Psychosocial and psychological interventions for preventing postpartum depression (Review)

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[Intervention Review]

Psychosocial and psychological interventions for preventing postpartum depression

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ABSTRACT

Background

Epidemiological studies and meta-analyses of predictive studies have consistently demonstrated the importance of psychosocial and psychological variables as postpartum depression risk factors. While interventions based on these variables may be effective treatment strategies, theoretically they may also be used in pregnancy and the early postpartum period to prevent postpartum depression.

Objectives

Primary: to assess the effect of diverse psychosocial and psychological interventions compared with usual antepartum, intrapartum, or postpartum care to reduce the risk of developing postpartum depression. Secondary: to examine (1) the effectiveness of specific types of psychosocial and psychological interventions, (2) the effectiveness of professionally-based versus lay-based interventions, (3) the effectiveness of individually-based versus group-based interventions, (4) the effects of intervention onset and duration, and (5) whether interventions are more effective in women selected with specific risk factors.

Search methods

We searched the Cochrane Pregnancy and Childbirth Group's Trials Register (30 November 2011), scanned secondary references and contacted experts in the field. We updated the search on 31 December 2012 and added the results to the awaiting classification section of the review for assessment at the next update.

Selection criteria

All published and unpublished randomised controlled trials of acceptable quality comparing a psychosocial or psychological intervention with usual antenatal, intrapartum, or postpartum care.

Data collection and analysis

Review authors and a research co-ordinator with Cochrane review experience participated in the evaluation of methodological quality and data extraction. Additional information was sought from several trial researchers. Results are presented using risk ratio (RR) for categorical data and mean difference (MD) for continuous data.

Main results

Twenty-eight trials, involving almost 17,000 women, contributed data to the review. Overall, women who received a psychosocial or psychological intervention were significantly less likely to develop postpartum depression compared with those receiving standard care (average RR 0.78, 95% confidence interval (CI) 0.66 to 0.93; 20 trials, 14,727 women). Several promising interventions include: (1) the provision of intensive, individualised postpartum home visits provided by public health nurses or midwives (RR 0.56, 95% CI 0.43 to 0.73; two trials, 1262 women); (2) lay (peer)-based telephone support (RR 0.54, 95% CI 0.38 to 0.77; one trial, 612 women); and (3) interpersonal psychotherapy (standardised mean difference -0.27, 95% CI -0.52 to -0.01; five trials, 366 women). Professional- and lay-based interventions were both effective in reducing the risk to develop depressive symptomatology. Individually-based interventions reduced depressive symptomatology at final assessment (RR 0.75, 95% CI 0.61 to 0.92; 14 trials, 12,914 women) as did multiple-contact interventions (RR 0.78, 95% CI 0.66 to 0.93; 16 trials, 11,850 women). Interventions that were initiated in the postpartum period also significantly reduced the risk to develop depressive symptomatology (RR 0.73, 95% CI 0.59 to 0.90; 12 trials, 12,786 women). Identifying mothers 'at-risk' assisted the prevention of postpartum depression (RR 0.66, 95% CI 0.50 to 0.88; eight trials, 1853 women).

Authors' conclusions

Overall, psychosocial and psychological interventions significantly reduce the number of women who develop postpartum depression. Promising interventions include the provision of intensive, professionally-based postpartum home visits, telephone-based peer support, and interpersonal psychotherapy.

PLAIN LANGUAGE SUMMARY

Psychosocial and psychological interventions for preventing postpartum depression

Postpartum depression is a serious condition of significant public health importance. The purpose of this review was to examine the effect of psychosocial and psychological interventions to reduce the risk of postpartum depression compared with usual care. This review includes data from 28 randomised controlled trials involving almost 17,000 women. The preventative interventions evaluated in the included trials were diverse and the end-points differed widely but the methodological quality was good to excellent. A clear beneficial effect in the prevention of postpartum depression was found from a range of psychosocial and psychological interventions. Promising interventions included professionally-based postpartum home visits, lay- or peer-based postpartum telephone support, and interpersonal psychotherapy. Interventions provided by various health professionals and lay individuals were similarly beneficial. Interventions that were individually-based were beneficial as were those that involved multiple contacts. There is also evidence that interventions initiated postnatally assisted in preventing postpartum depression as were those specifically targeting 'at-risk' mothers. Many questions remain unanswered and additional research is needed.

BACKGROUND

Description of the condition

Depression is a major cause of disability for all ages and both sexes worldwide (WHO 2010). The public health significance of depression in women is undeniable, with lifetime rates between 10% and 25% (Kessler 2005; Weissman 1996). According to the World Health Organization, by 2020 depression is projected to carry the highest disease burden of all health conditions in women, accounting for 5.7% of the total disease burden measured in disability-adjusted life years. Depression impairs social and physical functioning, is a major precipitating factor in suicide, and is associated with healthcare costs, morbidity, and mortality from medical illness. For women aged 15 to 44, depression is the leading cause of non-obstetric hospitalisations among women in the United States (O'Hara 2009). Postpartum depression is often defined as depression occurring within the first year following childbirth. In most studies this includes those women for whom the depression may be a continuation of that experienced during pregnancy, as well as those for whom it is a new onset. The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) does not recognise

postpartum depression as diagnostically distinct from depression at other times, although does allow for the addition of a "postpartum-onset specifier" in women with an onset within four weeks of birth. Results from a meta-analysis of postpartum depression in 59 studies found an overall prevalence of 13% within the first 12 weeks following childbirth (n = 12,810; 95% confidence interval 12.3% to 13.4%)(O'Hara 1996). A more recent systematic review of postpartum depression found the period prevalence of all depression to be 19.2% in the first 12 weeks postnatally, with a period prevalence for major depression of 7.1% (Gaynes 2005). This review also identified depression to be common during pregnancy with a period prevalence of 18.4% across the nine months of pregnancy, with 12.7% having an episode of major depression during this time. Not surprisingly, antenatal depression is a strong risk factor of postpartum depression. For the majority of women, postpartum depression starts within the first 12 weeks postpartum and common symptoms include dysphoria, emotional lability, insomnia, confusion, guilt, and suicidal ideation. For about 8% of mothers, their depressive symptoms will continue past the first year postpartum (Dennis 2012). If left untreated, postpartum depression can develop into severe clinical depression and, in a small number of cases, lead to suicide, which is one of the leading causes of maternal deaths in the UK (Lewis 2007; Lindahl 2005).

How the intervention might work

The cause of postpartum depression suggests a multifactorial aetiology (Beck 2001; O'Hara 1996). Despite considerable research, no single causative factor has been isolated. However, meta-analytic findings consistently highlight the importance of psychosocial variables such as stressful life events, marital conflict, and the lack of social support. To address this issue, a variety of psychosocial and psychological interventions have been developed to treat postpartum depression (Dennis 2007). For example, randomised controlled trials evaluating cognitive-behavioural counselling with antidepressants (Appleby 1997), cognitive-behavioural therapy and non-directive counselling (Cooper 1997; Cooper 2003), health visitor-led non-directive counselling (Holden 1989; Wickberg 1996), peer support (Dennis 2003a), and interpersonal psychotherapy (O'Hara 2000) have all demonstrated the amenability of postpartum depression to treatment. It is theoretically plausible that psychosocial and psychological interventions may also prevent postpartum depression, as many of the known risk factors are present during pregnancy and the immediate postpartum period. As such, these interventions may be provided to women antenatally or initiated early in the postpartum period. They may be individually-based focusing on specific maternal needs or provided in a group setting that could incorporate peer support from other women and social comparisons. Interventions may be intensive and include multiple contacts or be provided during a single session. Interventions may also be provided by a health professional, such as a midwife, nurse, psychologist, or lay individuals such as experienced mothers recruited from the community. The usefulness of any intervention to prevent postpartum depression, at a population level, depends on the proportion of depressed women who would have been identified to be at risk and offered the intervention (sensitivity of risk targeting). The cost-effectiveness will depend crucially on the proportion of women who would have developed postpartum depression amongst those identified to be at risk (positive predictive value of risk targeting). One way to identify those at increased risk of developing postpartum depression is to use a risk screening tool. A simpler approach is to target individual risk groups. Although there are unique circumstances in the perinatal period that might increase risk of depression, such as obstetric and neonatal complications, the risk factors identified by most studies are similar to those for depression at other times such as a past history of psychopathology, antenatal depression or anxiety, a poor relationship with partner, low social support, and stressful life events (Beck 2001; O'Hara 1996). There are also specific subgroups of women who are at high risk, e.g. those with a history of abuse (emotional, physical, sexual) (Ross 2009), young mothers (Brown 2011), and migrant groups (Collins 2011).

It is anticipated that the psychosocial and psychological interventions may reduce the risk for postpartum depression via several mechanisms (Cohen 2000; Dennis 2003b). These interventions can *directly* influence the development of postpartum depression by: (1) decreasing isolation and feelings of loneliness, (2) swaying health practices and deterring maladaptive behaviours or responses, (3) promoting positive psychological states and individual motivation, and (4) providing information regarding access to medical services or the benefits of behaviours that positively influence health and well-being. They may also *buffer* the influence of stress by: (1) redefining and reducing the potential for harm posed by the stressor, (2) broadening the number of coping resources, (3) discussing coping strategies, problem-solving techniques, and counter-responses thereby moderating the initial appraisals of the stressor, (4) highlighting norms through social comparison which prescribe adaptive behaviour, (5) inhibiting maladaptive responses, and (6) counteracting the propensity to blame oneself for causing the stressor or adversity thus preventing active coping efforts to be hampered by self-recriminations. Lastly, psychosocial or psychological interventions may *mediate* the development of postpartum depression by: (1) assisting in the interpretation and positive reinforcement of performance accomplishments, (2) providing vicarious experience and observational learning through role modelling, (3) offering opportunities for social comparisons to promote self-evaluations and motivation, (4) teaching coping strategies and conveying information about ability, (5) positively interpreting emotional arousal, and (6) encouraging cognitive restructuring through anticipatory guidance.

Why it is important to do this review

Postpartum depression occurs at a time when the infant is maximally dependent on parental care and is highly sensitive to the quality of the interaction. Concern for infant development is warranted as mood disorders can be incompatible with good parenting interactions and can cause significant stress for children (England 2009; Goodman 1999). There is a substantial body of evidence showing that maternal depression and subsequent poor maternal-infant interactions adversely affect the developing child (Weinberg 1998; Weissman 2006). Observational research shows that children of depressed mothers, compared with those of non-depressed mothers, are more fussy, receive lower scores on measures of intellectual and motor development, have more difficult temperaments and less secure attachments to their mothers, react more negatively to stress, show delayed development of self-regulatory strategies, and exhibit poorer academic performance, fewer social competencies, lower levels of self-esteem, and higher levels of behavioural problems (England 2009; Goodman 1999). A recent meta-analysis, including 193 studies, reported that maternal depression (not restricted to the postnatal period), was associated with higher levels of internalising behaviour, externalising behaviour, general psychopathology and to lower levels of positive affect in the offspring (Goodman 2011). Of particular relevance is the observation that these effects were stronger if the child was exposed to maternal depression at an early age. Suggested mechanisms by which maternal-interactions transmit risk from depressed mother to the child include maternal modelling of depressed affect, cognitions, and behaviours; reduced positive reinforcement for the child and inconsistent discipline practices; the development of an insecure child attachment, an indirect influence on maternal depression through its detrimental effects on the marital relationship and family functioning. Not surprisingly, international experts have clearly identified maternal depression as a major childhood adversity and that effective interventions to address this condition are one of the most important public health preventive strategies we can implement to reduce the long-term negative developmental outcomes among children (England 2009). This review will assist in the development of effective postpartum depression interventions with the aim of reducing the number of women who develop postpartum depression and thus aid in *preventing* poor child developmental outcomes.

OBJECTIVES

The primary objective of this review was to assess the effects, on mothers and their families, of preventive psychosocial and psychological interventions compared with usual antepartum, intrapartum, or postpartum care to reduce the risk of postpartum depression. Secondary objectives were to examine:

1. the effectiveness of specific types of psychosocial interventions (e.g., a "talking therapy" which is theoretically based on the social environment such as enhancing supportive interactions or creating supportive relationships);

2. the effectiveness of specific types of psychological interventions (e.g., a "talking therapy" which is theoretically based in a specific psychological method such as cognitive behavioural therapy, interpersonal psychotherapy, psychological debriefing);

3. the effects of intervention provider (e.g., professionally-based interventions, lay-based interventions);

4. the effects of intervention mode (e.g., individually-based interventions, group-based interventions);

5. the effects of intervention duration (e.g., single-contact interventions, multiple-contact interventions);

6. the effects of intervention onset (e.g., antenatal only interventions, antenatal and postnatal interventions, and postnatal-only interventions);

7. the effects of sample selection criteria (e.g., interventions targeting women with specific risk factors, interventions offered to the general population).

