial interventions versus usual care (Graphs 02.01 - 02.03)

Five trials involving 506 women evaluated psychosocial interventions. The two types of psychosocial interventions included were peer support and non-directive counselling. No trials provided data for family or infant outcomes.

Maternal outcomes

02.01 - 02.02 Depressive symptomatology at final assessment within the first year postpartum (variously defined)

Psychosocial interventions together showed a decrease in the likelihood of depressive symptomatology at the final assessment in the first year postpartum (five trials, n=506; RR=0.61, 95% CI 0.39 to 0.94). Individually, a beneficial effect was found for peer support (one trial, n=42; RR=0.30, 95% CI 0.10 to 0.92) but not for non-directive counselling (four trials, n=464; RR = 0.67, 95% CI 0.43 to 1.04). However, there was significant heterogeneity with the four non-directive counselling trials ($I^2 = 55.0\%$). Sensitivity analysis was completed with the removal of trials with inadequate allocation concealment (C) (Murray 1994; Wickberg 1996) re-

sulting in a beneficial effect (two trials, n =328; RR = 0.57, 95% CI 0.36 to 0.88).

02.03 Depressive symptomatology at post-treatment assessment (variously defined)

When mothers were assessed immediately post-treatment, a clear beneficial effect again was found with non-directive counselling (three trials, n = 189; RR = 0.55, 95% CI 0.32 to 0.94). Overall, immediately post-treatment psychosocial interventions together were effective in decreasing depressive symptomatology (four trials, n =231; RR = 0.49, 95% CI 0.28 to 0.85).

Comparison 3: Psychological interventions versus usual care (Graphs 03.01 - 03.02)

Six trials involving 645 women evaluated psychological interventions. The three types of psychological interventions were cognitive behavioural therapy, interpersonal psychotherapy, and psychodynamic therapy. Because the design of one trial (Murray 1994) included two psychological interventions compared to a control group, it was not possible to statistically summarise the results from the trials of psychological interventions. No trials provided data for family or infant outcomes

Maternal outcomes

03.01 Depressive symptomatology at final assessment within the first year postpartum (variously defined)

At final assessment, cognitive behavioural therapy appeared to have a beneficial effect on depressive symptomatology (five trials, n = 482; RR=0.72, 95% CI 0.57 to 0.90). One trial demonstrated a beneficial effect with interpersonal psychotherapy (n = 120; RR=0.80, 95% CI 0.66 to 0.98). One trial evaluated psychodynamic therapy, that did not show a beneficial effect at final assessment (n = 91; RR = 0.67, 95% CI 0.33 to 1.37). Combining the standard psychological interventions of cognitive behavioural therapy and interpersonal psychotherapy, a beneficial effect was found in reducing postpartum depressive symptomatology at final assessment (six trials, n = 602; RR = 0.75, 95% CI 0.63 to 0.88).

03.02 Depressive symptomatology at post-treatment assessment (variously defined)

Beneficial results were found when assessments were completed immediately post-treatment for cognitive behavioural therapy (four trials, n = 209; RR = 0.79, 95% CI 0.62 to 1.01), interpersonal psychotherapy (one trial, n=120; RR =0.80, 95% CI 0.66 to 0.98), and psychodynamic therapy (one trial, n = 95; RR = 0.48, 95% CI 0.29 to 0.80).

Comparison 4: Psychosocial interventions versus psychological interventions (Graph 04.01)

Two trials (Murray 1994; Morrell 2006) directly compared psychosocial and psychological interventions. No trials provided data for family or infant outcomes.

Maternal outcomes

04.01 Depressive symptomatology at final assessment within the first year postpartum

The results suggested no significant difference in beneficial effect

in reducing depressive symptomatology at final assessment between a psychosocial intervention (non-directive counselling) and a psychological intervention (cognitive behavioural therapy) ($n=358$; $RR = 1.13$, 95% CI 0.84 to 1.52).

Sub group analyses

Mode of intervention (Graph 05.01)

Because only one trial ($n=39$) evaluated a group-based intervention, it was not possible to draw conclusions about the relative merits of individually-based versus group interventions ($RR = 0.55$, 95% CI 0.28 to 1.10). However, individually-based intervention did appear to have a beneficial effect in the treatment of postpartum depressive symptomatology (eight trials, $n = 917$; $RR = 0.71$, 95% CI 0.61 to 0.82).

Variations in selection criteria (Graph 06.01)

Trials selecting participants based on a clinical diagnosis of depression appeared to be just as effective in decreasing depressive symptomatology (four trials, $n = 246$; $RR = 0.67$, 95% CI 0.46 to 0.97) as those that enrolled women who met inclusion criteria based on self-reported depressive symptomatology (five trials, $n = 710$; $RR = 0.72$, 95% CI 0.58 to 0.88).

DISCUSSION

This review summarises the results of nine trials involving 956 women, conducted in five countries under a wide variety of circumstances. Overall, psychosocial and psychological interventions are effective treatments for postpartum depression. However, the methodological quality of the included studies was not strong. All interventions were face-to-face and provided by a health professional except for one trial that provided telephone-based peer support (Dennis 2003). The reporting of the trials was often not comprehensive, lacking in terms of details in the training and qualifications of the intervention providers and the description of adherence to the intervention protocol. In the primary comparison, the diversity of treatment interventions and the varying final assessments should urge some caution in the interpretation of the pooled data. To partially address this issue, the meta-analyses included assessments immediately post-treatment and final assessment in first year postpartum. Furthermore, it was found that there was limited agreement on outcome measures, although the EPDS was the most consistently used measure of depressive symptomatology. Most studies obtained no information on maternal perceptions, such as whether the women simply felt better or even liked the intervention. Although postpartum depression can occur within the first year, most trials had follow-up periods of less than six months. Examination of the wider impact of postpartum depression through economic evaluations was not conducted except for Morrell 2006 and impossible to complete post hoc due to small sample sizes. Finally, little attention has been paid to the context in which postpartum depression interventions have been evaluated. This covers not only the broad social and policy context

of different countries but also control groups, which can be more variable than the intervention studies.

Despite studies showing a clear link between postpartum depression and a lack of social support, only a few studies have been found evaluating the effect of supportive interactions, including professionally-facilitated support groups (Chen 2000; Fleming 1992), in decreasing depressive symptomatology. Due to theoretical limitations, such as the inclusion of both depressed and non-depressed women, and methodological weaknesses only one trial was included in the review (Dennis 2003). The positive results from this pilot study which evaluated the effect of telephone-based peer (mother-to-mother) support suggests that well-designed trials with large samples are warranted. Another psychosocial intervention that has been evaluated in the treatment of postpartum depression is non-directive counselling, a form of counselling that is based on the understanding that, in many situations, people can resolve their own problems without being provided with a solution by the counsellor. In particular, the counsellor's role is to encourage the person to express their feelings but not suggest what decision the person should make. By listening and reflecting back what the person reveals to them, the counsellor helps them to explore and understand their feelings. With this understanding, the person is able to make the decision that is best for them. In this review, four European trials (Murray 1994; Holden 1989; Morrell 2006; Wickberg 1996) have evaluated the effectiveness of non-directive counseling with positive results suggesting this treatment modality may be an important option for mothers with mild to moderate postpartum depression. These trials have demonstrated the feasibility of population-based screening and the application of home visiting using trained health professionals. However, there was significant heterogeneity with the pooling of these four trials and all but one (Morrell 2006) included small sample sizes. Contextual factors also decrease the application of the results to a North American population where differences in the delivery of postpartum care exist.

There are several different psychological approaches to the treatment of postpartum depression including cognitive behavioural therapy (CBT), interpersonal psychotherapy (IPT), and psychodynamic therapy. In this review four trials (Murray 1994; Misri 2004; Morrell 2006; Prendergast 2001; Bennett 2001) evaluated the effect of CBT on postpartum depressive symptomatology, and beneficial effects were found. These results are consistent with a meta-analysis of 28 studies which found that, given over an average of 14.9 weeks, CBT for general depression was an effective treatment option (Dobson 1989). In a large analysis of four trials (DeRubeis 1999), CBT fared as well as antidepressant medication with 'severely' depressed outpatients in four major comparisons. As such, it appears that CBT is an effective treatment for depression in general and postpartum depression specifically. However, considerable time, commitment and cost is required from CBT participants and approximately 10% to 40% fail to complete full

treatment, a compliance rate similar to pharmacotherapy (Evans 1992). Our literature search found several studies (Clark 2003; Klier 2001; Reay 2006; Stuart 1995) that examined the beneficial effects of IPT in decreasing depressive symptomatology; however, only one trial was eligible for inclusion in the review (O'Hara 2000). Although this trial included women who were primarily caucasian, middle-class, and married, the results provide preliminary evidence that this approach may be effective in the treatment of postpartum depression. A third psychological approach to the treatment of postpartum depression is psychodynamic therapy. In this review, one trial (Murray 1994) evaluated the effect of psychodynamic therapy on the treatment of postpartum depression and found a short-term beneficial effect. Thus, structured CBT, IPT, and psychodynamic therapy hold promise as effective treatment options.

Similar to the Cochrane review evaluating psychosocial and psychological interventions for preventing postpartum depression (Dennis 2005), individual-based strategies were effective in decreasing depressive symptomatology. Only one study (Bennett 2001) included in this review examined a group-based interventions and thus no conclusions are available regarding this mode of delivery. However, research suggests that groups are poorly attended by pregnant women and new mothers (Dennis 2005); additional barriers to postpartum depression treatment include stigma, lack of accessible treatment, time constraints, and demands of child care (Dennis 2006a). For example, attrition rates in postpartum depression clinic or group-based IPT trials may be high, ranging from 20% to 35% (Klier 2001; O'Hara 2000). The increasing popularity of telemedicine for diverse health problems has led some researchers to suggest that the telephone is perhaps one of the most under utilised resources in health care (Bullock 1995). Telephone-based interventions are not only flexible, private, and non-stigmatising but they also reduce differences related to socio-economic status and traditional health care barriers such as accessibility due to transportation or geography. While in the last decade advances in technology, such as the utilisation of e-mail and the Internet, have enhanced the range of options available for "home" support (e.g., the UK-based Internet group "Netmums"), the telephone remains the most accessible to the majority of individuals.

Finally, it is important to note that depression is increasingly deemed a relapsing-remitting illness akin to a chronic disease. Only one in eight individuals who recover from an episode of major depression will remain depression-free (Mitchell 2006). For these reasons, most national guidelines recommend not only adequate treatment of the current episode but also six months of continuation treatment after remission. Importantly, most mothers with postpartum depression prefer 'talking therapies' and to increase adherence rates, treatment should be matched with maternal perceptions of etiology (Dennis 2006a). Gradually we are realising that people's adherence decisions are mostly a rational balance of perceived risks versus benefits from information available to them

(Mitchell 2006).

AUTHORS' CONCLUSIONS

Implications for practice

This review suggests psychosocial and psychological interventions may be effective treatment options for mothers with postpartum depression. However, definite conclusions cannot be reached about the relative effectiveness of these different treatment approaches due to the lack of well-designed investigations, diversity in settings, and small sample sizes. Randomised controlled trials with large and representative samples are needed to compare different treatment modalities, examine the effectiveness of individual treatment components, and determine which treatments are most useful for women with different risk factors or clinical presentations of postpartum depression. As there is no single aetiological pathway by which women develop postpartum depression, it is improbable that a single treatment modality will be effective for all women. It is also noteworthy that many of the psychosocial and psychological interventions included in this review were labour intensive (e.g., time consuming and included trained personnel), which will have important practice implications including cost.

Implications for research

Specific research implications

- Future research evaluating psychosocial interventions should include self-help groups (i.e., groups not facilitated by a health professional) to extend the testing of lay support models with mild to moderately depressed women.
- Evaluations of group interventions should include measures that assess group dynamics, social comparisons, and the provision of peer (mother-to-mother) support to determine the salutary components of support groups.
- One area that has received little attention except for a few studies (e.g., Misri 1997; Morgan 1997) is the role the partner plays in the prevention of or recovery from postpartum depression. Partners can be an excellent source of instrumental (e.g., sharing of childcare and domestic responsibilities) and emotional support (Dennis 2006b) and can be a mediating link between the mother and family members who may not understand the nature of postpartum depression. Further research evaluating interventions with the partner is needed to determine how the partner can be most effective in assisting with postpartum depression.

- While a large cluster randomised controlled trial evaluating the effect of non-directive counseling versus CBT versus standard care has been completed in the UK (Morrell 2006) and will contribute to our understanding about the treatment effect of non-directive counseling, further research is warranted in a North American context where differences in the delivery of postpartum care exist.

- Future investigations should include long-term follow-up after intervention discontinuation and be designed to determine the comparative effectiveness of pharmacological and psychological treatments using trained individuals (professional or lay) and standardized interventions.

- Important postpartum treatment barriers such as stigma, transportation, childcare, and availability of services and high attrition rates found in some group or clinic-based postpartum depression treatment studies (e.g., Klier 2001; Meager 1996; O'Hara 2000; Onozawa 2001) suggest the need for the evaluation of novel treatment modalities, including those provided via telephone or Internet.

- Because depression is increasingly deemed a relapsing-remitting illness additional research is needed to determine if treatment of the current episode is adequate or whether an additional six months of continuation treatment after remission is needed to maintain long-term treatment effects.

- Future trials should include economic evaluations and incorporate infant outcomes.

General research implications

This review has clearly demonstrated that postpartum depression presents many special methodological complexities that need to be considered if scientific knowledge is to progress. First, there are

particular difficulties in defining the target group to be studied, as diagnosis is much less concrete than in other areas where an initial assessment can be confirmed by laboratory tests. Second, many of the treatments used are hard to define with clarity as psychosocial and psychological interventions often involve talking and manipulation of the environment. Replicating such treatment with fidelity is challenging. Furthermore, the context of postpartum depression research is crucial and the social, cultural, and organizational environment in which postpartum depression services takes place is highly variable. For example, the same intervention can have differing effects depending on context and variations in the control group. To ensure that trials are well designed the following points need to be considered. Difficulties in the definition of the postpartum depression should be confronted by using structured diagnoses or psychometrically tested self-report instruments such as the EPDS. Dialogue between researchers should be encouraged to promote a consistency in outcome measures and research methods. It may also be important to know whether the depressive episode arose antenatally and continued into the postpartum period. Adequate sample sizes based on power analyses should be incorporated such that the results can be compared across different postpartum samples. Researchers should consider multiple dimensions of improvement. However, trials should focus on a small number of clear outcomes, in the interest of both clarity and maintaining the involvement of women. Long-term effects should be addressed by adequate length of follow-up. Intervention replication can be achieved through a concise account not only of the intended but also the actual intervention in both the experimental and control group. Finally, maternal evaluations should be included to understand the nature of the intervention as well as what are important outcomes.

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* Indicates the major publication for the study

CHARACTERISTICS OF STUDIES

Characteristics of included studies [ordered by study ID]

Appleby 1997

Methods	RCT - randomisation was performed using computer-generated numbers. Depression was assessed with self-report measures, but the person administering the measure was blinded to group allocation. The 12-week post-treatment attrition rate was 29.9%.
Participants	87 UK women at 6 to 8 weeks postpartum identified using RDC criteria for depression
Interventions	Four study groups: (1) fluoxetine and 1 CBT session, (2) fluoxetine and 6 CBT sessions, (3) placebo and 1 CBT session, or (4) placebo and 6 CBT sessions -Sessions derived for health visitors after brief training but provided over 12 weeks by a psychologist with no previous clinical experience
Outcomes	Outcomes included depression (EPDS, HRSD, and revised clinical interview) at 1, 4, and 12 weeks post-treatment.
Notes	Significant number of eligible women (54%) declined participation due to reluctance to take antidepressant medication. No true control group (no treatment).

Risk of bias

Item	Authors' judgement	Description
Allocation concealment?	Unclear	B - Unclear

Bennett 2001

Methods	RCT - randomisation was performed using a block randomisation procedure. It is unclear if the outcome assessors were blinded. The attrition rate at 24 weeks was 13%.
Participants	45 UK women identified by health visitors for probable depression (EPDS > 12).
Interventions	Intervention group: 8 weekly 2-hour meetings provided by two health visitors that included: (1) educational information regarding coping with difficult childcare situation and eliciting support, (2) CBT (not manualized), and (3) the teaching of relaxation strategies. Control group: standard primary care with health visitor.
Outcomes	Outcomes included depression (EPDS) at 8 weeks (immediately post-treatment) and 24 weeks.
Notes	Antidepressant medication use was monitored and the analyses indicated no interaction effect.

Risk of bias

Bennett 2001 (Continued)

Item	Authors' judgement	Description
Allocation concealment?	Unclear	B - Unclear

Dennis 2003

Methods	Pilot RCT - randomisation was performed using consecutively numbered, sealed, opaque envelopes containing randomly generated numbers. The outcome assessors were blinded to group allocation. The attrition rate at 8-week post-randomisation was 2%.	
Participants	42 Canadian women screened by public health nurses during an immunization clinic at 8 weeks postpartum and identified with depressive symptoms (EPDS > 9).	
Interventions	Intervention group: individualized telephone-based support provided by a mother recruited from the community who previously experienced postpartum depression and received a 4-hour training session. Control group: standard primary care provided by public health nurses and other community-based professionals.	
Outcomes	Outcomes included depression (EPDS), self-esteem, loneliness, and childcare stress at 4 and 8 weeks post-randomisation.	
Notes		

Risk of bias

Item	Authors' judgement	Description
Allocation concealment?	Yes	A - Adequate

Holden 1989

Methods	RCT - randomisation was performed using random numbers. The outcome assessors were blinded to group allocation. The attrition rate at 13 weeks post-randomisation was 9%.	
Participants	50 UK women identified through community-based EPDS screening at 6 weeks postpartum with a second screening at 13 weeks via a psychiatric clinical interview.	
Interventions	Intervention group: 8 weekly counseling visits at home by health visitors trained in non-directive counseling. Control group: standard primary care by a health visitor that included a home visit.	
Outcomes	Outcomes included depression (psychiatric clinical interview) at 13 weeks post-randomisation.	
Notes	Three women in each group were considered to have taken antidepressant medication at a therapeutic level.	

Risk of bias

Holden 1989 (Continued)

Item	Authors' judgement	Description
Allocation concealment?	Unclear	B - Unclear

Misri 2004

Methods	RCT - randomisation was performed using computer-generated random numbers. The outcome assessor was blinded to group allocation. The attrition rate immediately post-treatment was 0%.	
Participants	35 Canadian women identified with depression using the HRSD and EPDS who met DSM-IV criteria.	
Interventions	Intervention group: antidepressant medication (paroxetine) weekly, 1-hour CBT delivered by a psychologist using a treatment manual. Control group: all mothers were taking antidepressant medication as standard care offered in a tertiary care hospital outpatient program.	
Outcomes	Outcomes included depression (HRSD, EPDS) and anxiety at 12 weeks (immediately post-treatment).	
Notes		

Risk of bias

Item	Authors' judgement	Description
Allocation concealment?	Unclear	B - Unclear

Morrell 2006

Methods	Cluster RCT - randomisation performed by an individual blinded to the identity of the collaborating health visitors and general practitioners using a computer generated random list with stratification by expected number of births per year, per cluster, in a 2:1 ratio of intervention to control clusters Primary outcome was determined by mailed questionnaires. Attrition rate at 24 weeks was 29.2%.	
Participants	595 UK women who returned a 6 week postpartum questionnaire and scored >11 on the EPDS and then scored > 11 again at 8 weeks postpartum.	
Interventions	Two intervention groups: two active therapies were provided in women's own homes by a health visitor on a weekly basis for 1-hour up to a maximum of 8 weeks commencing at approximately 8 weeks postpartum: (1) CBT and (3) person-centred approach (non-directive counseling). Control Group: standard primary care provided by health visitors and general practitioners.	
Outcomes	Outcomes included depression (EPDS), general health, social support, life events, anxiety, parenting stress, and marital relations at 24, 52, and 72 weeks postpartum.	
Notes	Only the primary outcome data have been included in the review as provided via email by the principal investigator. Secondary outcome data will be included when available. - Because of perceived limitations of the EPDS, some home visitors also offered the intervention to women	

Morrell 2006 (Continued)

	about whom they felt concerned, irrespective of the EPDS score, by using their clinical judgement.	
Risk of bias		
Item	Authors' judgement	Description
Allocation concealment?	Unclear	B - Unclear

Murray 1994

Methods	Quasi-experimental - group allocation was performed using the selection of one of four coloured balls from a bag. The outcome assessors were blinded to group allocation. Attrition rates at 18, 36, and 72 weeks were 12%, 7%, and 8% respectively; the 5 year attrition rate was 29%.	
Participants	193 primiparous UK women screened with a mailed EPDS and identified with depression (DSM-III-R)(52 in the routine primary care group, 43 in the cognitive-behavioural therapy group; 50 in the psychodynamic group, and 48 in the non-directive counseling group).	
Interventions	Three intervention groups: three active therapies were provided in women's own homes on a weekly basis from 8 weeks to 18 weeks postpartum: (1) CBT which focused on mother-identified problems with infant (e.g., feeding, sleeping), (2) psychodynamic therapy which explored the mother's own early attachment history, and (3) non-directive counseling which provided mother's with an opportunity to discuss current feelings. Control Group: standard primary care provided by general practitioners and health visitors.	
Outcomes	Outcomes included depression (SCID and EPDS) at 18, 36, and 72 weeks and 5 years.	
Notes	Control group had more mothers with social adversity (35%) while the psychodynamic group had less (10%). No difference in maternal mood between treatment completers and non-completers.	
Risk of bias		
Item	Authors' judgement	Description
Allocation concealment?	No	C - Inadequate

O'Hara 2000

Methods	RCT -randomisation was performed using a random numbers table. The outcome assessors were not blinded to group allocation .The attrition rate 12 weeks post-randomisation was 17.5%	
Participants	120 US women were identified through a multi-stage community screening process that used diverse measures including the SCID and HRSD.	