METHODS

Criteria for considering studies for this review

Types of studies

All published, unpublished and ongoing randomised controlled trials of preventive psychosocial or psychological interventions in which the primary or secondary aim was reduction in the risk of developing postpartum depression. Quasi-randomised trials (e.g., those randomised by delivery date, or odd versus even medical record numbers) were excluded from the analysis.

Types of participants

Pregnant women and new (less than six weeks postpartum) mothers, including those at no known risk and those identified as at-risk of developing postpartum depression. Trials where more than 20% of participants were depressed at trial entry were excluded.

Types of interventions

Any form of standard or usual care compared with a variety of non-pharmaceutical interventions - including psycho educational strategies, cognitive behavioural therapy, interpersonal psychotherapy, non-directive counselling, psychological debriefing, various supportive interactions, and tangible assistance - delivered

via telephone, home or clinic visits, or individual or group sessions antenatally and/or within the first month postpartum by a professional (e.g., nurse, midwife, childbirth educator, physician, psychiatrist, psychologist) or lay person (e.g., specially trained woman from the community, student, research assistant).

Types of outcome measures

Primary outcome

Maternal

1. Postpartum depression (as variously defined and measured by trialists).

Secondary outcomes

Maternal

2. Maternal mortality and serious morbidity including self-harm, suicide attempts.
3. Maternal-infant attachment.
4. Anxiety.
5. Maternal stress.
6. Parental stress (e.g. measured using a tool such as the parenting stress index, Abidin 1995).
7. Maternal perceived social support.
8. Maternal dissatisfaction with care provided.

Infant

9. Infant health parameters including no immunisation or having accidental injury or non accidental injury.
10. Infant developmental assessments (variously defined).
11. Child abuse and/or neglect.

Family outcomes

12. Marital discord

The outcomes were assessed at four time points across the postpartum period:

- immediate (zero to eight weeks postpartum);
- short term (nine to 16 weeks postpartum);
- intermediate (17 to 24 weeks postpartum);
- long term (greater than 24 weeks postpartum).

Search methods for identification of studies

Electronic searches

We searched the Cochrane Pregnancy and Childbirth Group trials register by contacting the Trials Search Co-ordinator (30 November 2011). We updated the search on 31 December 2012 and added the results to Characteristics of studies awaiting classification for consideration at the next update.

The Cochrane Pregnancy and Childbirth Group's Trials Register is maintained by the Trials Search Co-ordinator and contains trials identified from:

1. monthly searches of the Cochrane Central Register of Controlled Trials (CENTRAL);
2. weekly searches of MEDLINE;
3. weekly searches of EMBASE;
4. handsearches of 30 journals and the proceedings of major conferences;
5. weekly current awareness alerts for a further 44 journals plus monthly BioMed Central email alerts.

Details of the search strategies for CENTRAL, MEDLINE and EMBASE, the list of handsearched journals and conference proceedings, and the list of journals reviewed via the current awareness service can be found in the 'Specialized Register' section within the editorial information about the Cochrane Pregnancy and Childbirth Group.

Trials identified through the searching activities described above are each assigned to a review topic (or topics). The Trials Search Co-ordinator searches the register for each review using the topic list rather than keywords.

Searching other resources

We examined secondary references and contacted experts in the field.

We did not apply any language restrictions.

Data collection and analysis

For the methods used when assessing the trials identified in the previous version of this review, *see* Appendix 1. For this update we used the following methods when assessing the reports identified by the updated search.

Selection of studies

Two review authors independently assessed for inclusion all the potential studies we identified as a result of the search strategy. We resolved any uncertainties regarding the appropriateness for inclusion through discussion or consultation with a third person.

Data extraction and management

We designed a form to extract data. For eligible studies, two review authors independently extracted the data using the agreed form. We resolved discrepancies through discussion or, if required, we consulted a third person. We entered data into Review Manager software (RevMan 2011) and checked for accuracy.

When information regarding any of the above was unclear, we attempted to contact authors of the original reports to provide further details.

Assessment of risk of bias in included studies

Two review authors independently assessed the risk of bias for each study using the criteria outlined in the *Cochrane Handbook for Systematic Reviews of Interventions* (Higgins 2011). We resolved any disagreement by discussion or by involving a third person.

(1) Sequence generation (checking for possible selection bias)

We described for each included study the method used to generate the allocation sequence in sufficient detail to allow an assessment of whether it should produce comparable groups.

We assessed the method as:

- low risk of bias (any truly random process, e.g., random number table; computer random number generator);
- high risk of bias (any non-random process, e.g., odd or even date of birth; hospital or clinic record number);
- unclear risk of bias.

(2) Allocation concealment (checking for possible selection bias)

We described for each included study the method used to conceal the allocation sequence and determined whether intervention allocation could have been foreseen in advance of, or during recruitment, or changed after assignment.

We assessed the methods as:

- low risk of bias (e.g., telephone or central randomisation; consecutively numbered sealed opaque envelopes);
- high risk of bias (open random allocation; unsealed or non-opaque envelopes, alternation; date of birth);
- unclear risk of bias.

(3) Blinding (checking for possible performance bias)

We described for each included study the methods used, if any, to blind study participants and personnel from knowledge of which intervention a participant received. Since women and care providers cannot be easily blinded as to whether a psychosocial or psychological intervention was given, we considered blinding adequate if outcomes were recorded by outcome assessors who had no knowledge of the woman's group assignment or if the women self-reported outcome data by mailed questionnaire. We considered studies at low risk of bias if they were blinded, or if we judged that the lack of blinding could not have affected the results. We assessed blinding separately for participants and staff and for outcome assessors.

We assessed the methods as:

- low, high or unclear risk of bias for participants and personnel;
- low, high or unclear risk of bias for outcome assessors.

(4) Incomplete outcome data (checking for possible attrition bias through withdrawals, dropouts, protocol deviations)

We described for each included study, and for each outcome or class of outcomes, the completeness of data including attrition and exclusions from the analysis. We stated whether attrition and exclusions were reported, the numbers included in the analysis at each stage (compared with the total randomised participants), reasons for attrition or exclusion where reported, and whether missing data were balanced across groups or were related to outcomes. Where sufficient information was reported, or could be supplied by the trial authors, we planned to include missing data in the analyses. We did not exclude any trial or outcome from the analysis based on rate of incomplete data. We performed a sensitivity analysis for those trials where 80% of data on a given outcome was available for those who were originally randomised versus those with < 80%.

We assessed methods as:

- low risk of bias;
- high risk of bias;
- unclear risk of bias.

(5) Selective reporting bias

We described for each included study how we investigated the possibility of selective outcome reporting bias and what we found. We assessed the methods as:

- low risk of bias (where it is clear that all of the study's pre-specified outcomes and all expected outcomes of interest to the review have been reported);
- high risk of bias (where not all the study's pre-specified outcomes have been reported; one or more reported primary outcomes were not pre-specified; outcomes of interest were reported incompletely and so could not be used; study failed to include results of a key outcome that would have been expected to have been reported);
- unclear risk of bias.

(6) Other sources of bias

We described for each included study any important concerns we had about other possible sources of bias.

We assessed whether each study was free of other problems that could put it at risk of bias:

- low risk of other sources of bias;
- high risk of other sources of bias;
- unclear risk of other sources of bias.

For cluster-randomised trials we described the following (as per the *Cochrane Handbook for Systematic Reviews of Interventions* 16.3.2 Higgins 2011).

1. Recruitment bias - whether the individuals participating in the trial were blinded to the type of cluster they were in before agreeing to participate.
2. Baseline imbalances - whether there were differences in baseline characteristics between the randomised groups.
3. Loss of clusters - whether any complete clusters were lost to follow-up and the reasons.
4. Incorrect analysis - whether the proper statistical analysis was carried out for a cluster-randomised design.
5. Differences in intervention effects - whether the cluster-randomisation method could have resulted in different intervention effects than an individually-randomised trial.

(7) Overall risk of bias

We made explicit judgements about whether studies were at high risk of bias, according to the criteria given in the *Cochrane Handbook for Systematic Reviews of Interventions* (Higgins 2011). With reference to (1) to (6) above, we assessed the likely magnitude and direction of the bias and whether we considered it was likely to impact on the findings. We explored the impact of the level of bias through undertaking sensitivity analyses - *see* Sensitivity analysis.

Measures of treatment effect

Dichotomous data

For dichotomous data, we presented results as summary risk ratio with 95% confidence intervals.

Continuous data

For continuous data, we used the mean difference if outcomes were measured in the same way between trials. We used the standardised mean difference to combine trials that examined the same outcome, but used different measures.

Unit of analysis issues

Cluster-randomised trials

We included cluster-randomised trials in the analyses along with individually-randomised trials. We adjusted the sample sizes using the methods described in the *Cochrane Handbook for Systematic Reviews of Interventions* Section 16.3.4 using an estimate of the intracluster correlation co-efficient (ICC) derived from the trial. We synthesised the relevant information from the cluster-randomised trials and individually-randomised trials we identified. We considered it reasonable to combine the results from both as there was little heterogeneity between the study designs and the interaction between the effect of intervention and the choice of randomisation unit was considered to be unlikely.

We also acknowledged heterogeneity in the randomisation unit and performed a sensitivity analysis to investigate the effects of the randomisation unit.

Other unit of analysis issues

In Sen 2006, data for the mother-infant attachment outcome were collected for each twin. We took the 'worst' score from the two twins so we did not miss a 'bad outcome'.

Dealing with missing data

For included studies, we noted levels of attrition. We explored the impact of including studies with high levels of missing data in the overall assessment of treatment effect by using sensitivity analysis. We compared those trials where 80% of data on a given outcome were available for those who were originally randomised versus those with less than 80%.

For all outcomes, we carried out analyses, as far as possible, on an intention-to-treat basis, i.e., we attempted to include all participants randomised to each group in the analyses, and all participants were analysed in the group to which they were allocated, regardless of whether or not they received the allocated intervention. The denominator for each outcome in each trial was the number randomised minus any participants whose outcomes were known to be missing.

Assessment of heterogeneity

We assessed statistical heterogeneity in each meta-analysis using the T^2, I^2 and Chi^2 statistics. We regarded heterogeneity as substantial if T^2 was greater than zero and either I^2 was greater than 30% or there was a low P value (less than 0.10) in the Chi^2 test for heterogeneity.

Assessment of reporting biases

For the primary outcome (postpartum depression), if there were 10 or more studies in the meta-analysis we investigated possible reporting biases (such as publication bias) using funnel plots. We assessed funnel plots visually, and if there had been any obvious

asymmetry apparent we planned to seek statistical advice on carrying out formal tests for funnel plot asymmetry.

Data synthesis

We carried out statistical analysis using the Review Manager software (RevMan 2011). All trials were considered to include some form of 'talking therapy' and thus eligible to be combined in a meta-analysis. We used fixed-effect meta-analysis for combining data where it was reasonable to assume that the studies were estimating the same underlying treatment effect: i.e., where trials examined similar interventions, and the trials' populations and methods were judged sufficiently similar. If there was clinical heterogeneity sufficient to expect that the underlying treatment effects differed between trials, or if substantial statistical heterogeneity was detected, we used random-effects meta-analysis to produce an overall summary if an average treatment effect across trials was considered clinically meaningful. The random-effects summary was treated as the average range of possible treatment effects and we discussed the clinical implications of treatment effects differing between trials. If the average treatment effect was not clinically meaningful, we did not combine trials. If we used random-effects analyses, the results were presented as the average treatment effect with its 95% confidence interval, and the estimates of T^2 and I^2.

Subgroup analysis and investigation of heterogeneity

We planned and completed the following a priori subgroup analyses:

1. the effect of psychosocial interventions (e.g., antenatal/ postnatal classes, professional home visits, lay home visits, lay telephone support, early postpartum follow-up, continuity model of care);
2. the effect of psychological interventions (e.g., cognitive behavioural therapy, interpersonal psychotherapy, psychological debriefing);
3. the effect of intervention provider (e.g., professionally-based and lay-based interventions);
4. the effect of intervention mode (e.g., individual-based and group-based interventions);
5. the effect of intervention duration (e.g., single-contact and multiple-contact interventions);
6. the effect of intervention onset (e.g., antenatal-only interventions, antenatal and postnatal interventions and postnatal-only interventions);
7. the effects of sample selection criteria (e.g., interventions targeting women with specific risk factors and the general population).

Where data were available, the following postpartum depression outcomes were used in subgroup analysis:

1. depressive symptomatolgy (as defined by trialist, presented as dichotomous outcome;
2. mean depression scores (as defined by trialist, presented as continuous measure);
3. diagnosis of depression (as defined by trialist).

All outcomes were assessed at four time points across the postpartum period:

- immediate (zero to eight weeks postpartum);
- short term (nine to 16 weeks postpartum);
- intermediate (17 to 24 weeks postpartum);
- long term (more than 24 weeks postpartum).