O'Hara 2000 (Continued)

Interventions	Intervention group: 12 weekly 60-minute individual sessions of interpersonal psychotherapy by trained therapists using a treatment manual. Control group: waiting list.	
Outcomes	Outcomes included depression (HRSD, BDI), social adjustment, marital relations, and postpartum adjustment at 4, 8, and 12 weeks post-randomisation.	
Notes	Participants were primarily educated, Caucasian, and married. It is unknown why "re-randomisation" occurred after patients 77 and 108 to "ensure equal groups."	
Risk of bias		
Item	Authors' judgement	Description
Allocation concealment?	Unclear	B - Unclear

Prendergast 2001

Methods	RCT - randomisation was performed using a randomisation table. The outcome assessor was blinded to group allocation. The attrition rate post-intervention and at 24 weeks was 0%.	
Participants	37 Australian women screened by nurses and identified using the EPDS and a clinical psychiatric interview.	
Interventions	Intervention group: Six weekly 60 minute home-based CBT sessions by trained early childhood nurses. Control group: standard care which included 6 weekly clinic visits lasting 20 to 60 minutes.	
Outcomes	Outcomes included depression (EPDS, MADRS) immediately post-treatment and at 24-weeks.	
Notes	Significant group differences in baseline EPDS scores. There were more primiparous women in the intervention group (82%) than the control group (60%). In addition, 70% of control early childhood nurses used some form of problem-solving and pleasant-event scheduling, providing similarities to the intervention.	
Risk of bias		
Item	Authors' judgement	Description
Allocation concealment?	Unclear	B - Unclear

Wickberg 1996

Methods	Quasi-experimental - group allocation was achieved through alternate allotment. Ther outcome assessors were blinded to group allocation. The attrition rate at 6 weeks post-randomisation was 14.6%	
Participants	41 Swedish women participating in a 2-stage population-based screening procedure at 8 and 12 weeks using the EPDS.	

Wickberg 1996 (Continued)

Interventions	Intervention group: 6 weekly 1-hour counseling visits at home by nurses trained in non-directive counseling. Control group: standard primary care.	
Outcomes	Outcomes included depression (modified MADRS) at 6 weeks post-randomisation.	
Notes		
<i>Risk of bias</i>		
Item	Authors' judgement	Description
Allocation concealment?	No	C - Inadequate

RCT: Randomised controlled trial

RDC: Research Diagnostic Criteria

EPDS: Edinburgh Postnatal Depression Scale

CBT: Cognitive Behavioural Therapy

HRSD: Hamilton Rating Scale for Depression

DSM-IV: Diagnostic and Statistical Manual of Mental Disorders - Fourth Edition

BDI: Beck Depression Inventory

SCID: Structured Clinical Interview for DSM-IV

MADRS: Montgomery-Asberg Depression Rating Scale

Characteristics of excluded studies [ordered by study ID]

Ahokas 2001	Not a psychosocial or psychological intervention - a descriptive study of oestrogen therapy.
Armstrong 2003	Not a psychosocial or psychological intervention - a pilot randomised controlled trial evaluating a "multi-intervention" with a primary focus on a pram-walking.
Armstrong 2004	Not a psychosocial or psychological intervention - a randomised controlled trial evaluating a pram-walking intervention.
Boath 1999	Not an experimental design - a prospective, naturalistic study.
Chabrol 2002	Methodologically weak quasi-experimental study using odd/even group assignment. Differential loss to follow-up-25.4% in intervention group and 10.0% in control group. No intent-to-treat analysis and the authors only reported the F for a repeated measures ANOVA.
Chen 2000	Methodologically weak quasi-experimental study using Zelen-like randomisation method ("randomly assigned" with no further details). 115 women were randomised but outcome data were only provided for 60.

(Continued)

Clark 2003	Methodologically weak quasi-experimental study where two groups were “sequentially assigned” and “an additional comparison group” (IPT) was added. A later sentence implies the participants were matched based on sociodemographic characteristics suggesting the allocation method was not sequential. Very uneven groups - 24 in one, 17 in the second, and 17 in the third.
Cohen 2001	Not a psychosocial or psychological intervention - a descriptive study of antidepressant medication.
Cooper 2002	Not an experimental design - a pilot study with matched controls.
Corral 2000	Not a psychosocial or psychological intervention - a case report describing bright light therapy.
Craig 2005	Not an experimental design - a prospective repeated measures descriptive study.
Field 1996	Not a psychosocial or psychological intervention - a randomised controlled trial evaluating a massage intervention.
Fleming 1992	A quasi-experimental study where not all participants were experiencing postpartum depression.
Freeman 2006	Not a psychosocial or psychological intervention - a randomised controlled trial evaluating omega-3 fatty acids.
Gregoire 1996	Not a psychosocial or psychological intervention - a randomised controlled trial evaluating oestrogen therapy.
Hight 2004	Not an experimental design - a descriptive study comparing community-based treatments.
Hiscock 2002	Not a psychosocial or psychological intervention - a randomised controlled trial evaluating an infant sleep intervention.
Horowitz 2001	Not a psychosocial or psychological intervention - a randomised controlled trial evaluating an interactive coaching intervention to promote responsiveness between depressed mothers and their infants.
Kendrick 2005	Randomised controlled trial not targeting postpartum depression but anxiety, depression, and life difficulties among general practice patients.
Klier 2001	Not an experimental design - a descriptive study of interpersonal psychotherapy.
MacArthur 2002	Not a treatment trial - it is a postpartum depression prevention trial.
Matthey 2003	Not an experimental design - two studies examining the diagnosis of postpartum depression and anxiety.
Meager 1996	Methodologically weak trial with unclear randomisation. 20 women were included with follow-up data available for only 12 mothers. Mean data provided with no standard deviation.
Milgrom 2005	Methodologically weak quasi-experimental study where randomisation was a process of drawing lots and then recruitment continued until the minimum required sample size was achieved in all treatment conditions. 37% loss to follow-up and uneven attrition across the study groups.
Misri 1997	Not a psychosocial or psychological intervention - a randomised controlled trial where the mother’s partner was the recipient of the intervention for two sessions (partner did not provide a supportive intervention).

(Continued)

Morgan 1997	Not an experimental design - a descriptive study of a group programme where psychotherapeutic and cognitive-behavioural strategies were employed.
Nonacs 2005	Not a psychosocial or psychological intervention - a descriptive study of antidepressant medication.
Onozawa 2001	Not a psychosocial or psychological intervention - a randomised controlled trial evaluating infant massage.
Oren 2002	Not a psychosocial or psychological intervention - a case report describing bright light therapy.
Parry 2000	Not a psychosocial or psychological intervention - a descriptive study of critically timed sleep deprivation.
Reay 2006	Not an experimental design - a descriptive study of group interpersonal psychotherapy.
Sharp 1998	Not an experimental design - an open-label pilot study
Stowe 1995	Not a psychosocial or psychological intervention - a descriptive study of antidepressant medication.
Stuart 1995	Not an experimental design - a descriptive study of interpersonal psychotherapy.
Suri 2001	Not a psychosocial or psychological intervention - a descriptive study of antidepressant medication.
Suri 2005	Not a psychosocial or psychological intervention - a descriptive study of antidepressant medication.
Tezel 2006	Not an experimental design - a pretest-posttest design with two groups controlling for potentially confounding variables. Evaluation of a model of nursing care versus problem-solving training.
Ugarriza 2004	Not an experimental design - a pilot study with a matched control group describing a 10-week group therapy consisting of (1) education and information, (2) stress reduction techniques, (3) development of support systems, and (4) cognitive restructuring.
Ugarriza 2006	Not an experimental design - a descriptive study of telecare therapy consisting of cognitive-behavioural therapy, relaxation techniques, and problem-solving strategies.

Characteristics of ongoing studies *[ordered by study ID]*

Clarke

Trial name or title	Relational Group Intervention for Postpartum Depression
Methods	
Participants	208 mothers Inclusion Criteria: - Major depression with an infant under 7 months of age Exclusion Criteria:

Clarke (Continued)

	<ul style="list-style-type: none"> - Bipolar disorder - Schizophrenia - Organic brain syndrome - Antisocial personality disorder - Current psychosis or mania - Lifetime history of mental retardation - Current alcohol or substance abuse - Cognitive disability - Infants born more than 6 weeks premature or with major medical conditions or developmental disabilities
Interventions	Mother-infant psychotherapy versus interpersonal psychotherapy
Outcomes	Assessments of maternal and infant functioning, mother-infant and father-infant relations, parenting stress, and marital conflict and conducted pre- and post-treatment, at 12 months post-treatment, and when infants are 12 and 24 months of age.
Starting date	01/01/2002
Contact information	Roseanne Clark PhD Univ. of Wisconsin Dept. of Psychiatry Madison Wisconsin 53719 tel: 608-263-6067 rclark@wisc.edu
Notes	

Dennis

Trial name or title	An RCT to Evaluate the Effect of Telephone-Based Interpersonal Psychotherapy for the Treatment of Postpartum Depression
Methods	
Participants	<p>240 women</p> <p>Inclusion Criteria:</p> <ul style="list-style-type: none"> - live birth - infant discharged from hospital - mother > 2 but < 24 weeks postpartum - clinical diagnosis of major depression using the Structured Clinical Interview for DSM-IV (SCID) - understands spoken English <p>Due to the nature of the intervention, it is not feasible to recruit mothers unable to speak English.</p> <p>Exclusion Criteria:</p> <ul style="list-style-type: none"> - current use of antidepressant medication - currently receiving any form of psychotherapy administered by a trained professional - active suicidal or self-harm thoughts - chronic depression (episode length > 2.5 years)

Dennis (Continued)

Interventions	12 weekly, 1-hour sessions of telephone-based interpersonal psychotherapy provided by a trained nurse versus standard care
Outcomes	The primary outcome is the EPDS and SCID at 12 weeks post-randomisation. Other outcomes include anxiety, social functioning, and health service utilization at 12 and 24 weeks post-randomisation
Starting date	09/01/2007
Contact information	Cindy-Lee Dennis, PhD Faculty of Nursing University of Toronto 155 College Street Toronto, Ontario Canada M5T 1P8 cindylee.dennis@utoronto.ca
Notes	