For random-effects and fixed-effect meta-analyses, we assessed differences between subgroups by inspection of the subgroups' confidence intervals; non-overlapping confidence intervals suggested a statistically significant difference in treatment effect between the subgroups. We also carried out formal sub-group analysis available in RevMan 2011. Where data were available we set up analysis for all of the four time points described above, but in the text we have reported results only for outcomes measured at the final study assessment.

Sensitivity analysis

We performed sensitivity analyses, for the primary outcome, in instances in which any of the following occurred:

1. a high risk of bias associated with the methodological quality of included trials;
2. incomplete outcome data (more than 20% missing data) for any of the included trials.

RESULTS

Description of studies

See: Characteristics of included studies; Characteristics of excluded studies; Characteristics of studies awaiting classification; Characteristics of ongoing studies.

Please see table of Characteristics of included studies. Thirty trials, reported between 1995 and 2011, were identified and met the inclusion criteria. Two trials (Austin 2008; Heinicke 1999) that were otherwise eligible for inclusion in the review did not report usable data for our primary outcome. Further information about these studies can be found in the Characteristics of included studies tables but these trials will not be discussed below. In total, 16,912 women from 28 trials were included in the meta-analyses.The trials were primarily conducted in Australia and the UK; four trials were conducted in the USA (Feinberg 2008; Gjerdingen 2002; Gorman 1997; Zlotnick 2001), two trials were conducted in China (Gao 2010; Tam 2003), and one trial was conducted in each of the following countries: Canada (Dennis 2009), Germany (Weidner 2010) and India (Tripathy 2010). While all trials included

the outcome postpartum depression, several studies provided data on other variables including: maternal mortality (Tripathy 2010), maternal-infant attachment (Armstrong 1999; Feinberg 2008; Sen 2006), anxiety (Dennis 2009; Gamble 2005; Gorman 1997; Lavender 1998; Sen 2006; Weidner 2010), maternal stress (Gamble 2005; Ickovics 2011), parental stress (Armstrong 1999; Cupples 2011; Sen 2006), perceived social support (Armstrong 1999; Brugha 2000; Gjerdingen 2002; Ickovics 2011; Lumley 2006; Morrell 2000; Reid 2002; Sen 2006),dissatisfaction with care provided (Armstrong 1999; MacArthur 2002; Sen 2006; Small 2000; Tam 2003; Waldenstrom 2000), infant health parameters such as full immunisation (MacArthur 2002), infant development (Cupples 2011), child abuse (Armstrong 1999), and marital discord (Gjerdingen 2002; Gorman 1997; Sen 2006).

Definition of postpartum depression

In all trials but seven (Cupples 2011; Feinberg 2008; Gjerdingen 2002; Ickovics 2011; Weidner 2010; Zlotnick 2001; Zlotnick 2006), postpartum depressive symptomatology was defined as a score above a specified cut-off point on a self-report measure; for the majority of studies (15) an Edinburgh Postnatal Depression Scale (EPDS) score greater than 12 (also reported as a 12/13 cut-off score) indicated postpartum depression. Several studies also reported mean EPDS scores (Armstrong 1999; Dennis 2009; Gao 2010, Gorman 1997; Gunn 1998; Ickovics 2011; Le 2011; Lumley 2006; MacArthur 2002; Morrell 2000; Reid 2002; Sen 2006; Small 2000). Three additional trials used the EPDS to measure postpartum depression but incorporated a different cut-off score; Brugha 2000 used a 10/11 cut-off, while Morrell 2000 and Reid 2002 selected a 11/12 cut-off. 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 20 languages. Several other trials used a self-report measure other than the EPDS and included the Beck Depression Inventory (BDI) (Le 2011; Zlotnick 2001; Zlotnick 2006), Center for Epidemiologic Studies Depression Scale (CES-D) (Feinberg 2008; Ickovics 2011), Hospital Anxiety and Depression Scale (HADS) (Lavender 1998; Tam 2003; Weidner 2010), Kessler-10 (Tripathy 2010), and the SF36 Mental Health Subscale (Cupples 2011; Gjerdingen 2002). For trials that used two self-report measures of depression, if one was the EPDS then those data were used. Five trials incorporated a semi-structured diagnostic interview to provide a clinical diagnosis of depression (Brugha 2000; Dennis 2009; Gorman 1997; Harris 2006; Zlotnick 2001) with four of these trials using the Structured Clinical Interview for DSM-IV (SCID).

The timing of the outcome assessments varied considerably between studies, ranging from three (Lavender 1998) to more than 24 weeks (Armstrong 1999; Cupples 2011; Ickovics 2011; Le 2011; MacArthur 2002; Priest 2003; Sen 2006). Due to the significant differences in the timing of outcome data, we included an additional outcome assessment point that included data "at final study assessment".

Types of psychosocial interventions

The studies were subgrouped into categories to examine specific types of psychosocial interventions such as antenatal and postnatal classes/groups (Brugha 2000; Feinberg 2008; Gjerdingen 2002; Ickovics 2011; Reid 2002; Stamp 1995; Tripathy 2010), professional- (Armstrong 1999; MacArthur 2002) and lay-based (Cupples 2011; Harris 2006; Morrell 2000) home visits, lay-based telephone support (Dennis 2009), early postpartum follow-up (e.g., routine postpartum care initiated earlier than standard practice) (Gunn 1998), continuity/models of care (Lumley 2006; Sen 2006; Waldenstrom 2000). In the majority of studies, the control group was reported to have received usual antenatal/postnatal care, which varied both between and within countries. Wherever there were individual study details on care received by the control group, these are presented in the Characteristics of included studies tables.

Types of psychological interventions

The studies were subgrouped into categories to examine specific types of psychological interventions, such as debriefing (Gamble 2005; Lavender 1998; Priest 2003; Small 2000; Tam 2003), cognitive behavioural therapy (Le 2011), interpersonal psychotherapy (Gao 2010, Gorman 1997; Weidner 2010; Zlotnick 2001; Zlotnick 2006).

Differences in intervention provider, mode of delivery, duration, and onset

The interventions were provided by a variety of professionals including nurses (Armstrong 1999; Brugha 2000; Lumley 2006; Tam 2003; Zlotnick 2006), physicians (Gunn 1998; Lumley 2006), midwives (Gamble 2005; Gao 2010; Ickovics 2011; Lavender 1998; MacArthur 2002; Priest 2003; Reid 2002; Sen 2006; Small 2000; Stamp 1995; Waldenstrom 2000), mental health specialists (Gorman 1997; Weidner 2010) including psychologists Gjerdingen 2002). In seven trials, the intervention was provided by lay individuals (Cupples 2011; Dennis 2009; Feinberg 2008; Harris 2006; Morrell 2000; Tripathy 2010) including trained research staff (Le 2011). Eleven trials (Brugha 2000; Feinberg 2008; Gao 2010; Gjerdingen 2002; Ickovics 2011; Le 2011; Reid 2002; Stamp 1995; Tripathy 2010; Zlotnick 2001; Zlotnick 2006) provided an intervention that was delivered to groups of women. If parts of the intervention were individualised

and other parts were group-based, the subgroup classification was determined by the main focus of the intervention. All trials but four (Gunn 1998; Lavender 1998; Priest 2003; Small 2000) provided multiple contacts as part of the intervention. Four trials (Gjerdingen 2002; Ickovics 2011; Weidner 2010; Zlotnick 2001) evaluated an intervention that was provided solely in the antenatal period. Twelve trials (Brugha 2000; Cupples 2011; Feinberg 2008; Gao 2010; Gorman 1997; Harris 2006; Le 2011; Sen 2006; Stamp 1995; Tripathy 2010; Waldenstrom 2000; Zlotnick 2006) incorporated an intervention that was initiated antenatally and continued into the postpartum period and 12 trials (Armstrong 1999; Dennis 2009; Gamble 2005; Gunn 1998; Lavender 1998; Lumley 2006; MacArthur 2002; Morrell 2000; Priest 2003; Reid 2002; Small 2000; Tam 2003) evaluated a postnatal-only intervention

Differences in sample selection criteria

Twelve of the trials targeted at-risk women based on various factors believed to put them at additional likelihood of developing postpartum depression (Armstrong 1999; Brugha 2000; Dennis 2009; Gamble 2005; Gorman 1997; Harris 2006; Le 2011; Stamp 1995; Tam 2003; Weidner 2010; Zlotnick 2001; Zlotnick 2006) while the other 16 trials enrolled women from the general population.

Risk of bias in included studies

Randomisation was performed most frequently by consecutively numbered, sealed, opaque envelopes (Gamble 2005; Gorman 1997; Harris 2006; Lavender 1998; Le 2011; Morrell 2000; Priest 2003; Reid 2002; Stamp 1995; Tam 2003; Waldenstrom 2000). Various forms of computer-based randomisation was used by nine trials (Armstrong 1999; Brugha 2000; Cupples 2011; Feinberg 2008; Gao 2010; Gjerdingen 2002; Ickovics 2011; MacArthur 2002; Weidner 2010). Four trials incorporated a central, computerised randomisation service accessed by telephone (Gunn 1998; Small 2000) or the Web (Dennis 2009; Sen 2006) and two trials performed the randomisation of clusters at a public event (Lumley 2006; Tripathy 2010). Allocation concealment was unclear in four trials (Gao 2010; Lumley 2006; Zlotnick 2001; Zlotnick 2006). In all but three trials (Brugha 2000; Harris 2006; Le 2011) outcome data were collected by assessors blinded to group allocation or by mailed questionnaires; for three studies the method of collecting outcomes is unknown (Tam 2003; Zlotnick 2001; Zlotnick 2006). Six trials had a follow-up rate less than 80%: Gunn 1998 (69.7% at 12 weeks); Harris 2006 (55.5% at 12 weeks); MacArthur 2002 (72.8% at 16 weeks); Reid 2002 (73.3% at 12 weeks); Waldenstrom 2000 (68.4% at eight weeks) and Weidner 2010 (47.8% at 52 weeks). It is noteworthy that follow-up in all these trials except Harris 2006 was done by mailed questionnaires. Trials were excluded for sensitivity analyses related to high susceptibility to bias due to methodological quality (Brugha 2000; Harris 2006; Le 2011; Tam 2003; Weidner 2010; Zlotnick 2001; Zlotnick 2006) or follow-up losses greater than 20% (Gunn 1998; Harris 2006; MacArthur 2002; Reid 2002; Waldenstrom 2000; Weidner 2010). A summary of the risk of bias for all included studies can be found in Figure 1 and Figure 2.

Figure 1. 'Risk of bias' summary: review authors' judgements about each risk of bias item for each included study.

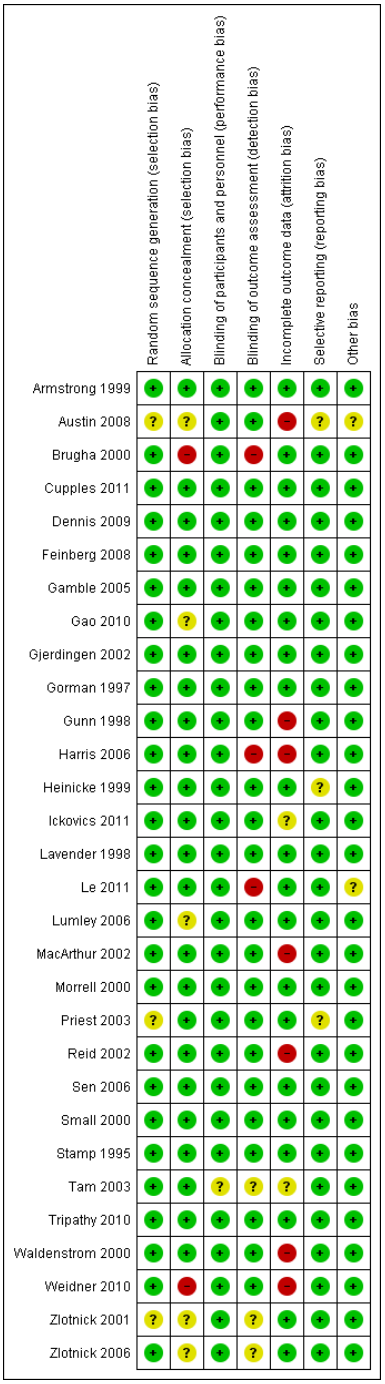
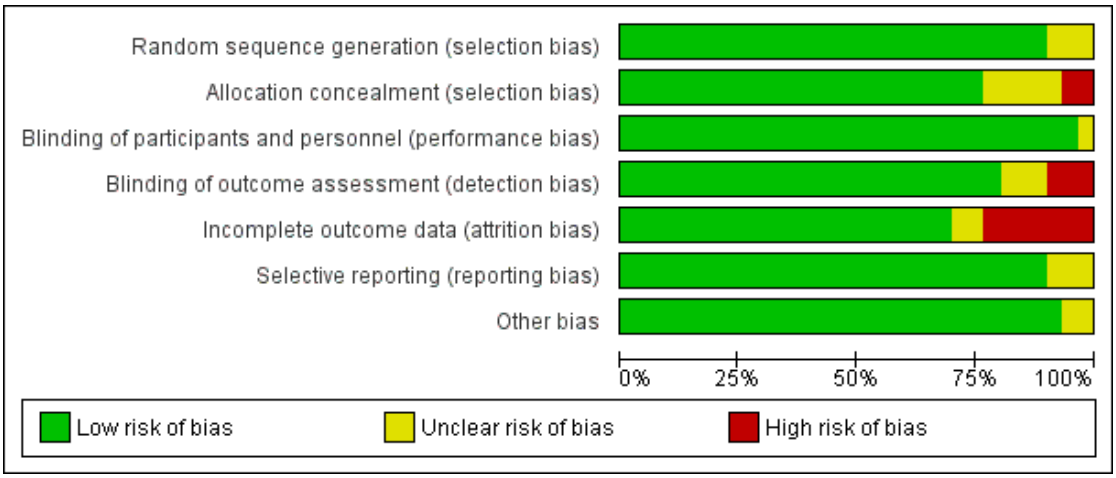


Figure 2. 'Risk of bias' graph: review authors' judgements about each risk of bias item presented as percentages across all included studies.



Effects of interventions

Twenty-eight trials, involving almost 17,000 women, were included in the meta-analyses. The results are presented in sequential order, starting with maternal outcomes followed by infant and family outcomes. Because of the large number of outcomes in this review, the following summary of results has been restricted at times to present only final study comparisons. Please refer to the meta-analyses graphs for the full results. According to our prespecified criteria, there was substantial statistical heterogeneity in many of the outcomes. We report results of random-effects analyses for our main comparison (one) and for other comparisons for those outcomes with statistical heterogeneity. Random-effects analyses provide an estimate of the average treatment effect and effects may differ considerably over different settings. Sensitivity analyses, conducted by removing trials with high likelihood of bias due to either methodological quality or follow-up losses greater than 20%, altered some of the conclusions and these have been noted in the text. Sensitivity analyses were not completed for the clinical diagnosis of depression outcome for any comparison due to small trial numbers. Outcomes were categorised and presented in the results as follows:

1. zero to eight weeks - immediate effects;
2. nine to 16 weeks - short-term effects;
3. 17 to 24 weeks - intermediate effects;
4. more than 24 weeks - long-term effects.

Main comparison one: all psychosocial and psychological interventions versus usual care - various study outcomes

We considered eight maternal outcomes, three infant outcomes, and one family outcome. Between one and 20 trials contributed to the analyses of each outcome. In this comparison, we combined trials that have evaluated very different types of interventions and thus there could be substantial clinical heterogeneity. To address this, we used random-effects analysis independent of statistical heterogeneity for all outcomes and, in view of this, we would advise caution in the interpretation of results.

A. Maternal outcomes

Primary outcome: postpartum depression at last study assessment (variously defined)

The main outcome measure for this review was postpartum depression at final study assessment. There was a beneficial effect on the prevention of depressive symptomatology in the meta-analysis of all types of interventions (20 trials, n = 14,727, average risk ratio (RR) 0.78, 95% confidence interval (CI) 0.66 to 0.93, I^2 64%, T^2 0.07, I^2 64%) (Analysis 1.1). The standard mean difference (SMD) among trials that provided mean scores was -0.13 (19 trials, n = 12,376, 95% CI -0.28 to 0.01, T^2 0.08, I^2 = 91%)

(Analysis 1.2). For these outcomes we generated funnel plots to investigate possible reporting biases; visual assessment suggested no obvious plot asymmetry (Figure 3; Figure 4). A significant preventative effect was found among the few studies that included a clinical diagnosis of depression (five trials; n = 939; average RR 0.50, 95% CI 0.32 to 0.78, T^2 0.00, I^2 = 0%) (Analysis 1.3). When trials with high susceptibility to bias were temporarily removed (sensitivity analysis related to poor methodological quality or more than 20 loss to follow-up rate), the direction of the effect remained the same for the depressive symptomatology (average RR 0.72, 95% CI 0.57 to 0.91) and also for the SMD in depression scores, although in this case the effect size was reduced when studies at high risk of bias were removed from the analysis (SMD -0.06, 95% CI -0.14 to 0.02) (data not shown).

Figure 3. Funnel plot of comparison: 1 All interventions versus usual care - various study outcomes, outcome: 1.1 Depressive symptomatology at final study assessment.

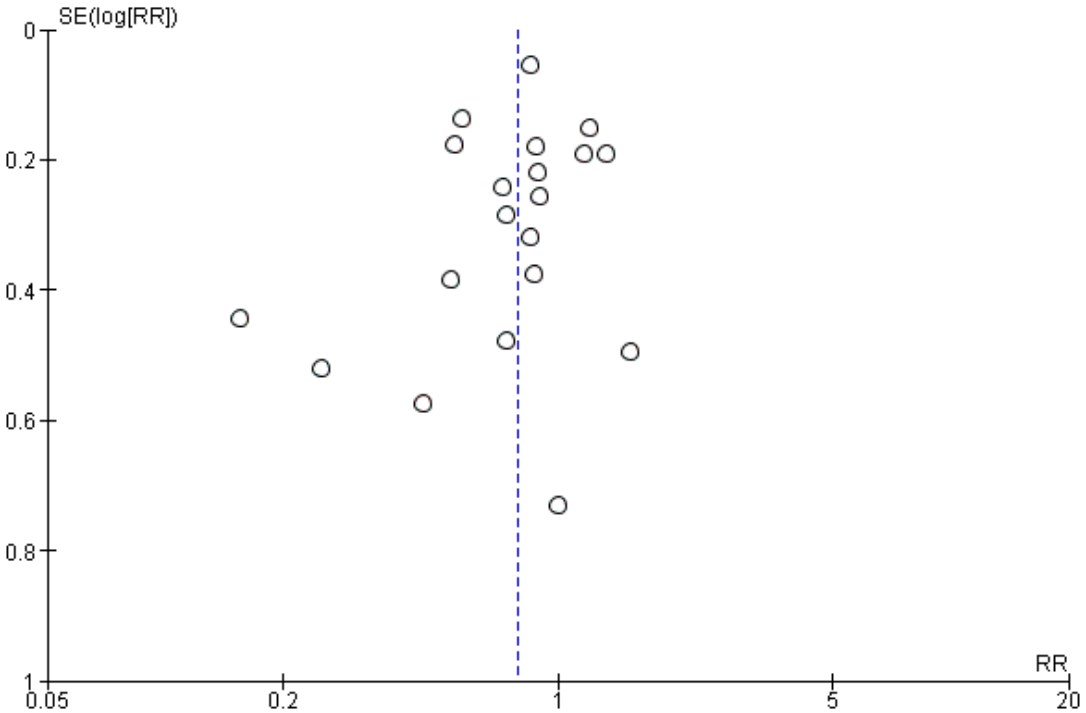
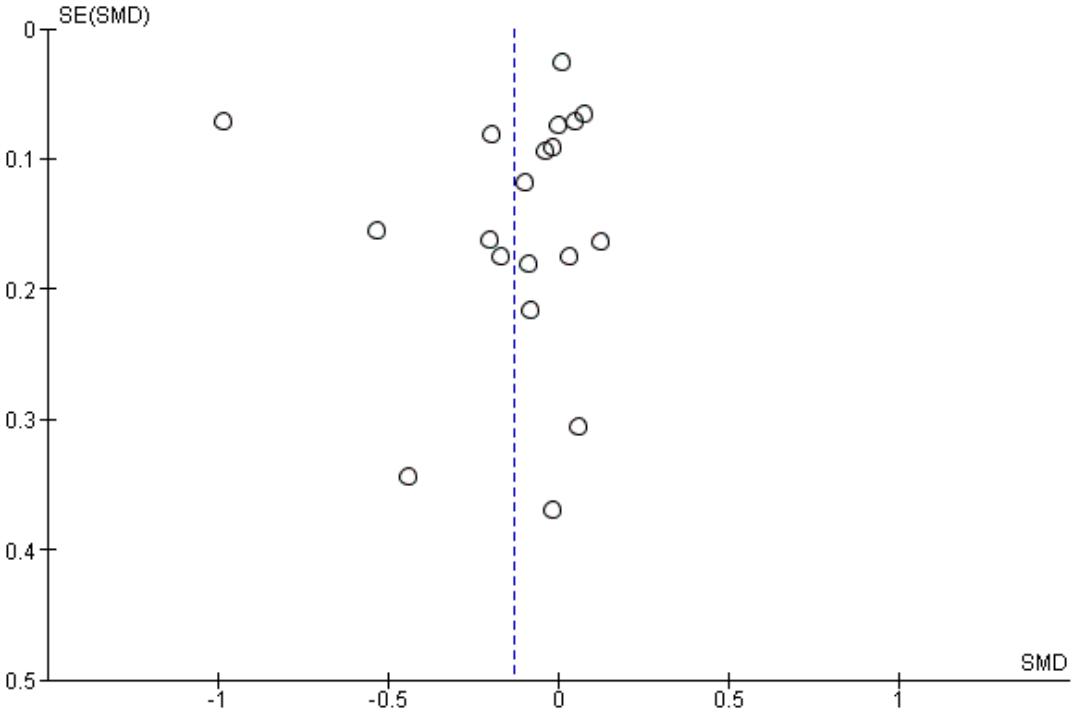


Figure 4. Funnel plot of comparison: 1 All interventions versus usual care - various study outcomes, outcome: 1.2 Mean depression scores at final study assessment.



Primary outcome: postpartum depression at eight, 16, 24 and more than 24 weeks (variously defined)

Results suggested an immediate (13 trials; n = 4,907; average RR 0.73, 95% CI 0.56 to 0.95, I^2 61%, T^2 0.13) and short-term (10 trials; n = 3982; RR 0.73, 95% CI 0.56 to 0.97, I^2 65%, T^2 0.11) reduction in depressive symptomatology. The preventative effect appeared to weaken at the intermediate postpartum time period between 17 to 24 weeks (nine trials; n = 10,636; average RR 0.93, 95% CI 0.82 to 1.05, I^2 15%, T^2 0.01) and was again significant when depressive symptomatology was assessed past 24 weeks postpartum (five trials; n = 2936; average RR 0.66, 95% CI 0.54 to 0.82, I^2 1%, T^2 0.00) (Analysis 1.4). While no statistically significant preventative effect across the postpartum period was found among trials that examined mean depression scores a short-term beneficial effect was found among trials that included a clinical diagnosis of depression (four trials; n = 902; average RR 0.49, 95% CI 0.31 to 0.77,T^2 0.00, I^2 = 0%) (Analysis 1.5; Analysis 1.6). When sensitivity analyses were performed, the short-term effect in the reduction of depressive symptomatology was strengthened (six trials; n = 1322; RR 0.59, 95% CI 0.46 to 0.75, I^2 1%, T^2 0) and the difference in means scores became significant (six trials; n = 1061; SMD -0.19, 95% CI -0.31 to -0.07) (data not shown).

Secondary outcome: maternal mortality at more than 24 weeks

One cluster trial conducted in India evaluated maternal mortality at one year postpartum and found no beneficial effect (n = 234; RR 0.97, 95% CI 0.06 to 15.27) (Analysis 1.7).

Secondary outcome: maternal-infant attachment at eight, 16, 24 and more than 24 weeks

No significant effect was found across the postpartum period in the one trial that dichotomised maternal-infant attachment or the two trials that examined mean scores on a maternal-infant measure (two trials; n = 268; SMD at final study assessment -0.18, 95% CI -0.42 to 0.06,) (Analysis 1.8; Analysis 1.9).

Secondary outcome: anxiety at eight, 16, and more than 24 weeks

While at last study assessment, no significant effect was found when a dichotomous measure of anxiety was used (four trials; n = 959; average RR 0.40, 95% CI 0.14 to 1.14, I^2 77%, T^2 0.79) (Analysis 1.10), a significant decrease in mean anxiety scores was

found (four trials; n = 815; SMD -0.16, 95% CI -0.30 to -0.03) (Analysis 1.11).

Secondary outcome: maternal stress at 16, 24, and more than 24 weeks

In a single trial (Gamble 2005), the intervention appeared to positively influence stress levels among women at any time in the postpartum period when measured as a dichotomous outcome (one trial; n = 103; RR 0.44, 95% CI 0.20 to 0.96) (Analysis 1.12). In another trial that measured mean stress scores there was no clear difference between groups for long-term stress scores (one trial; n = 840; MD 0.50, 95% CI -0.51 to 1.51) (Analysis 1.13).