Letourneau

Trial name or title	An RCT to Evaluate the Effect of Home-Based Peer Support on Maternal-Infant Interaction, Infant Health Outcomes, and Postpartum Depression
Methods	
Participants	104 women Inclusion Criteria: - Eligible mothers will be identified as experiencing symptoms of postpartum depression and scores >12 on the Edinburgh Postnatal Depression Scale. - Mothers must speak English or French. - The infant must be full-term, in the care of the mother and between 3 to 6 months of age at initial enrolment. Exclusion Criteria: - Infants who have been admitted to the NICU - Infants will be excluded if medicated with corticosteroids - Mothers will not be excluded for taking anti-depressant or anti-psychotic medication, using other interventions for postpartum, or reporting a history of mental illness
Interventions	Home-based peer support
Outcomes	Assessments of maternal-infant interaction, cognitive development, social development, salivary cortisol, depressive symptomatology, and social support
Starting date	01/012006

Letourneau (Continued)

Contact information	Nicole Letourneau, PhD Faculty of Nursing University of New Brunswick Fredericton New Brunswick E3B 5A4 Linda Duffet-Leger tel: (506) 452-6160 lindadl@rogers.com
Notes	

Reay

Trial name or title	An RCT of Group Interpersonal Psychotherapy for Postnatal Depression
Methods	
Participants	Sample size not reported Inclusion Criteria: -minor or major depression -infant 12 months old or less
Interventions	8-week group therapy versus standard care
Outcomes	Assessments of depressive symptoms, marital adjustment, social support, mother-infant attachment, and adult attachment style at mid-treatment, immediately post-treatment, and 12 weeks post-treatment
Starting date	study nearing completion
Contact information	Rebecca Reay Academic Unit of Psychological Medicine ANU Medical School L 2 Blg 15 The Canberra Hospital Garran, ACT Australia 2605 rebecca.reay@act.gov.au
Notes	

Sharp

Trial name or title	Antidepressant Drug Therapy Versus a Community-Based Psychosocial Intervention for the Treatment of Moderate Postnatal Depression: A Pragmatic Randomised Controlled Trial
Methods	
Participants	Sample size not reported Women with postpartum depression up to 3 months postnatal
Interventions	A two arm multi-centre pragmatic randomised controlled trial. Women who reach the threshold for inclusion (EPDS>12, CIS-R>11) at 8 weeks will be randomised to either antidepressants or counselling. Women who do not respond to the allocated therapy in their group will be offered the opportunity to either switch or combined therapies after the primary outcome has been measured (4 weeks for antidepressants, 18 weeks for counselling) Thus the research design allows women to receive both antidepressants and psychological therapy is required.
Outcomes	The primary outcome measure is the EPDS at 4 weeks, 18 weeks and 44 weeks. In addition, the trial will use the SF-36 as a generic measure of functional quality of life, the EQ5D for economic analysis, the MAMA for parenting skills and attitudes towards the baby, and the GRIMS for the quality of the marital relationship. The trial will ask partners to complete the GHQ12 the PAPA and the GRIMS. At 12 months we will assess the family milieu using the HOME and the child's development using the Bayley scales
Starting date	01/06/2004
Contact information	Prof Deborah Sharp Division of primary care University of Bristol Cotham House Cotham Hill Bristol BS6 6JL United Kingdom tel: +44 0117 9546641 debbie.sharp@bris.ac.uk
Notes	

Stuart

Trial name or title	Clinician Managed Interpersonal Psychotherapy
Methods	
Participants	160 women Women between 8 and 24 weeks postpartum Meet DSM-IV criteria for Major Depression Hamilton Rating Scale for Depression score of 12 or more Active substance abuse Psychotic disorders

Stuart (Continued)

Interventions	Interpersonal psychotherapy is delivered in 12 sessions over the course of a year. Standard IPT is delivered in 12 sessions in the first 12 weeks after treatment assignment.
Outcomes	Postpartum depression (measure not reported).
Starting date	Not reported
Contact information	Scott Stuart, M.D. University of Iowa, Iowa City, Iowa, 52242 319-353-6960 scott-stuart@uiowa.edu Michael W O'Hara, Ph.D. mike-ohara@uiowa.edu
Notes	

DATA AND ANALYSES

Comparison 1. All interventions versus usual care - all trials

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Evidence of depression at final assessment within first year	9		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
1.1 Any measure of depressive symptomatology	9	956	Risk Ratio (M-H, Fixed, 95% CI)	0.70 [0.60, 0.81]
1.2 EPDS>12	2	81	Risk Ratio (M-H, Fixed, 95% CI)	0.44 [0.24, 0.80]
2 Mean EPDS score at final assessment within first year	3	238	Mean Difference (IV, Fixed, 95% CI)	-0.46 [-1.87, 0.95]
3 Evidence of depression at assessment immediately post-treatment	8		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
3.1 Any measure of depressive symptomatology	8	555	Risk Ratio (M-H, Fixed, 95% CI)	0.68 [0.58, 0.79]
4 Maternal self-esteem	1	41	Mean Difference (IV, Fixed, 95% CI)	1.43 [-1.04, 3.90]
5 Maternal loneliness	1	41	Mean Difference (IV, Fixed, 95% CI)	-3.54 [-7.00, -0.08]
6 Maternal anxiety	1	35	Risk Ratio (M-H, Fixed, 95% CI)	0.77 [0.48, 1.24]
7 Childcare stress	1	41	Mean Difference (IV, Fixed, 95% CI)	-1.53 [-3.48, 0.42]
8 Maternal social adjustment	1	99	Mean Difference (IV, Fixed, 95% CI)	-0.42 [-0.58, -0.26]
9 Relationship quality with partner	1	99	Mean Difference (IV, Fixed, 95% CI)	12.5 [2.93, 22.07]

Comparison 2. Psychosocial interventions versus usual care - variations in intervention type

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Evidence of depression at final assessment within first year	5	506	Risk Ratio (M-H, Random, 95% CI)	0.61 [0.39, 0.94]
1.1 Peer support	1	42	Risk Ratio (M-H, Random, 95% CI)	0.30 [0.10, 0.92]
1.2 Non-directive counselling	4	464	Risk Ratio (M-H, Random, 95% CI)	0.67 [0.43, 1.04]
2 Evidence of depression at final assessment - sensitivity analysis	2	328	Odds Ratio (M-H, Fixed, 95% CI)	0.57 [0.36, 0.88]
3 Evidence of depression at assessment immediately post-treatment	4	231	Risk Ratio (M-H, Random, 95% CI)	0.49 [0.28, 0.85]
3.1 Peer support	1	42	Risk Ratio (M-H, Random, 95% CI)	0.24 [0.06, 1.00]
3.2 Non-directive counselling	3	189	Risk Ratio (M-H, Random, 95% CI)	0.55 [0.32, 0.94]

Comparison 3. Psychological interventions versus usual care - variations in intervention type

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Evidence of depression at final assessment within first year	6		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
1.1 Cognitive-behavioural therapy	5	482	Risk Ratio (M-H, Fixed, 95% CI)	0.72 [0.57, 0.90]
1.2 Interpersonal psychotherapy	1	120	Risk Ratio (M-H, Fixed, 95% CI)	0.80 [0.66, 0.98]
1.3 Psychodynamic therapy	1	91	Risk Ratio (M-H, Fixed, 95% CI)	0.67 [0.33, 1.37]
1.4 Cognitive-behavioural therapy and interpersonal psychotherapy	6	602	Risk Ratio (M-H, Fixed, 95% CI)	0.75 [0.63, 0.88]
2 Evidence of depression at assessment immediately post-treatment	5		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
2.1 Cognitive-behavioural therapy	4	209	Risk Ratio (M-H, Fixed, 95% CI)	0.79 [0.62, 1.01]
2.2 Interpersonal psychotherapy	1	120	Risk Ratio (M-H, Fixed, 95% CI)	0.80 [0.66, 0.98]
2.3 Psychodynamic therapy	1	95	Risk Ratio (M-H, Fixed, 95% CI)	0.48 [0.29, 0.80]

Comparison 4. Psychosocial interventions versus psychological interventions

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Non-directive counselling versus cognitive behavioural therapy at last assessment in first year	2	358	Risk Ratio (M-H, Fixed, 95% CI)	1.13 [0.84, 1.52]

Comparison 5. All interventions versus usual care - variations in intervention mode

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Evidence of depression at final assessment within first year	9		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
1.1 Individually-based interventions	8	917	Risk Ratio (M-H, Fixed, 95% CI)	0.71 [0.61, 0.82]
1.2 Group-based interventions	1	39	Risk Ratio (M-H, Fixed, 95% CI)	0.55 [0.28, 1.10]

Comparison 6. All interventions versus usual care - variations in selection criteria

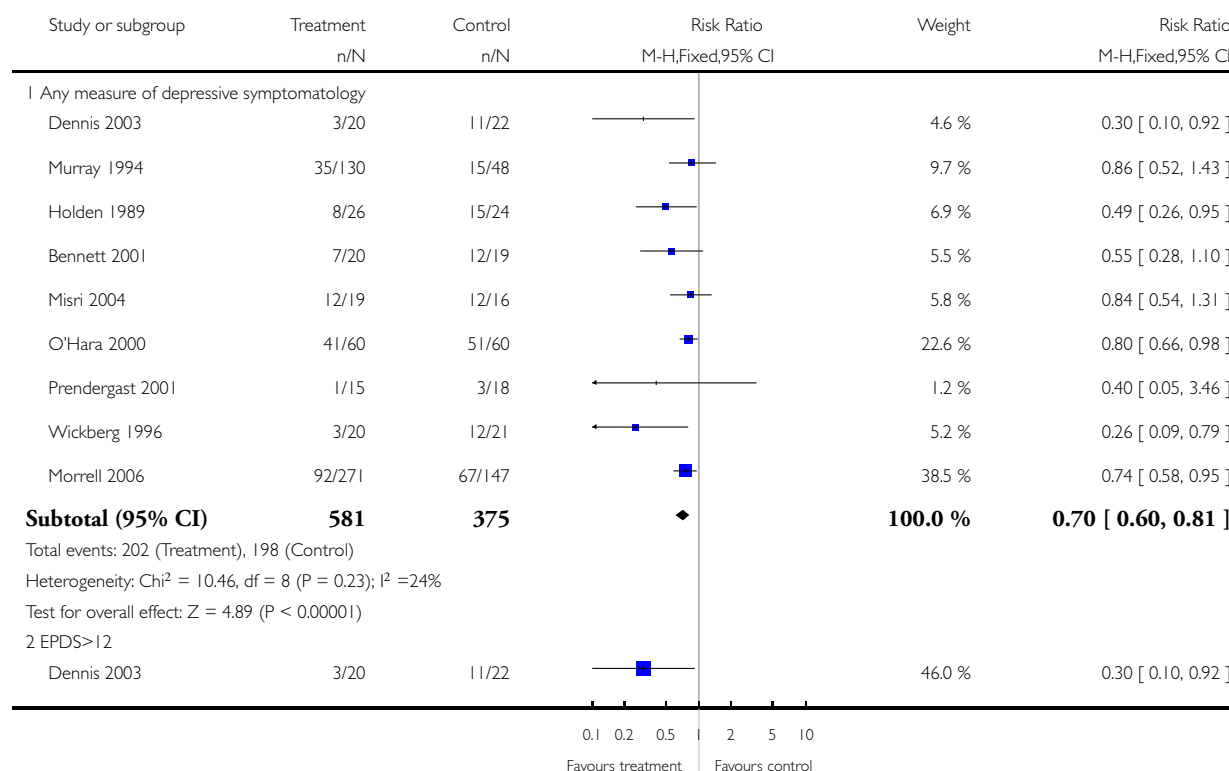
Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Evidence of depression at final assessment within first year	9		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
1.1 Clinical diagnosis of depression	4	246	Risk Ratio (M-H, Random, 95% CI)	0.67 [0.46, 0.97]
1.2 Self-reported depressive symptomatology	5	710	Risk Ratio (M-H, Random, 95% CI)	0.72 [0.58, 0.88]

Analysis 1.1. Comparison 1 All interventions versus usual care - all trials, Outcome 1 Evidence of depression at final assessment within first year.