Secondary outcome: parental stress at eight, 24 and more than 24 weeks

At last study assessment, no significant difference in mean scores was found in relation to parental stress as measured using the Parenting Stress Index (PSI) (three trials, n = 465; SMD 0.11, 95% CI -0.25 to 0.48, I^2 71%, T^2 0.07) (Analysis 1.14). The PSI is an internationally used questionnaire to measure to identify parent-child problem areas.

Secondary outcome: perceived social support at eight, 16, 24 and more than 24 weeks

Seven trials assessed maternal perceptions of support across the postpartum period using different measures; no beneficial effect was demonstrated at final study assessment (n = 8290; SMD 0.01, 95% CI -0.08 to 0.10, I^2 45%, T^2 0.01) (Analysis 1.16). Similar results were found when social support was measured as a dichotomous variable at final study assessment (two trials; n = 718; average RR 0.72, 95% CI 0.48 to 1.08) (Analysis 1.15).

Secondary outcome: maternal dissatisfaction with care provided at eight, 16, 24 and more than 24 weeks

At final study assessment, women in the intervention group who received some form of psychosocial or psychological intervention were less likely to be dissatisfied with the care they received than those who were provided with some form of standard care (four trials; n = 3014; average RR 0.67, 95% CI 0.44 to 1.00, I^2 83%, T^2 0.14) (Analysis 1.17). For trials that included a mean score of maternal dissatisfaction, no statistically significant difference was found between groups at final study assessment (two trials, n = 676; SMD 0.44, 95% CI -0.44 to 1.32, I^2 96%, T^2 0.39) (Analysis 1.18).

B. Infant outcomes

Secondary outcome: infant health parameters - not fully immunised at more than 24 weeks

Only one trial reported on infant health parameters. There was no beneficial effect of protocol-based midwifery-led postpartum home visits on whether or not infants were fully immunised at one year postpartum (n = 884; RR 1.16, 95% CI 0.39 to 3.43) (Analysis 1.19).

Secondary outcome: infant development more than 24 weeks

One trial reported on infant development using the Bayley (BSID-II). There was no beneficial effect identified of peer mentoring provided via home visits or the telephone on infant development measured at more than 24 weeks postpartum (n = 280; MD -0.90, 95% CI -2.90 to 1.10) (Analysis 1.20).

Secondary outcome: child abuse at eight and more than 24 weeks

One trial that evaluated the effect of a postpartum home visiting program by child health nurses among vulnerable families found a beneficial effect on child abuse potential scores in the immediate postpartum period (n = 176; MD -35.66, 95% CI -62.65 to -8.67) (Analysis 1.21) but not at one year postpartum (n = 66; MD -41.90, 95% CI -87.48 to 3.68) (Analysis 1.21).

C. Family outcomes

Secondary outcome: marital discord at eight, 16, and 24 weeks

There was no significant effect on marital discord scores at last study assessment (three trials, n = 291; SMD -0.14, 95% CI -0.37 to 0.09,) or across the postpartum period (Analysis 1.22).

Main comparison two: all psychosocial interventions versus usual care - variations in intervention type

In total, 17 trials evaluated a psychosocial intervention. Overall, these interventions have a beneficial effect in decreasing the risk of depressive symptomatology at final study assessment (12 trials; n = 11,322; RR 0.83, 95% CI 0.70 to 0.99, I^2 57%, T^2 0.04) (Analysis 2.1). There was no obvious funnel plot asymmetry for this outcome at final study assessment (Figure 5; Analysis 2.4). A beneficial effect was found across the postpartum period from zero to eight weeks (six trials; n = 2138; RR 0.77, 95% CI 0.52 to 1.14, I^2 63%, T^2 0.14) to more than 24 weeks postpartum (three trials; n = 1385; RR 0.59, 95% CI 0.46 to 0.76, I^2 0.0%,

T^2 0.0), although fewer trials collected longer-term outcome data. A significant preventative effect at final study assessment was also found among the studies that included a clinical diagnosis of depression (three trials; n = 867; RR 0.52, 95% CI 0.33 to 0.83, fixed-effect analysis) (Analysis 2.3). At final study assessment, the SMD for depression among trials that provided mean scores was -0.14 (12 trials, n = 10,944, 95% CI -0.33 to 0.04, I^2 94%, T^2 0.10) (Analysis 2.2); there was no obvious funnel plot asymmetry for this outcome (Analysis 2.5; Figure 6). Sensitivity analyses strengthened the preventive effect across the postpartum period in relation to depressive symptomatology but did not change any of the mean depression score conclusions.

Figure 5. Funnel plot of comparison: 2 All psychosocial interventions versus usual care - variations in intervention type, outcome: 2.4 All psychosocial interventions: depressive symptomatology at final study assessment.

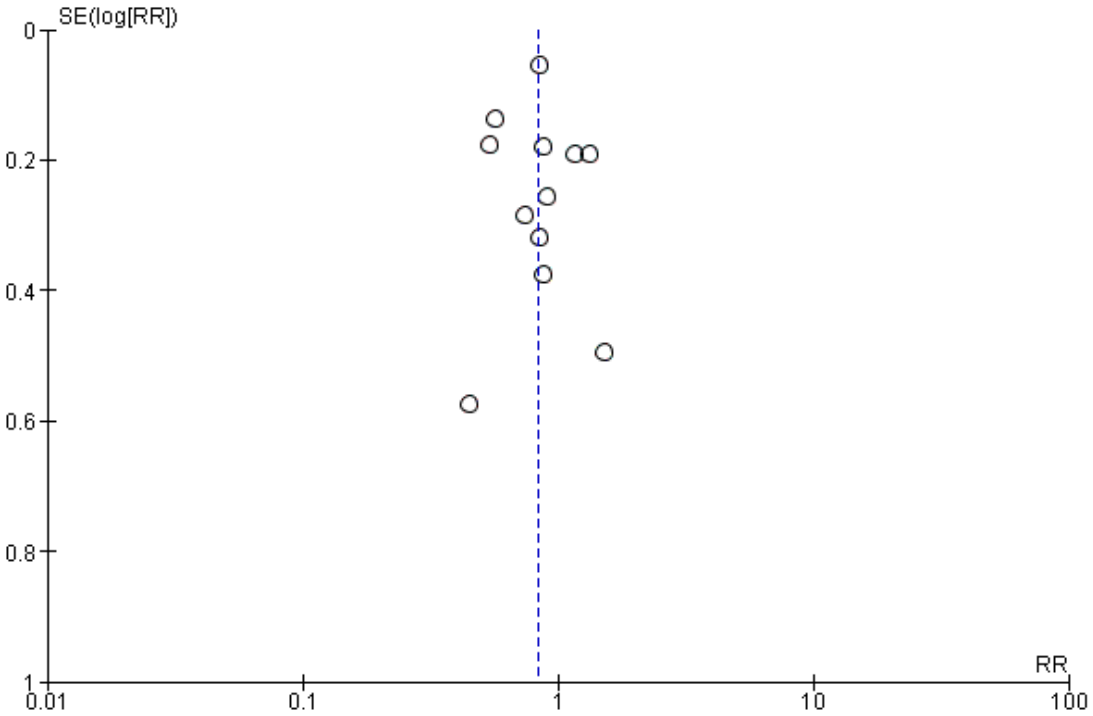
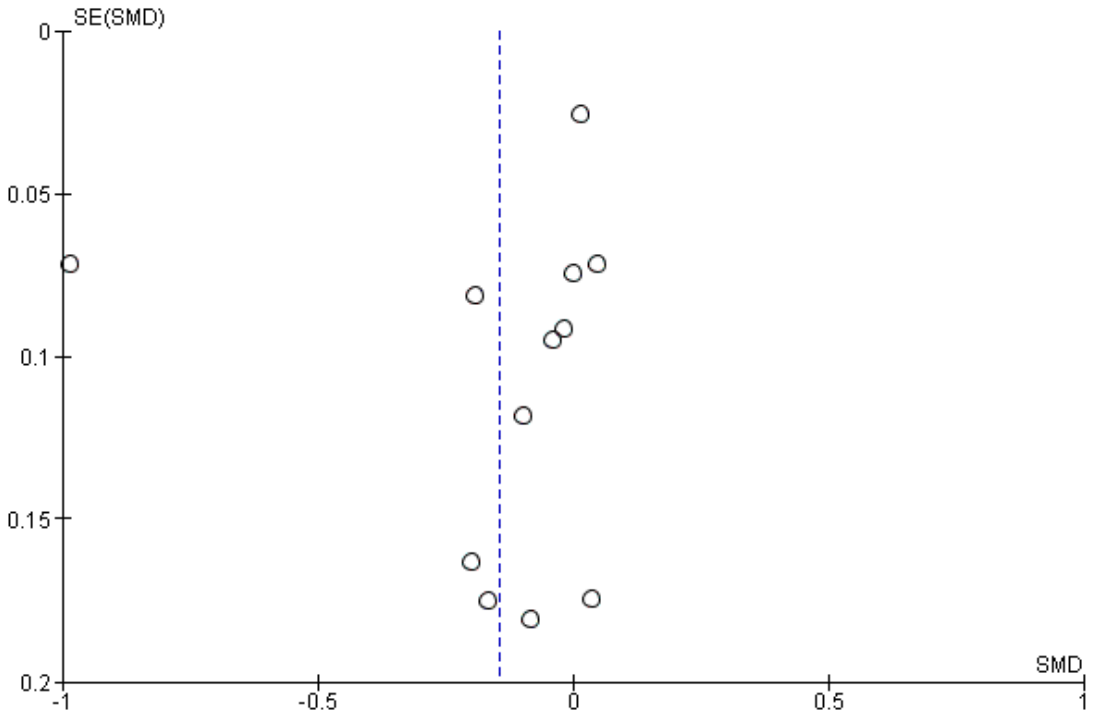


Figure 6. Funnel plot of comparison: 2 All psychosocial interventions versus usual care - variations in intervention type, outcome: 2.5 All psychosocial interventions: mean depression scores.



Main comparison three: all psychological interventions versus usual care - variations in intervention type

In total, 11 trials evaluated a psychological intervention. The average RR for depressive symptomatology at final assessment for psychological interventions was 0.61 (eight trials; n = 3405, 95% CI 0.39 to 0.96, I^2 75%, T^2 0.27) (Analysis 3.1). Across the postpartum period, the only time a statistically significant beneficial effect was found was at nine to 16 weeks (two trials; n = 277; average RR 0.40, 95% CI 0.18 to 0.89, I^2 37%, T^2 0.12). The SMD among trials that provided mean scores for depression was -0.10 (seven trials, n = 1432; 95% CI -0.32 to 0.13) (Analysis 3.2). No significant preventative effect was found among the studies that included a clinical diagnosis of depression (two trials; n = 72; average RR 0.31, 95% CI 0.04 to 2.52, I^2 50%, T^2 1.25) (Analysis 3.3). Sensitivity analyses weakened the preventive effect in relation to depressive symptomatology at final assessment but did not change the negative mean depression score conclusion.

Subgroup comparisons (comparisons four to 11)

Influence of variations in psychosocial interventions (comparison four)

Data were available for all types of psychosocial interventions for depressive symptomatology at final study assessment. While overall 16 trials contributed data to the pooled results, the number of trials examining specific types of interventions was limited (ranging from one to four) and the results of subgroup interaction tests should therefore be interpreted with caution. We identified some evidence of differences between subgroups for depressive symptomatology at final study assessment (X^2 = 16.37, P = 0.006) (Analysis 4.1). We found no statistically significant preventive effect on depressive symptomatology at final study assessment when the interventions were antenatal and postnatal classes (four trials, n = 1488; RR 1.01, 95% CI 0.77 to 1.32, I^2 0%,T^2 0.0), postpartum lay-based home visits (one trial, n = 493; RR 0.88, 95% CI 0.62 to 1.25), early postpartum follow-up (one trial, n = 446; RR 0.90, 95% CI 0.55 to 1.49), or continuity/model of care (three trials, n = 7021; RR 0.99, 95% CI 0.71 to 1.36, I^2 60%,T^2 0.05) (Analysis 4.1). However, we found a beneficial effect when the intervention involved postpartum professional-based home visits (two trials, n = 1262; RR 0.56, 95% CI 0.43 to 0.73, I^2 0%,T^2

0.0) and for postpartum lay-based telephone support (one trial, n = 612; RR 0.54, 95% CI 0.38 to 0.77) (Analysis 4.1). Due to the small number of trials examining specific types of interventions, sensitivity analyses were not completed.