Review: Psychosocial and psychological interventions for treating postpartum depression

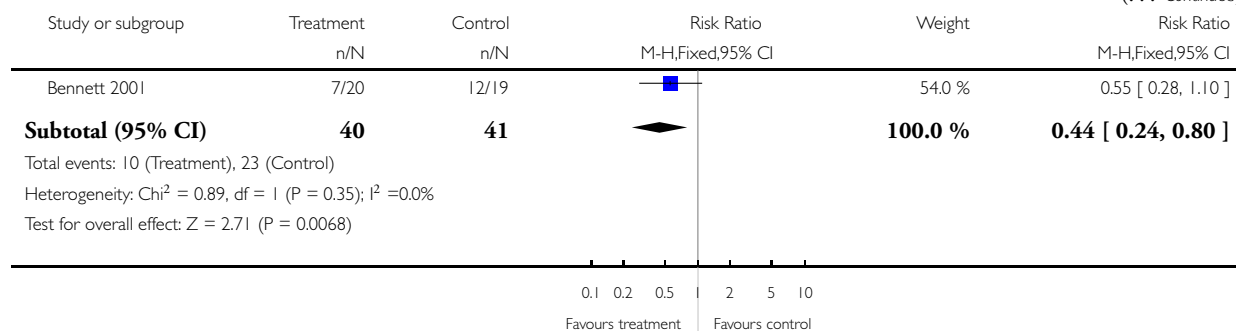
Comparison: 1 All interventions versus usual care - all trials

Outcome: 1 Evidence of depression at final assessment within first year



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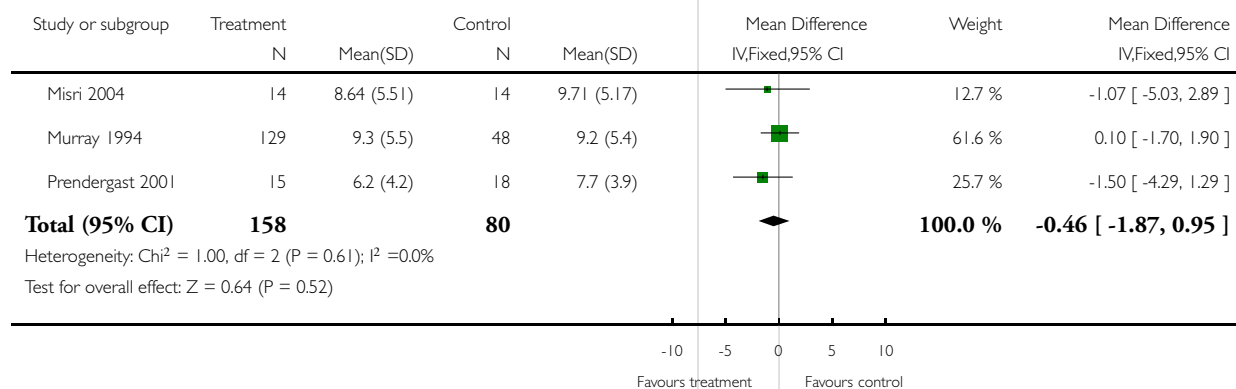


Analysis 1.2. Comparison 1 All interventions versus usual care - all trials, Outcome 2 Mean EPDS score at final assessment within first year.

Review: Psychosocial and psychological interventions for treating postpartum depression

Comparison: 1 All interventions versus usual care - all trials

Outcome: 2 Mean EPDS score at final assessment within first year

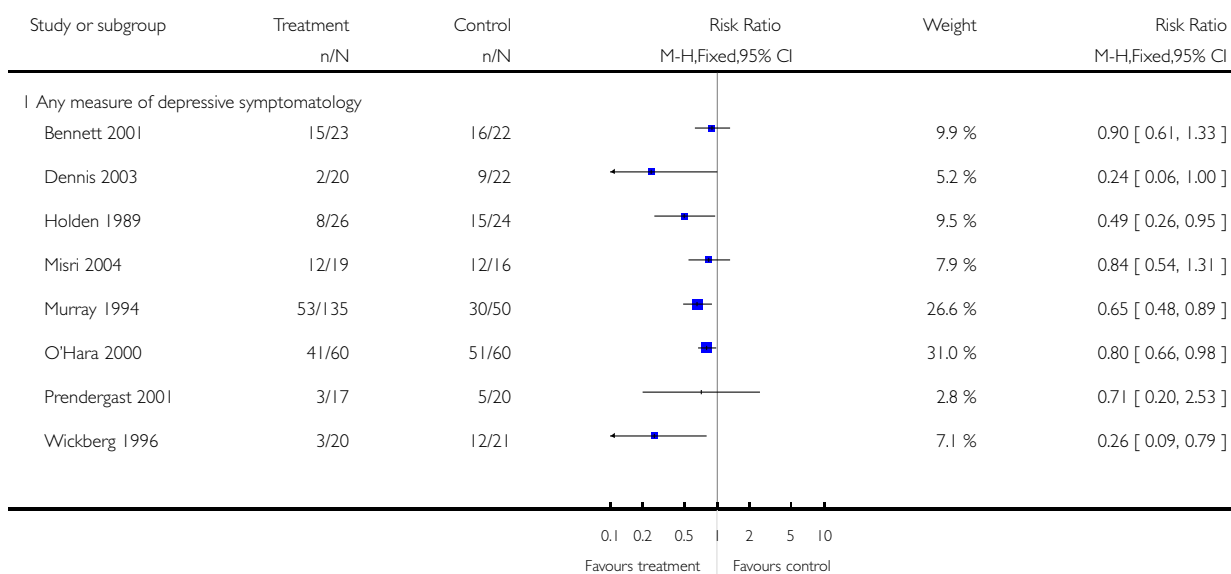


Analysis I.3. Comparison I All interventions versus usual care - all trials, Outcome 3 Evidence of depression at assessment immediately post-treatment.

Review: Psychosocial and psychological interventions for treating postpartum depression

Comparison: I All interventions versus usual care - all trials

Outcome: 3 Evidence of depression at assessment immediately post-treatment

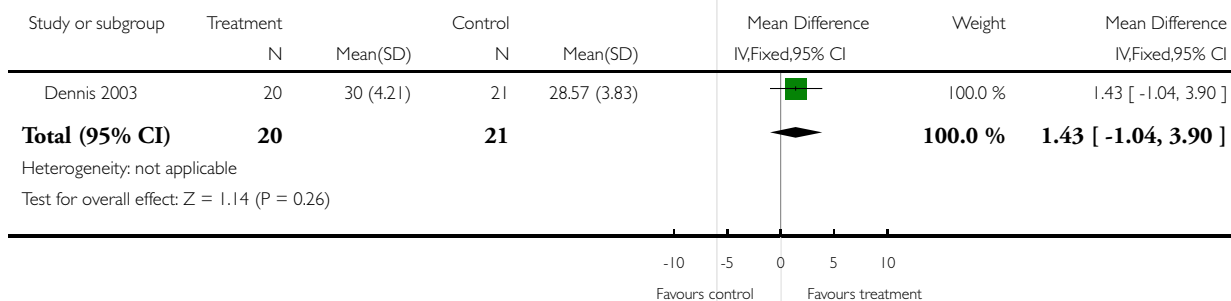


Analysis I.4. Comparison I All interventions versus usual care - all trials, Outcome 4 Maternal self-esteem.

Review: Psychosocial and psychological interventions for treating postpartum depression

Comparison: I All interventions versus usual care - all trials

Outcome: 4 Maternal self-esteem

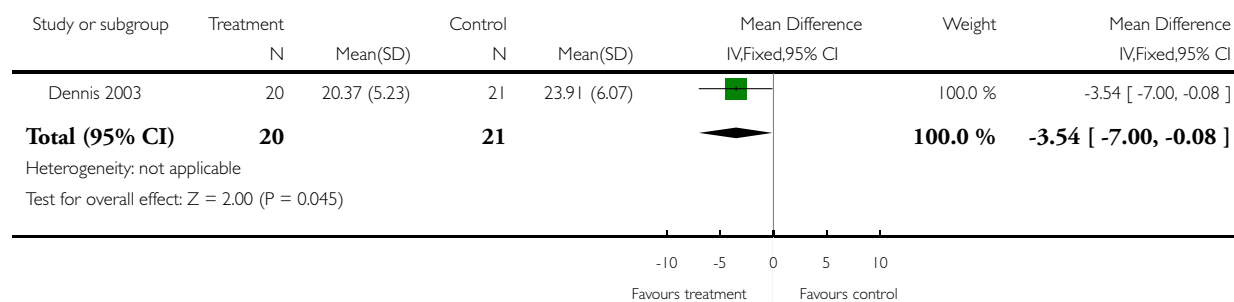


Analysis 1.5. Comparison 1 All interventions versus usual care - all trials, Outcome 5 Maternal loneliness.

Review: Psychosocial and psychological interventions for treating postpartum depression

Comparison: 1 All interventions versus usual care - all trials

Outcome: 5 Maternal loneliness

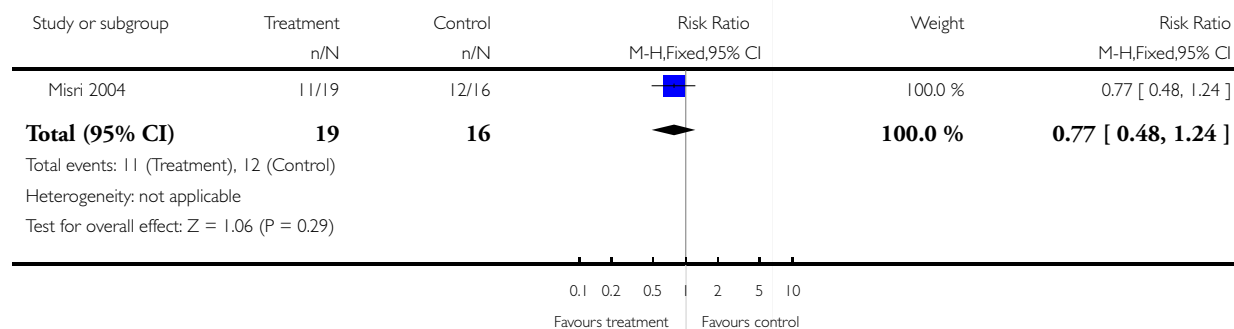


Analysis 1.6. Comparison 1 All interventions versus usual care - all trials, Outcome 6 Maternal anxiety.

Review: Psychosocial and psychological interventions for treating postpartum depression

Comparison: 1 All interventions versus usual care - all trials

Outcome: 6 Maternal anxiety

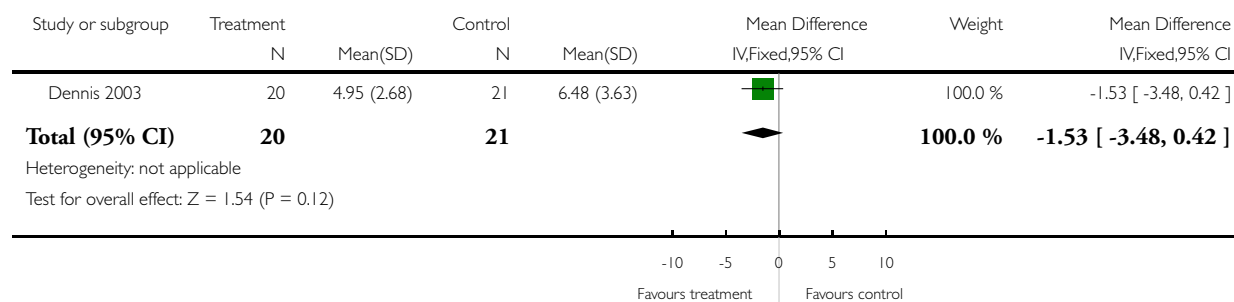


Analysis 1.7. Comparison 1 All interventions versus usual care - all trials, Outcome 7 Childcare stress.

Review: Psychosocial and psychological interventions for treating postpartum depression

Comparison: 1 All interventions versus usual care - all trials

Outcome: 7 Childcare stress

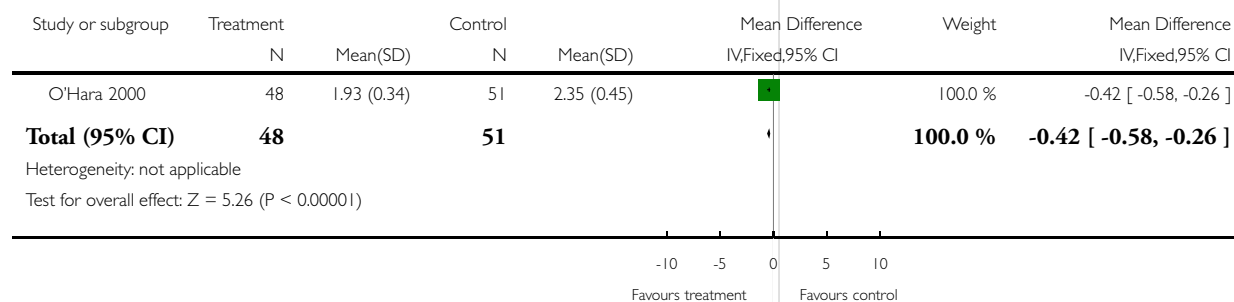


Analysis 1.8. Comparison 1 All interventions versus usual care - all trials, Outcome 8 Maternal social adjustment.

Review: Psychosocial and psychological interventions for treating postpartum depression

Comparison: 1 All interventions versus usual care - all trials

Outcome: 8 Maternal social adjustment

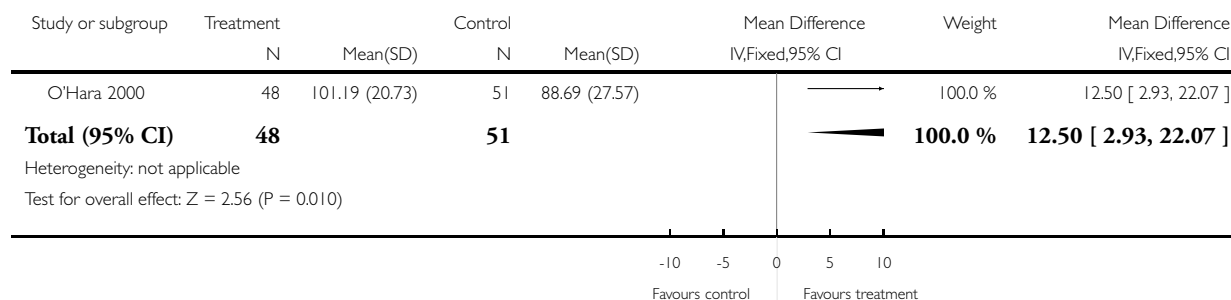


Analysis 1.9. Comparison 1 All interventions versus usual care - all trials, Outcome 9 Relationship quality with partner.

Review: Psychosocial and psychological interventions for treating postpartum depression

Comparison: 1 All interventions versus usual care - all trials

Outcome: 9 Relationship quality with partner

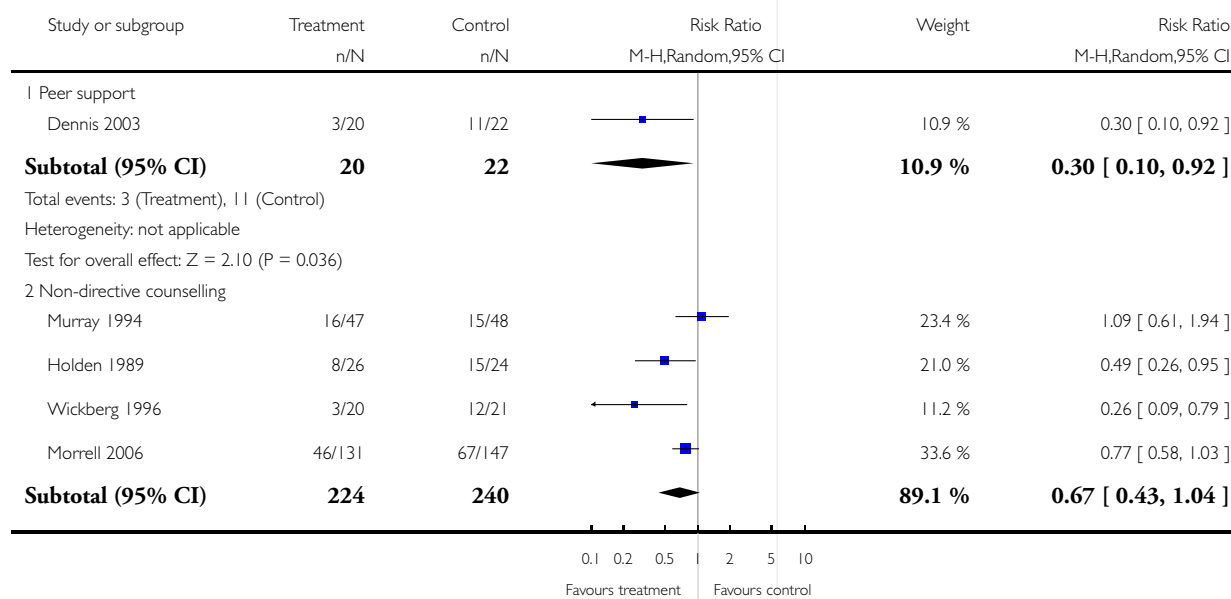


Analysis 2.1. Comparison 2 Psychosocial interventions versus usual care - variations in intervention type, Outcome 1 Evidence of depression at final assessment within first year.

Review: Psychosocial and psychological interventions for treating postpartum depression

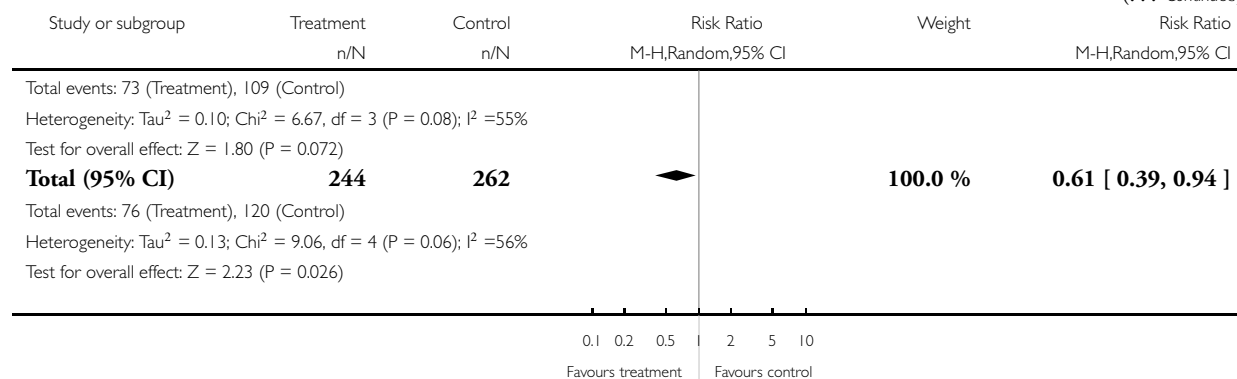
Comparison: 2 Psychosocial interventions versus usual care - variations in intervention type

Outcome: 1 Evidence of depression at final assessment within first year



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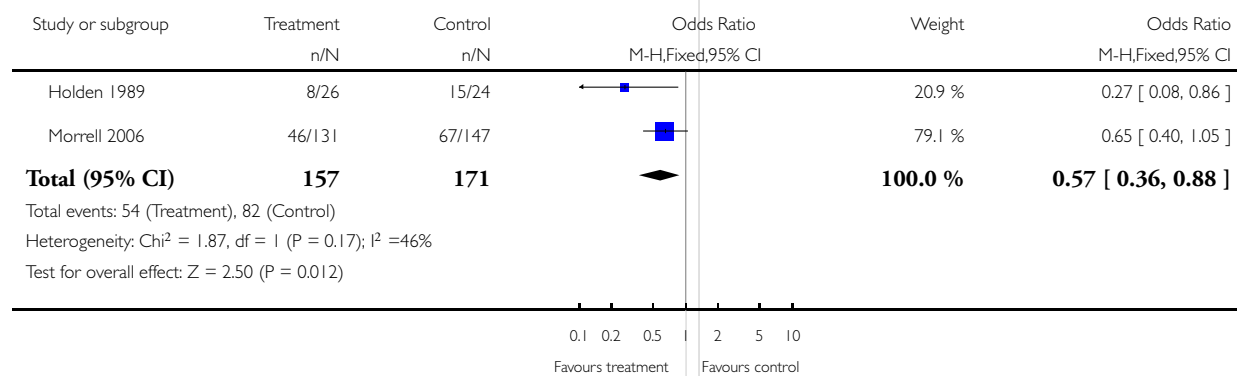


Analysis 2.2. Comparison 2 Psychosocial interventions versus usual care - variations in intervention type, Outcome 2 Evidence of depression at final assessment - sensitivity analysis.