Influence of variations in psychological interventions (comparison five)

We did not have sufficient data from all studies examining different types of psychological interventions to allow us to carry out a complete subgroup analysis for depressive symptomatology at final study assessment: only studies examining psychological debriefing and cognitive behavioural therapy contributed to this analysis. We found no statistically significant preventive effect at final study assessment for psychological debriefing (five trials, n = 3050; RR 0.57, 95% CI 0.31 to 1.03, I^2 85%, T^2 0.37) and cognitive behavioural therapy (one trial, n = 150; RR 0.74, 95% CI 0.29 to 1.88) (Analysis 5.1). Mean depression scores at final study assessment were reported in studies examining interpersonal psychotherapy (five trials, n = 366; SMD -0.27, 95% CI -0.52 to -0.01 I^2 25%, T^2 0.02) and cognitive behavioural therapy (one trial, n = 150; SMD 0.13, 95% CI -0.20 to 0.45) (Analysis 5.2). The test for subgroup differences was not significant (X^2 = 3.50, P = 0.06, I^2 71.4%) (Analysis 5.2). Due to the small number of trials examining specific types of interventions, sensitivity analyses were not completed.

Influence of variations in intervention provider (comparison six)

Outcome: professionally-based and lay-based interventions

In total, 19 trials evaluated an intervention provided by a health professional. The average RR for depressive symptomatology at final assessment for professionally-based interventions was 0.78 (15 trials; n = 6790, 95% CI 0.60 to 1.00, I^2 70%, T^2 0.15) (Analysis 6.7). The SMD at final assessment among trials that provided mean scores was -0.15 (12 trials, n = 4509; 95% CI -0.40 to 0.10, I^2 93%, T^2 0.17) (Analysis 6.8). Only two studies included a clinical diagnosis of depression (n = 227; RR 0.56, 95% CI 0.22 to 1.47, fixed-effect analysis) (Analysis 6.9). Seven trials evaluated an intervention provided by a lay individual. The RR for depressive symptomatology at final assessment for lay-based interventions was 0.70 (four trials; n = 1723, 95% CI 0.54 to 0.90) (Analysis 6.7). The SMD at final assessment among trials that provided mean scores was -0.10 (five trials, n = 1682; 95% CI -0.20 to 0.01, I^2 8%, T^2 0.0) (Analysis 6.8). Among the two studies that included a clinical diagnosis of depression between nine to 16 weeks postpartum (final study assessment for both trials) the RR was 0.52 (n = 677; 95% CI 0.32 to 0.86, fixed-effect analysis) (Analysis 6.9). The test for subgroup differences between professionally-based and lay-based interventions was not significant for depressive symptomatology, mean depression scores, or clinical diagnosis of depression. Sensitivity analyses did not change any of the final conclusions.

Influence of variations in professionally-based intervention provider (comparison seven)

Data were available for all types of professionally-based interventions for depressive symptomatology at final study assessment. While overall 19 trials contributed data to the meta-analyses, the number of trials examining a specific type of intervention provider was limited, ranging from one to 10. In relation to depressive symptomatology at final study assessment, we found no evidence that a specific health professional providing an intervention increased the likelihood of a preventative effect. The RR for the specific health professionals were as follows: nurses (three trials, n = 837; RR 0.73, 95% CI 0.51 to 1.04, I^2 0%, T^2 0.0), physicians (one trial, n = 446; RR 0.90, 95% CI 0.55 to 1.49), midwives (10 trials, n = 5477; RR 0.76, 95% CI 0.54 to 1.07, I^2 80%, T^2 0.22), mental health professional (one trial, n = 30; RR 1.00, 95% CI 0.24 to 4.18) (Analysis 7.1). Similar non-significant results were found in relation to mean depression scores at final study assessment. Due to multiple health professionals providing the community-based intervention with no clear primary provider, the trial by Lumley 2006 could not be included in this comparison. There were insufficient trials to complete an analysis in relation to a clinical diagnosis of depression. The test for subgroup differences was not significant for depressive symptomatology or mean depression scores (Analysis 7.1; Analysis 7.2).

Influence of variations in intervention mode (comparison eight)

Outcome: individually-based and group-based interventions

Analysis of 14 trials of interventions provided to individual women suggested a reduction in depressive symptomatology at the last study assessment (n = 12,914; RR 0.75, 95% CI 0.61 to 0.92, I^2 72%, T^2 0.09) (Analysis 8.7). When trials susceptible to bias (more than 20% loss to follow-up) were removed, the direction of the effect strengthened (11 trials, n = 10,653; RR 0.71, 95% CI 0.56 to 0.91, I^2 70%, T^2 0.09) (data not shown). At final study assessment, the SMD among trials that provided mean scores was -0.15 (11 trials, n = 10,092; 95% CI -0.37 to 0.07, I^2 94%, T^2 0.11) (Analysis 8.8) and the RR for a clinical diagnosis of depression was significant (three trials; n = 714; RR 0.53, 95% CI 0.33 to 0.84) (Analysis 8.9). Sensitivity analyses did not change any of the final conclusions.

Of the six trials evaluating interventions delivered to groups of women, there was no clear reduction in depressive symptomatology at final study assessment (n = 1813; RR 0.92, 95% CI 0.71 to

1.19, I^2 7%, T^2 0.09) (Analysis 8.7). When sensitivity analysis was performed and trials with more than 20% loss to follow-up were removed, there continued to be no clear beneficial effect (three trials; n = 779; RR 0.87, 95% CI 0.60 to 1.28) (data not shown). No beneficial effect was found in relation to mean depression scores at final study assessment (eight trials, n = 2284; SMD -0.08, 95% CI -0.23 to 0.06) (Analysis 8.8). Similary, no clear beneficial effect was found in relation to a clinical diagnosis of depression at final study assessment between nine to 16 weeks (two trials, n = 225; RR 0.30, 95% CI 0.05 to 1.66, I^2 32%,T^2 0.59) (Analysis 8.9). The test for subgroup differences between individually-based and group-based interventions was not significant for depressive symptomatology, mean depression scores, or clinical diagnosis of depression (Analysis 8.7; Analysis 8.8; Analysis 8.9). Sensitivity analyses did not change any of the final conclusions.

Influence of variations in intervention duration (comparison nine)

Outcome: single-contact and multiple-contact interventions

Only four trials evaluated a single-contact intervention (e.g. psychological debriefing, early postpartum follow-up). The RR related to depressive symptomatology at final assessment was 0.70 (four trials, n = 2877; 95% CI 0.38 to 1.28, I^2 84%, T^2 0.30) (Analysis 9.6) and the mean depression scores at final study assessment was 0.04 (two trials, n = 1362; 95% CI -0.07 to 0.15, I^2 5%) (Analysis 9.7). Sensitivity analyses did not change any of the final conclusions.

Of the 24 trials evaluating a multiple-contact intervention, there was a reduction in depressive symptomatology at final study assessment (16 trials, n = 11,850; average RR 0.78, 95% CI 0.66 to 0.93, I^2 53%, T^2 0.05) (Analysis 9.6). Similarly, the average RR for a clinical diagnosis of depression at final study assessment was significant (five trials, n = 939; RR 0.48, 95% CI 0.31 to 0.74, I^2 0%) (Analysis 9.5). The SMD in the 17 trials that provided mean depression scores was -0.15 (n = 11,014; 95% CI -0.32 to 0.02, I^2 92%, T^2 0.10) (Analysis 9.7). Sensitivity analyses did not change any of the final conclusions.

There appears to be no strong evidence of subgroup differences for interventions involving a single contact as opposed to more intensive interventions involving multiple contacts for depressive symptomatology at final study assessment (I^2 = 0%, P = 0.73) (Analysis 9.6). There was a trend that mean depression scores were lower at final study assessment where interventions involved multiple rather that single contacts (test for subgroup differences I^2 = 71.4%, P = 0.06) (Analysis 9.7). However, this result should be interpreted with caution, as while results for this outcome were derived from 17 studies involving multiple contacts, it was measured in only two with single contacts.

Influence of variations in intervention onset (comparison 10)

Outcome: interventions with antenatal-only component, antenatal and postnatal components, and postnatal-only component

Four trials evaluated an intervention that was conducted only in the antenatal period and the SMD at final study assessment was 0.03 (n = 1050; 95% CI -0.09 to 0.16) (Analysis 10.10). Eight trials evaluated interventions that were initiated antenatally and continued postnatally. The average RR in relation to depressive symptomatology at final assessment was 0.96 (eight trials, n = 1941; 95% CI 0.75 to 1.22, I^2 6%, T^2 0.01) (Analysis 10.9) and the SMD was -0.14 (seven trials, n = 1000; 95% CI -0.31 to 0.02, I^2 37%, T^2 0.02) (Analysis 10.10). While a significant effect was found related to a clinical diagnosis of depression (three trials, n = 292; RR 0.44, 95% CI 0.24 to 0.80, fixed-effect analysis), it is noteworthy that two out of the three trials (Brugha 2000; Harris 2006) included in this analysis were identified as high risk for bias. Of the 12 trials that evaluated an Intervention that was initiated postnatally, a significant reduction in depressive symptomatology at final study assessment was found (n = 12,786; average RR 0.73, 95% CI 0.59 to 0.90, I^2 75%, T^2 0.09) (Analysis 10.9). However, no preventative effects were found in relation to mean depression scores (eight trials, n = 10,326; SMD -0.16, 95% CI -0.40 to 0.08, I^2 96%, T^2 0.11) (Analysis 10.10) or a clinical diagnosis of depression (one trial, n = 612; RR 0.65, 95% CI 0.34 to 1.23) (Analysis 10.11) at final study assessment. There was no strong evidence of differences between subgroups for outcomes at the final study assessment. For depressive symptomatology, mean depression scores, and diagnosis of depression there was heterogeneity between subgroups, however, there was also considerable heterogeneity within some subgroups; tests for subgroup differences for these outcomes were not statistically significant. Sensitivity analyses did not change any of the final conclusions.

Influence of variations in sample selection criteria (comparison 11)

Outcome: interventions for at-risk women and women drawn from the general population

In the eight trials that selected participants based on 'at-risk' criteria, a reduction in postpartum depressive symptomatology at final study assessment was found (eight trials, n = 1853; average RR 0.66, 95% CI 0.50 to 0.88, I^2 23%, T^2 0.04) (Analysis 11.6). Participants in the intervention groups in these trials also had lower mean depression scores (seven trials, n = 1087; SMD -0.13, 95% CI -0.25 to -0.01, I^2 0%, T^2 0.00) (Analysis 11.7) and were less likely to be diagnosed with clinical depression (five trials, n = 939; RR 0.48, 95% CI 0.31 to 0.74, fixed-effect analysis). When

sensitivity analyses were performed, the direction of the effect at final study assessment in relation to depressive symptomatology remained the same but the CI widened (five trials, n = 997; RR 0.60, 95% CI 0.35 to 1.02, I^2 45%, T^2 0.16) (data not shown). The beneficial effect related to a diagnosis with clinical depression disappeared when three out of the five trials (Brugha 2000; Harris 2006; Zlotnick 2001) were deemed high risk for bias and were removed from the analysis (two trials, n = 649; RR 0.64, 95% CI 0.36 to 1.15, I^2 0%, T^2 0.0) (data not shown). Twelve trials enrolled women from the general population. The average RR related to depressive symptomatology at final study assessment was 0.83 (12 trials, n = 12,874; 95% CI 0.68 to 1.02, I^2 71%, T^2 0.07) (Analysis 11.6) and the SMD was -0.15 (12 trials, n = 11,289; 95% CI -0.33 to 0.04, I^2 94%, T^2 0.10) (Analysis 11.7). There was no strong evidence of differences between these subgroups at final study assessment for depressive symptomatology or mean scores, although there was much greater heterogeneity in the results of studies including women from the general population (I^2 = 94%) compared with those recruiting women at high-risk only (I^2 = 0%). Sensitivity analyses did not change any of the final conclusions.

DISCUSSION

This review summarises the results of 28 trials involving almost 17,000 women, that were conducted in seven countries under a wide variety of circumstances. The methodological quality of the included trials was good to excellent with the most frequently identified weakness being follow-up attrition. In particular, six trials had losses to follow-up greater than 20% with five of these trials collecting outcome data from mailed questionnaires. The removal of trials at risk of bias resulted in minimal changes to any of the conclusions. While intent-to-treat data analyses were performed, several trials involving group sessions had high (Brugha 2000; Reid 2002; Stamp 1995) or unknown (Tripathy 2010) levels of non-compliance with group attendance. Further, the reporting of the trials was often not comprehensive, lacking in terms of details in the training and qualifications of the intervention providers and in the description of adherence to the intervention protocol. There was also a failure to present details of the informational element of the interventions and on the background features of the care received by the control groups.

In the primary comparison, the diversity of preventative interventions and the widely differing study end-points should urge some caution in the interpretation of the pooled data. To partially address this issue, the meta-analyses included immediate, short, intermediate, and longer-term effects where appropriate. Despite this caution and the subgrouping of end-points, this review has demonstrated that women who received a psychosocial or psychological intervention were significantly less likely to experience postpartum depression than those who received standard care (average risk ratio (RR) 0.78, 95% confidence interval (CI) 0.66 to 0.93). Psychosocial (average RR 0.83, 95% CI 0.70 to 0.99) and psychological (average RR 0.61, 95% CI 0.39 to 0.96) interventions were both effective in reducing the risk to develop depressive symptomatology at final study assessment.