Review: Psychosocial and psychological interventions for treating postpartum depression

Comparison: 2 Psychosocial interventions versus usual care - variations in intervention type

Outcome: 2 Evidence of depression at final assessment - sensitivity analysis

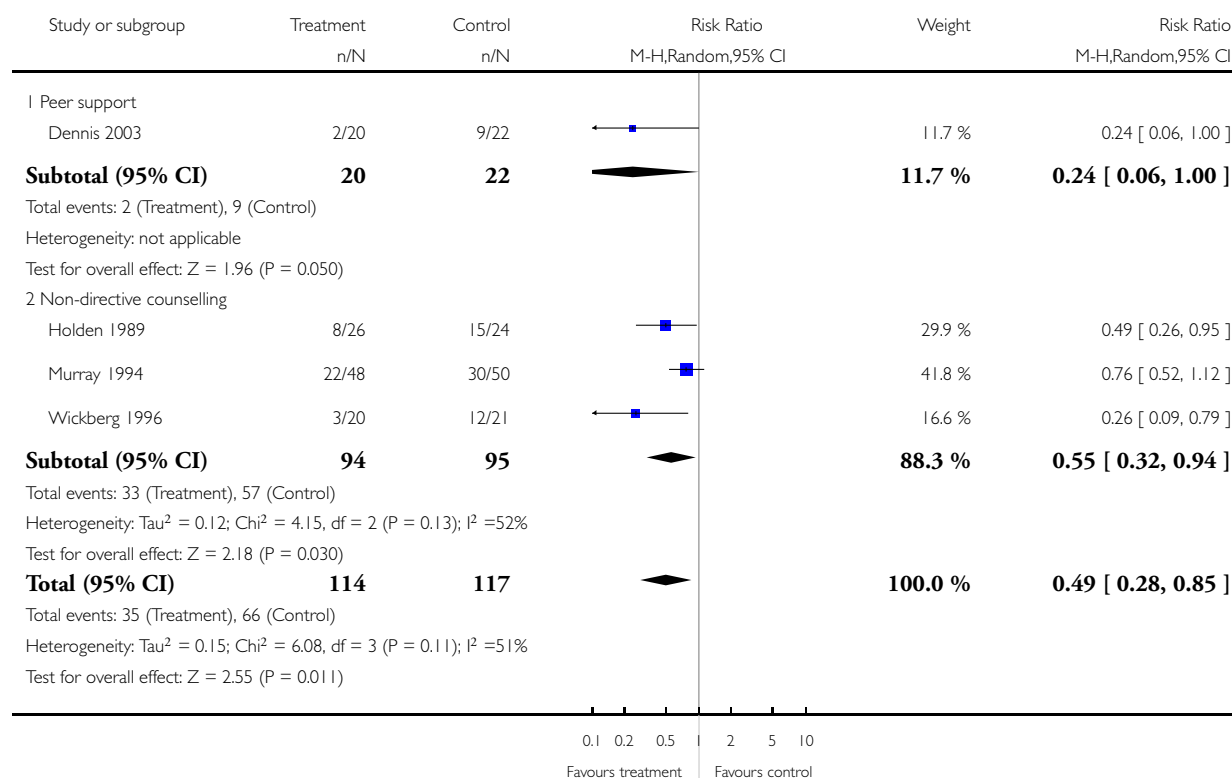


Analysis 2.3. Comparison 2 Psychosocial interventions versus usual care - variations in intervention type, Outcome 3 Evidence of depression at assessment immediately post-treatment.

Review: Psychosocial and psychological interventions for treating postpartum depression

Comparison: 2 Psychosocial interventions versus usual care - variations in intervention type

Outcome: 3 Evidence of depression at assessment immediately post-treatment

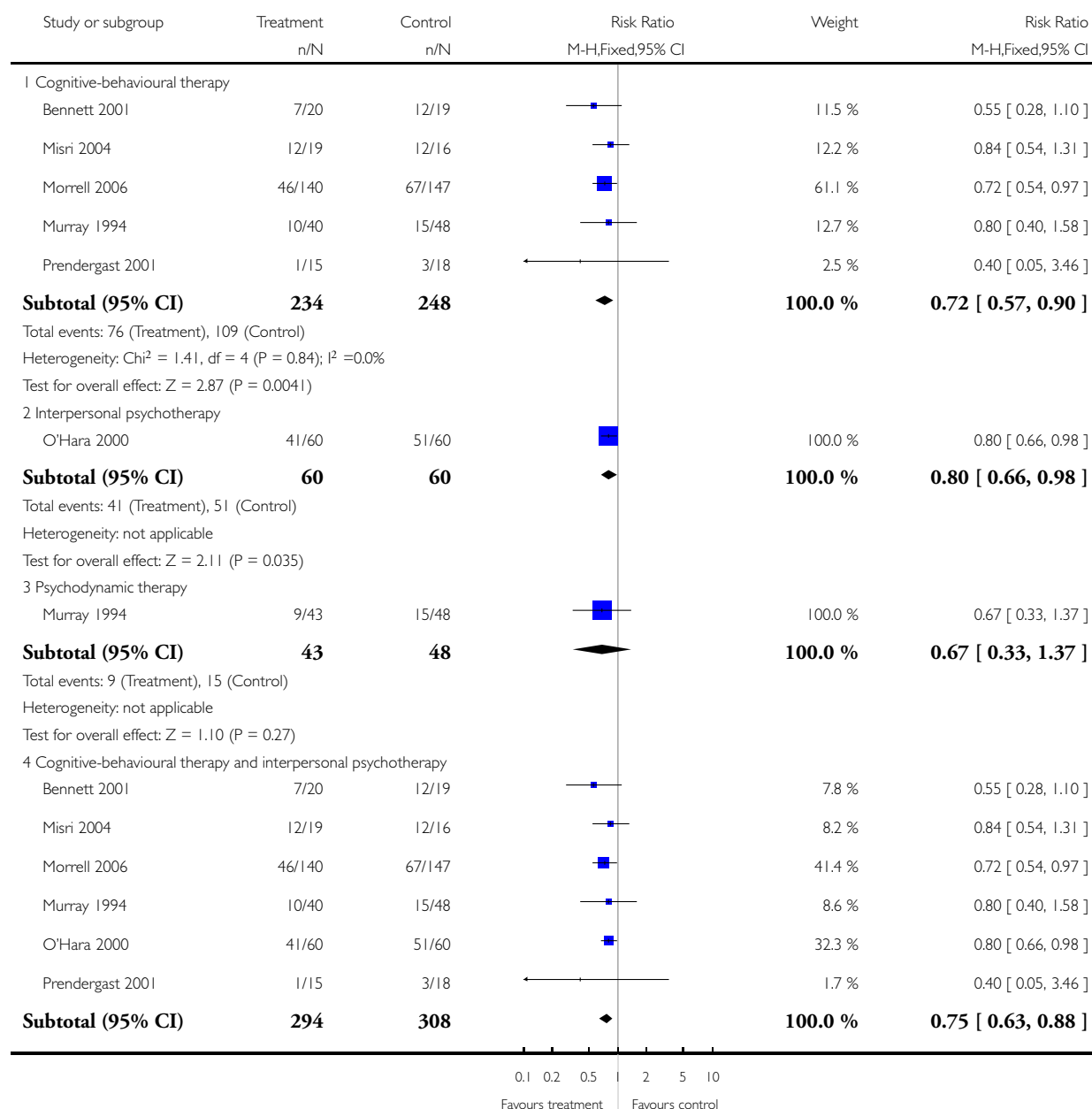


Analysis 3.1. Comparison 3 Psychological interventions versus usual care - variations in intervention type, Outcome 1 Evidence of depression at final assessment within first year.

Review: Psychosocial and psychological interventions for treating postpartum depression

Comparison: 3 Psychological interventions versus usual care - variations in intervention type

Outcome: 1 Evidence of depression at final assessment within first year



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Study or subgroup	Treatment n/N	Control n/N	Risk Ratio M-H,Fixed,95% CI	Weight	Risk Ratio M-H,Fixed,95% CI
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Total events: 117 (Treatment), 160 (Control)
Heterogeneity: Chi² = 1.94, df = 5 (P = 0.86); I² = 0.0%
Test for overall effect: Z = 3.49 (P = 0.00049)

0.1 0.2 0.5 2 5 10
Favours treatment Favours control

Analysis 3.2. Comparison 3 Psychological interventions versus usual care - variations in intervention type, Outcome 2 Evidence of depression at assessment immediately post-treatment.

Review: Psychosocial and psychological interventions for treating postpartum depression
Comparison: 3 Psychological interventions versus usual care - variations in intervention type
Outcome: 2 Evidence of depression at assessment immediately post-treatment

Study or subgroup	Treatment n/N	Control n/N	Risk Ratio M-H,Fixed,95% CI	Weight	Risk Ratio M-H,Fixed,95% CI
1 Cognitive-behavioural therapy					
Bennett 2001	15/23	16/22		26.7 %	0.90 [0.61, 1.33]
Misri 2004	12/19	12/16		21.2 %	0.84 [0.54, 1.31]
Murray 1994	18/42	30/50		44.6 %	0.71 [0.47, 1.08]
Prendergast 2001	3/17	5/20		7.5 %	0.71 [0.20, 2.53]
Subtotal (95% CI)	101	108		100.0 %	0.79 [0.62, 1.01]
Total events: 48 (Treatment), 63 (Control) Heterogeneity: Chi ² = 0.74, df = 3 (P = 0.86); I ² = 0.0% Test for overall effect: Z = 1.87 (P = 0.061)					
2 Interpersonal psychotherapy					
O'Hara 2000	41/60	51/60		100.0 %	0.80 [0.66, 0.98]
Subtotal (95% CI)	60	60		100.0 %	0.80 [0.66, 0.98]
Total events: 41 (Treatment), 51 (Control) Heterogeneity: not applicable Test for overall effect: Z = 2.11 (P = 0.035)					
3 Psychodynamic therapy					
Murray 1994	13/45	30/50		100.0 %	0.48 [0.29, 0.80]
Subtotal (95% CI)	45	50		100.0 %	0.48 [0.29, 0.80]
Total events: 13 (Treatment), 30 (Control) Heterogeneity: not applicable Test for overall effect: Z = 2.80 (P = 0.0051)					

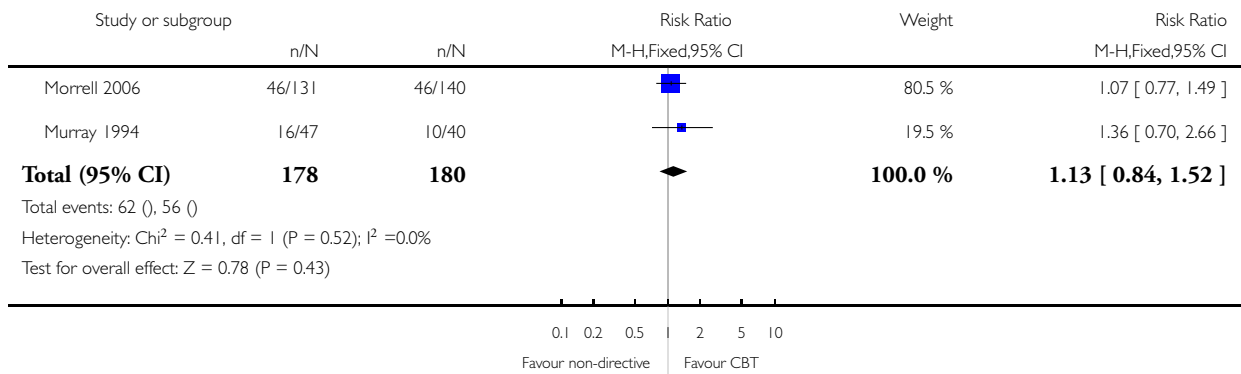
0.1 0.2 0.5 2 5 10
Favours treatment Favours control

Analysis 4.1. Comparison 4 Psychosocial interventions versus psychological interventions, Outcome 1 Non-directive counselling versus cognitive behavioural therapy at last assessment in first year.