Importantly, the review has assisted in specifying what interventions may be effective or not and require further investigation. Although there was no clear evidence of differences between subgroups in trials focusing on different types of psychosocial interventions, antenatal classes addressing postpartum depression have been shown in four trials to have no preventative effect (average RR 1.01, 95% CI 0.77 to 1.32) and cannot be recommended at this time. In four of five trials evaluating in-hospital psychological debriefing there was some evidence of positive effect, but overall, pooled results showed that differences between groups were not statistically significant and more evidence is needed before this intervention is implemented into practice (RR 0.57, 95% CI 0.31 to 1.03).The effectiveness of postpartum lay-based home visits remains uncertain. Morrell 2000 demonstrated that the addition of home visits by a community support worker had no protective effect on postpartum depression (RR 0.88, 95% CI 0.62 to 1.25). However, a review of the intervention activities revealed that the lay women spent a significant amount of their time providing instrumental support, such as housework and infant care, and limited time providing emotional and appraisal (feedback) support to the mother. The potential to positively influence health outcomes depends on predicting which supportive functions will be the most effective for a particular type of stressor (Will 2000). In qualitative studies, women from diverse cultures who have suffered from postpartum depression consistently describe their feelings of loneliness, worries about maternal competence, role conflicts, and inability to cope (Chen 1999; Nahas 1999; Ritter 2000; Small 1994); the presence or absence of instrumental support was not a highlighted factor. The preventative effect of cognitive behavioural therapy also remains uncertain, primarily due to the fact that only one study contributing data to the review (Le 2011) evaluated this type of intervention. Another trial (Austin 2008) also evaluated cognitive behaviour therapy and was included in the review but not the meta-analysis due to the lack of usable data; this study reported no clear differences between intervention and control groups for depression outcomes. Improving the quality of perinatal care provided to women has been another postpartum depression preventative approach. Two trials have evaluated the effect of early postpartum follow-up. Although one quasi-experimental study was not included in this review (Serwint 1991), another well-designed trial demonstrated no beneficial effect on maternal mental health outcomes (Gunn 1998). However, the intervention in this trial did not included a formal assessment of maternal mood during the early postpartum contact. It is well documental that without a formal assessment, most depressive symptomatology remain undetected by primary care health professionals. Three

trials evaluated continuity/models of care interventions (Lumley 2006; Sen 2006; Waldenstrom 2000) without demonstrating a preventative effect. The impressive community-based cluster trial by Lumley 2006 was particularly comprehensive where the intervention incorporated strategies at both the primary care and community levels. However, the significant changes to the local government implemented by the State government was not the ideal context for a community-based intervention. Replicating multicomponent trials like this are warranted.

There is growing evidence to suggest the importance of additional professional-based home visits provided postnatally (RR 0.56, 95% CI 0.43 to 0.73). While one well-designed trial (Armstrong 1999) suggested intensive nursing home visits with at-risk mothers was protective during the first six weeks postpartum, the beneficial effect was not maintained to 16 weeks. It is noteworthy that the 16-week assessment coincided with a decrease in intervention intensity from weekly to monthly nursing visits. Results from a cluster-randomised controlled trial (MacArthur 2002) demonstrated that flexible, individualised midwifery-based postpartum care that incorporated postpartum depression screening tools also had a preventive effect. Individualised, telephone-based lay support provided by peers postnatally (Dennis 2009) is another promising intervention (RR 0.54, 95% CI 0.38 to 0.77). Combined, these three trials decreased the risk to develop postpartum depression by almost 50% and provide accumulating evidence that additional individualised support early in the postpartum period is an effective preventative intervention. Another strategy that may assist in preventing postpartum depression is interpersonal psychotherapy (standardised mean difference (SMD) -0.27, 95% CI -0.52 to -0.01). Interpersonal psychotherapy is a manual-based, time-limited psychotherapeutic approach with a basic premise that depression, regardless of aetiology, is initiated and maintained within an interpersonal context. The goal of interpersonal psychotherapy is to achieve symptomatic relief for depression by addressing current interpersonal issues associated with its onset or perpetuation; it does not seek to attribute interpersonal problems to underlying personality characteristics or unconscious motivations. Interpersonal psychotherapy is primarily concerned with symptom functioning, presumed to have biological and psychological precipitants, and social functioning. There is a specific focus on social interactions. Given that a lack of support and marital conflict are two strong risk factors for postpartum depression (Beck 2001; O'Hara 1996), this intervention is theoretically congruent with preventing postpartum depression.

While there was diversity in the types of intervention provided, most of the trials included in this review incorporated a primary preventative intervention; only one trial (Dennis 2009) selected participants within the first two weeks postpartum based on evidence of beginning depressive symptomatology. According to Shah 1998, preventative interventions incorporate any strategy that (1) reduces the likelihood of a disease/condition affecting an individual (*primary* prevention); (2) interrupts or slows the progress of a disease/condition through early detection and treatment (*secondary* prevention); or (3) slows the progress of a disease/condition and reduces resultant disability through treatment of established disease (*tertiary* prevention). These preventative interventions can be further classified into different categories depending on the target population: (1) *universal* interventions are designed to be offered to all women; (2) *selective* interventions are designed to be offered to women at increased risk of developing depression; and (3) *indicated* interventions are designed to be offered to women who have been identified as depressed or probably depressed (Mrazek 1994). To examine the effects of universal and selective interventions, subgroup analyses were conducted. The results suggest identifying mothers 'at-risk' may assist in the prevention of postpartum depression (average RR 0.66, 95% CI 0.50 to 0.88). However, currently there is no consistency in the identification of women 'at-risk' and a review of 16 antenatal screening tools suggests that there are no measures with acceptable predictive validity to accurately identify asymptomatic women who will later develop postpartum depression (Austin 2003). This may partially explain why interventions initiated in the postpartum period had a beneficial effect on reducing depressive symptomatology (average RR 0.73, 95% CI 0.59 to 0.90). Other differences in intervention delivery were also examined. Women who received a multiple-contact intervention were less likely to develop postpartum depression (RR average 0.78, 95% CI 0.66 to 0.93). It is noteworthy that all but five trials provided a multi-contact intervention. Individually-based interventions were effective in significantly reducing the number of women with depressive symptomatology at last study assessment and across the various assessment time periods. The decreased effect related to groups could be due to high group attrition and thus insufficient intervention dosage. It may also underpin the fact that there are many unique barriers for pregnant women and new mothers to attend sessions outside of their homes. It is noteworthy that five out of the 11 trials evaluating group-based interventions were classified as high risk of bias. Lastly, both professionally-based (average RR 0.78, 95% CI 0.60 to 1.00) and lay-based (average RR 0.70, 95% CI 0.54 to 0.90) interventions appeared beneficial in reducing the risk to develop depressive symptomatology at last assessment. The majority of the interventions included in this review were professionally-based.

There was insufficient evidence to show that the preventative interventions had an effect on other maternal outcomes including mortality, maternal-infant attachment, stress, perceived support, and marital discord. Most of these outcomes were measured in a relatively small number of trials. It is unclear if there was an effect on anxiety. However, women who received a preventative intervention were less likely to be dissatisfied with the care they received (average RR 0.67, 95% CI 0.44 to 1.00) than those who where provided with standard care. One study (MacArthur 2002) examined infant immunisations and found no beneficial effect; similar results were found with the one study (Cupples 2011) that

evaluated infant development. Another study (Armstrong 1999) examined child abuse and while there was a short-term gain when the nursing home visits were being offered, the beneficial effect was not maintained once the intervention discontinued. Very few trials evaluated these secondary outcomes and thus additional research in this area is warranted.

The long-term consequences of postpartum depression suggest preventive approaches are warranted. Manipulation of a risk factor may improve the associated likelihood of developing postpartum depression through many different ways. The most obvious is to decrease the amount of exposure to a given risk factor or, alternatively, reduce the strength or mechanism of the relationship between the risk factor and postpartum depression (McLennan 2002). However, translating risk factor research into predictive screening protocols and preventative interventions is challenging, as complex interactions of biopsychosocial risk factors with individual variations need to be considered. Theoretical justifications for a couple of these preventative approaches were presented by the individual researchers and there is accumulating evidence available to guide practice and policy recommendations. Details of research currently in progress are provided in the Characteristics of ongoing studies table.

AUTHORS' CONCLUSIONS

Implications for practice

Currently, there is no strong evidence to recommend the following interventions be implemented into practice in order to prevent postpartum depression: antenatal and postnatal classes, postpartum lay-based home visits, early postpartum follow-up, continuity of care models, in-hospital psychological debriefing, and cognitive behavioural therapy. However, professionally-based home visits such as intensive nursing home visits and flexible postpartum care provided by midwives, postpartum lay (peer)-based telephone support, and interpersonal psychotherapy appear to show promise in the prevention of postpartum depression. It is noteworthy that the midwifery-based flexible postpartum care and lay telephone support interventions incorporated screening with the Edinburgh Postnatal Depression Scale (EPDS) for the early identification of depressive symptomatology. Interventions that are individually-based and initiated postnatally may be beneficial. Finally, interventions targeting 'at-risk' mothers may be more beneficial and feasible than those including a general maternal population.

Implications for research

There has been great interest in the prevention of postpartum depression. In total, over 40 experimental studies have evaluated an intervention that may be useful in the prevention of postpartum depression. Of these studies, 12 were quasi-experimental and excluded from this review resulting in 30 included randomised controlled trials of which 28 were included in the meta-analyses. Despite the recent upsurge of interest in this area, many questions remain unanswered.

Specific research implications

- Further research is warranted to examine the effectiveness of psychosocial interventions with a specific focus on intervention content to determine the specific preventative mechanisms. Randomised controlled trials inform whether an intervention is effective or not but they do not specify 'why' the intervention was effective. Did the intervention *directly* influence the development of postpartum depression by: (1) decreasing isolation and feelings of loneliness, (2) swaying health practices and deterring maladaptive behaviours or responses, (3) promoting positive psychological states and individual motivation, and (4) providing information regarding access to health services or the benefits of behaviours that positively influence health and well-being? Alternatively, did the intervention *buffer* the influence of stress or *mediate* the development of postpartum depression by: (1) assisting in the interpretation and positive reinforcement of performance accomplishments, (2) providing vicarious experience and observational learning through role modelling, (3) offering opportunities for social comparisons to promote self-evaluations and motivation, (4) teaching coping strategies and conveying information about ability, (5) positively interpreting emotional arousal, and (6) encouraging cognitive restructuring through anticipatory guidance? This information would assist with the theoretical development of preventative interventions and assist in matching risk factors with appropriate interventions.
- Flexible, individualised postnatal care provided by a professional that incorporates postpartum depression screening tools appears to be promising. A well-designed trial conducted outside a UK-midwifery context is needed to replicate the results.
- Telephone-based support provided by a peer among new mothers with beginning depressive symptomatology early in the postpartum period appears to be a promising secondary preventative intervention. Replication of this trial is needed.
- Interpersonal psychotherapy is another promising intervention. All five trials that evaluated this intervention provided it face-to-face. Additional research in relation to diverse intervention providers and delivery mode (e.g., face-to-face, via telephone, or web-based) is warranted.
- Further research is warranted to examine the effectiveness of cognitive-behavioural therapy.
- Both professional and lay interventions appear to be beneficial. However, only seven out of the 28 trials evaluated a lay-based intervention. Trials examining individually-based lay interventions specifically targeting maternal mood are required. Characteristics of the lay individuals (peers versus general community-based workers) and the nature of the relationships developed should be explored.

- Pregnant women and women in the postpartum period face unique health service barriers. Innovative and creative ways to deliver preventative interventions to these women are required including those that incorporate technology.
- There is increasing evidence to suggest migrant women (refuge, asylum-seeking, immigrant) are at higher risk to develop postpartum depression. Interventions targeting this vulnerable maternal population are needed.
- No preventative interventions specifically targeted the mother's partner. This is a significant limitation since a lack of social support and marital conflict are strong risk factors for the development of postpartum depression.