Review: Psychosocial and psychological interventions for treating postpartum depression

Comparison: 4 Psychosocial interventions versus psychological interventions

Outcome: 1 Non-directive counselling versus cognitive behavioural therapy at last assessment in first year

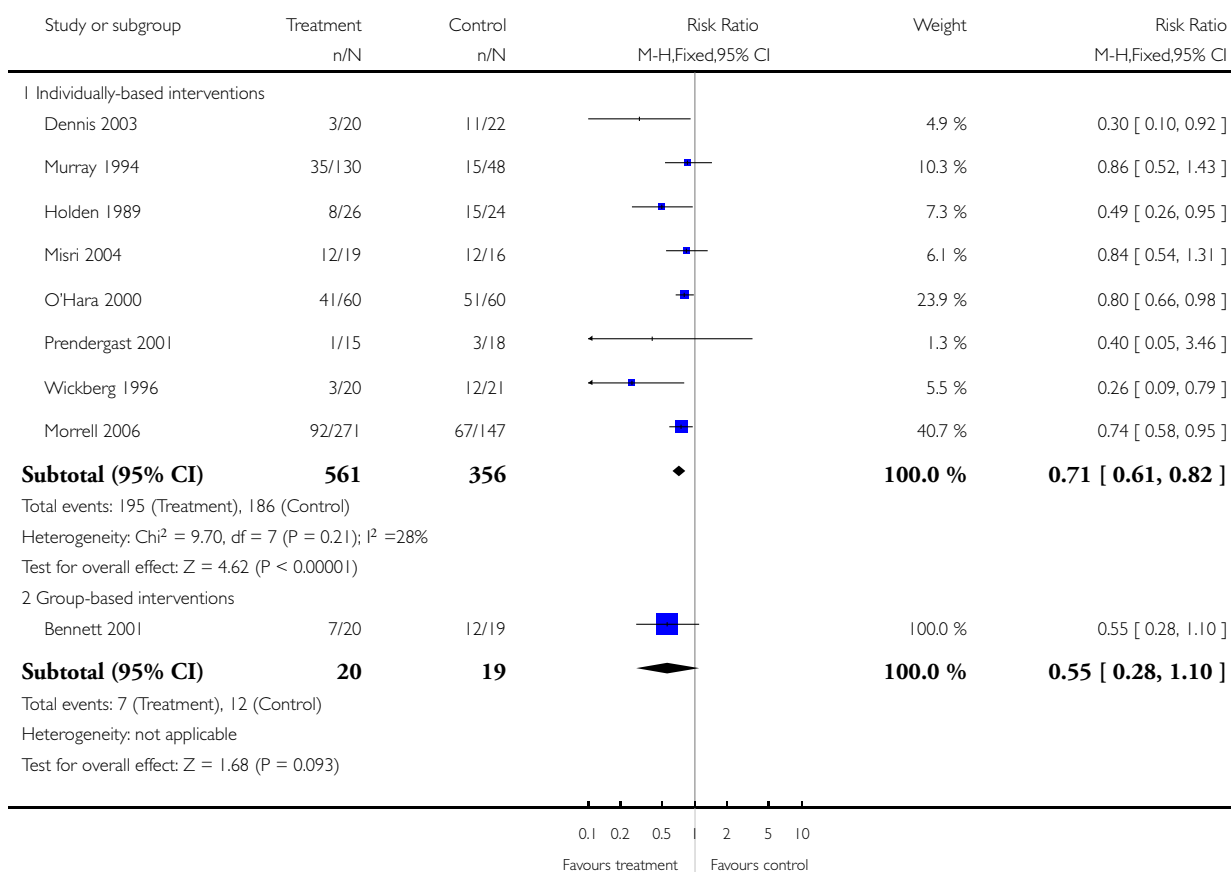


Analysis 5.1. Comparison 5 All interventions versus usual care - variations in intervention mode, Outcome 1 Evidence of depression at final assessment within first year.

Review: Psychosocial and psychological interventions for treating postpartum depression

Comparison: 5 All interventions versus usual care - variations in intervention mode

Outcome: 1 Evidence of depression at final assessment within first year

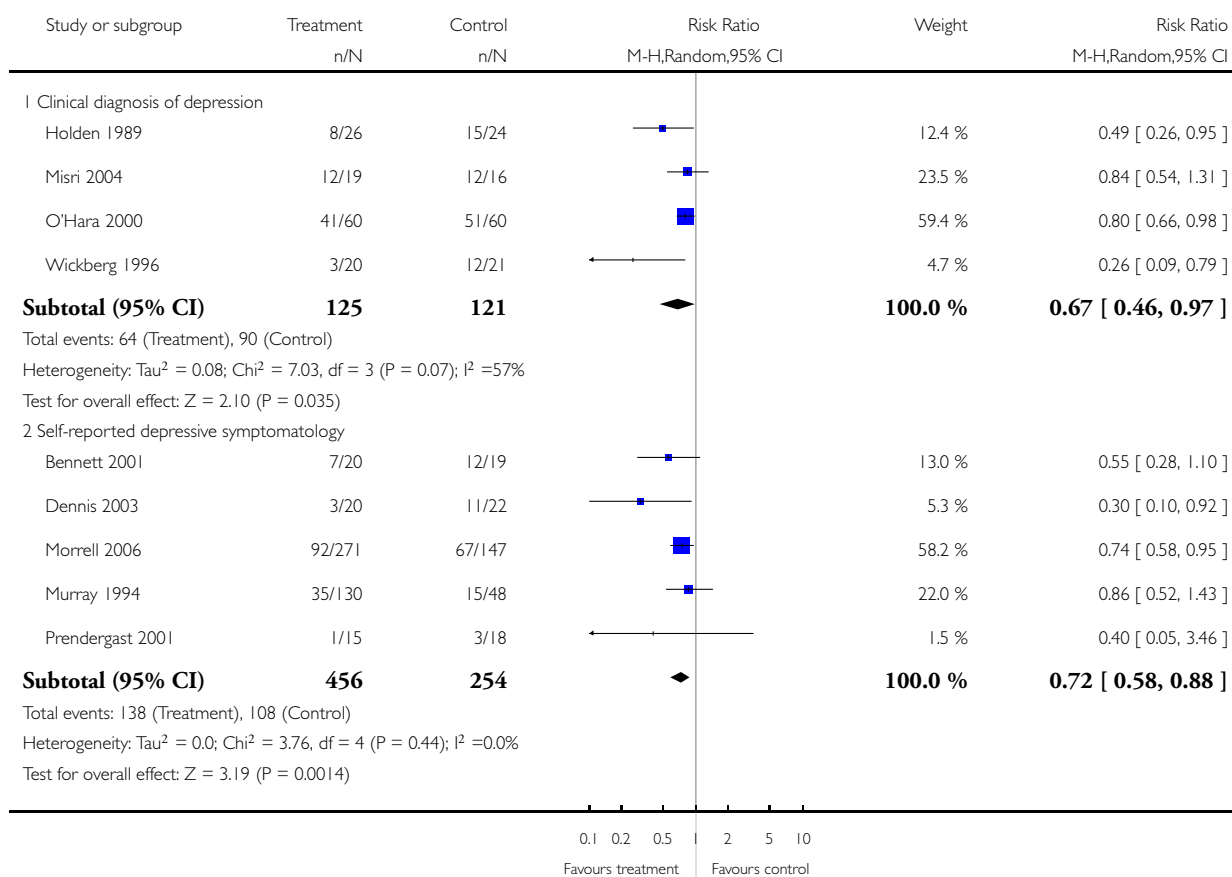


Analysis 6.1. Comparison 6 All interventions versus usual care - variations in selection criteria, Outcome 1 Evidence of depression at final assessment within first year.

Review: Psychosocial and psychological interventions for treating postpartum depression

Comparison: 6 All interventions versus usual care - variations in selection criteria

Outcome: 1 Evidence of depression at final assessment within first year



WHAT'S NEW

Last assessed as up-to-date: 1 August 2007.

5 November 2008 Amended Converted to new review format.

HISTORY

Protocol first published: Issue 3, 2006

Review first published: Issue 4, 2007

2 August 2007	New citation required and conclusions have changed	Substantive amendment
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CONTRIBUTIONS OF AUTHORS

Dr. Dennis developed the protocol, completed the search and retrieval of trials, completed all tables, and wrote the majority of the review.

Dr. Hodnett assisted Dr. Dennis in the critical appraisal of the trials, data entry, and writing the methodological quality and results sections of the review.

DECLARATIONS OF INTEREST

Dr. Dennis is a principal investigator of a recently completed postpartum depression prevention trial and an ongoing postpartum depression treatment trial. She is the primary reviewer for the following four additional Cochrane reviews related to perinatal mood disorders: (1) psychosocial and psychological interventions for preventing postpartum depression, (2) psychosocial and psychological interventions for treating antenatal depression, (3) oestrogens and progestins for preventing and treating postpartum depression, and (4) interventions (other than pharmacological, psychosocial or psychological) for treating antenatal depression. Dr. Hodnett is a co-investigator on Dr. Dennis' postpartum depression prevention and treatment trials.

SOURCES OF SUPPORT

Internal sources

- University of Toronto, Canada.

External sources

- No sources of support supplied

INDEX TERMS**Medical Subject Headings (MeSH)**

Depression, Postpartum [*therapy]; Psychotherapy [*methods]; Randomized Controlled Trials as Topic; Treatment Outcome

MeSH check words

Female; Humans