General research implications

Most women receive postpartum services at the primary care level. Hence, the quality of the postpartum depression care in the primary care systems needs to be improved. Various approaches have been employed to improve the quality of care for depression in general. Notable among these is the development of a collaborative care model, a multi-component, healthcare system-level intervention that uses case managers to link primary care providers, patients, and mental health specialists. Collaborative care models typically include case managers, who support primary care providers with functions such as patient education, patient follow-up to track depression outcomes and adherence to treatment, and adjustment of treatment plans for patients who do not improve. In studies of non-postpartum depression, collaborative treatment of depression has been acclaimed as superior to traditional treatment methods (e.g. antidepressants and/or psychotherapy). A special type of collaborative care-stepped care treatment-delivers care in a step-wise manner, beginning with screening, diagnosis, and initial treatment in a primary care setting and adding follow-up and support, decision support, mental health consultation, or referral by a care manager as needed for patients with persistent depressive symptoms. Although it would seem that collaborative care would also improve postpartum depression outcomes, neither collaborative or stepped care have been rigorously evaluated in a postpartum population. Such evaluation would be important given that postpartum women often possess unique help-seeking and treatment barriers, such as the need for childcare, concerns about medication effects on breastfeeding infants, and fear of judgment or referral to child protection. Postpartum depression collaborative, stepped care models should include interventions to prevent postpartum depression. To be most efficient in conducting this research there continues to be a need for further interdisciplinary networking among investigators with complementary research interests. For example, psychosocial intervention researchers could collaborate with health services researchers to develop and test multi-level intervention approaches embedded in service systems. To further address postpartum depression as a public health problem, the inclusion of ethnically and socio-economically diverse women in these research efforts is critical to examining the differences in depression symptoms, response rate to interventions, and health service use. In addition, all trials should include an economic analysis of the relative costs and benefits. It is also necessary to present a few general comments regarding the development of preventive programs. Similar to screening initiatives, preventive interventions should be relatively simple and inexpensive. This is critical if the intervention is to be applied to a relatively large population; unless a project is feasible on a large scale, there is little utility in pursuing smaller demonstration projects.

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As part of the pre-publication editorial process, this review has been commented on by four peers (an editor and three referees who are external to the editorial team), a member of the Pregnancy and Childbirth Group's international panel of consumers and the Group's Statistical Adviser.

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* *Indicates the major publication for the study*

CHARACTERISTICS OF STUDIES

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

Armstrong 1999

Methods	RCT.
Participants	181 mothers (90 in the intervention group; 91 in the control group) who gave birth in 1 urban hospital in Queensland, Australia. Families were included where the child, for environmental (home/family) reasons, was at increased risk for poor health and developmental outcomes. Exclusion criteria included poor English literacy skills
Interventions	Intervention group: home visits by child heath nurses with support from a multidisciplinary team. The visits were weekly until 6 weeks postpartum, every 2 weeks until 12 weeks and then monthly until 52 weeks. The minimum target of 18 visits was exceeded in most cases Control group: usual community care (which included the choice of 1 home visit from the child health nurse) and a list of community resources. Extra child care nurse visits were only done for problems, most often with the baby. Research visits were for data collection only
Outcomes	Outcomes included depression (EPDS > 12), parental stress (Parenting Stress Index - PSI) , breastfeeding duration, infant immunisation, utilisation of medical services, accidental injury and Child Abuse Potential Inventory at 6,16 and 52 weeks postpartum
Notes	Only 63% of mothers completed the pre-trial screening questionnaire. The intervention group included significantly more primiparous and aboriginal mothers and fewer women (1) with a past history of depression, (2) with a partner who had a history of psychiatric illness, and (3) who reported physical forms of domestic violence During the course of the trial women with an EPDS score > 12 were offered a referral to a healthcare professional of their choice

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	"computer generated random numbers table."
Allocation concealment (selection bias)	Low risk	"completed by clerical staff not involved in the eligibility assessment."
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Data collection was done in the participant's home by a researcher who was blinded to study group and not providing care to the woman. Research assistants were blind to research group

Armstrong 1999 (*Continued*)

		when carrying out the 6-week data collection but during that visit the participant often revealed her group assignment. A different research assistant was used for the 52-week visit
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rates at 6, 16 and 52 weeks postpartum were 96.1%, 88.4% and 76.2% respectively
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	No other sources of bias noted.

Austin 2008

Methods	RCT.
Participants	277 pregnant women (191 in the intervention group; 86 in the control group) who attended antenatal clinics in an Australian hospital were identified, by screening at the end of their first trimester, to be at an increased risk of postpartum depression. Those with substance or alcohol abuse, organic brain disorder, bipolar disorder, schizophrenia, childhood abuse, suicidal ideation or poor command of English were excluded
Interventions	Intervention group: information booklet and cognitive behavioural therapy group sessions. There were 6 weekly 2-hour sessions (and a later follow-up session) that were skills based and led by a clinical psychologist. The timing of the follow-up session was not specified by the authors Control group: information booklet about postnatal anxiety and depression
Outcomes	Outcomes included depression (EPDS and MINI) and anxiety (STAI) at 8 and 16 weeks postpartum
Notes	All reported data analyses used imputation. Missing data were imputed using last observation carry forward. The authors were contacted for the raw data but they were not available No data from this trial were included in the review.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	"Randomization using a randomization table". No further details available from authors. Randomisation on a 2:1 basis to allow for more drop outs from the intervention group
Allocation concealment (selection bias)	Unclear risk	No information available from authors about process of randomisation
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.

Austin 2008 (*Continued*)

Blinding of outcome assessment (detection bias) All outcomes	Low risk	Administration of MINI done by research assistant 'blind to study allocation'
Incomplete outcome data (attrition bias) All outcomes	High risk	The follow-up rate at 8 and 16 weeks postpartum was 69.7% and 59.2% respectively. Missing data were imputed using 'last observation carried forward'. Raw data were not available
Selective reporting (reporting bias)	Unclear risk	MINI results were reported. EPDS and STAI were not reported and not available from authors
Other bias	Unclear risk	No other sources of bias noted.

Brugha 2000

Methods	RCT with prognostic stratification on 3 factors (level of support, screening, and ethnic group)
Participants	209 pregnant women (103 in the intervention group; 106 in the control group) who attended antenatal clinics in a UK hospital between 12 and 20 weeks' gestation are were identified, by screening, to be at an increased risk of postpartum depression. Inclusion criteria: 16 years old, primiparous, residence in reasonable driving distance to hospital, and sufficient English to complete questionnaires
Interventions	Intervention group: 'Preparing for Parenthood' - 6 structured 2-hour weekly antenatal classes (preceded by an initial introductory meeting with the participant and her partner) and 1 'reunion' class at 8 weeks postpartum. Classes were provided by a trained nurse and occupational therapist and based on established psychological models for tackling depression together with emerging models for enhancing social support Control group: routine antenatal care.
Outcomes	Outcomes included depression (EPDS > 10) and maternal health service contact since randomisation at 12 weeks postpartum
Notes	Women in the intervention group were more likely to adopt an avoidant problem-solving style than women in the control group; using logistic modelling to adjust for this covariate at baseline did not alter the trial results. Only 45% of participants in the intervention group attended sufficient sessions to 'likely receive benefit'

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	"performed using a computer-based stratification process with minimisation"

Brugha 2000 (*Continued*)

Allocation concealment (selection bias)	High risk	Randomisation done by research interviewer.
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	High risk	The same researcher did the enrolment interview and collected the outcome data. After each interview the researcher was asked to mark which group she thought the participant was in
Incomplete outcome data (attrition bias) All outcomes	Low risk	The follow-up rate at 12 weeks postpartum was 90.9%'
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	No other sources of bias noted.

Cupples 2011

Methods	RCT.
Participants	343 women (172 to the intervention group; 171 to the control group), pregnant with their first baby and less than 20 weeks' gestation were enrolled from Northern Ireland. They were 16-30 years old, had no co-morbidity and were from disadvantaged areas based on their postcode
Interventions	Intervention group: peer mentoring provided during home visits or phone calls. The peer mentors were non-health professionals, < 40 years old with at least 1 child < 10 years old. They received an initial 2-hour training session, follow-up training sessions every 6-8 weeks and ongoing supervision from a midwife. The mentoring sessions were offered twice monthly during pregnancy and monthly for the first postpartum year. The peers were matched to the participants based on age and locality. The mean number of contacts was 8.5 (SD 9.3). 29% of the participants had > 12 contacts and 16% received none Usual care: routine antenatal and postpartum care.
Outcomes	Outcomes included depression (SF36), parental stress (PSI) and the Bayley Scales of Infant Development II at 52 weeks postpartum
Notes	

Risk of bias

Bias	Authors' judgement	Support for judgement

Cupples 2011 (*Continued*)

Random sequence generation (selection bias)	Low risk	Computer-generated using alternate blocks of 20 and 40.
Allocation concealment (selection bias)	Low risk	"Randomization done by independent individuals at a remote location."
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	"Assessed by researcher blinded to group allocation."
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rates at 52 weeks postpartum were 85.3% for questionnaires and 81.6% for the Bayley
Selective reporting (reporting bias)	Low risk	All outcomes were reported on. Non-imputed values used in this review
Other bias	Low risk	No other sources of bias noted.

Dennis 2009

Methods	RCT with stratification on self reported history of depression
Participants	701 postpartum women (349 in the intervention group; 352 in the control group) were enrolled from 7 large health regions in Ontario, Canada. During the routine postpartum phone call (24-48 hours post hospital discharge) public health nurses administered the EPDS and those women scoring > 9 and deemed to be high risk to develop postpartum depression were referred to the study. Women taking antidepressant or antipsychotic drugs at the time of recruitment were excluded. Participants were 2 weeks postpartum or less, aged 18 years or more, able to speak English, had a live birth and were discharged home with their baby
Interventions	Intervention group: standard community postpartum care plus telephone based peer support from a mother with a history and recovery from postpartum depression. Telephone contact was initiated within 48-72 hours of randomisation. Peer support mothers underwent a 4-hour training session and were asked to make a minimum of 4 contacts with each mother. On average each peer supported 2 women (range 1-7); made 8.8 contacts (SD 6.0) with each contact lasting 14.1 minutes (SD 18.5) Control group: standard community postpartum care including access to services from public health nurses and other providers (mother initiated) and drop in centres
Outcomes	Outcomes included depression (EPDS > 12 and SCID), anxiety (STAI) and UCLA Loneliness scale at 12 and 24 weeks postpartum

Notes	Women in both groups with severe depression at 12 weeks were referred for treatment. More women in the control group were referred at 12 weeks so the 24-week results were not included in the meta-analyses

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	"done by web randomisation service."
Allocation concealment (selection bias)	Low risk	"centrally controlled with a web based randomisation service."
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants not possible. Community caregiver was not informed of trial participation or group allocation
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Research nurses doing data collection were blinded to group allocation
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rates at 12 and 24 weeks postpartum were 87.4% and 85.6% respectively
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	No other sources of bias noted.

Feinberg 2008

Methods	RCT.
Participants	169 couples expecting their first child (89 in intervention group and 80 in control group) were recruited via antenatal education classes at 2 hospitals and doctors' offices in Pennsylvania USA. They were all heterosexual couples living together and were enrolled in the 2nd trimester of pregnancy
Interventions	Intervention group: 8 group classes (4 in the antenatal and 4 in the postnatal period), focusing on improving co-parenting by encouraging conflict management, sharing tasks and developing supportive roles in parents. The group sessions were in addition to the regular antenatal classes, structured and led by a trained man and woman team. There were 6-10 couples in each group and 2/3 of the couples attended 5 or more of the 8 sessions Control group: regular antenatal classes and a mailed brochure about selecting child care

Feinberg 2008 (*Continued*)

Outcomes	Outcomes included depression (CES-D), anxiety (Taylor Manifest Anxiety Scale), parent child dysfunction, infant regulation and co-parenting at 24 weeks postpartum
Notes	We used only the data collected from the mothers. We used the 6-item Dysfunction Interaction Scale from the PSI for the Maternal-Infant attachment outcome in this review. We did not use the anxiety data as the Taylor Manifest Anxiety Scale measures chronic anxiety

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	"A staff person created a randomisation list of intervention and control assignments base on a computer program" [personal communication]
Allocation concealment (selection bias)	Low risk	"After collection of baseline data a staff member, not involved in enrolment, assigned group based on the order of receipt of baseline data" [personal communication]
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment by participant-completed questionnaire sent by mail
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rate at 24 weeks postpartum was 89.9%.
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	No other sources of bias noted.

Gamble 2005

Methods	RCT.
Participants	103 mothers (50 in the intervention group; 53 in the control group) who were assessed as having a 'distressing or traumatic birth' were enrolled in the immediate postpartum period in a Brisbane, Australia hospital
Interventions	Intervention group: 1 midwifery-led debriefing session before hospital discharge and another at 6 to 8 weeks postpartum Control group: standard care with no midwifery-led debriefing session

Gamble 2005 (*Continued*)

Outcomes	Outcomes included depression (EPDS > 12) at 4-6 and 12 weeks postpartum, maternal stress (Depression Anxiety and Stress Scale-21) at 12 weeks
Notes	

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	"computer generated random allocations."
Allocation concealment (selection bias)	Low risk	"performed using sealed, opaque envelopes." Personal communication confirmed the envelopes were consecutively numbered
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	A "second research midwife, blinded to group allocation, conducted the follow-up telephone interviews"
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rates at 4-6 and 12 weeks postpartum were 99.0% and 100% respectively
Selective reporting (reporting bias)	Low risk	All outcomes were reported on. Satisfaction information was collected only from intervention group
Other bias	Low risk	No other sources of bias noted.

Gao 2010

Methods	RCT.
Participants	194 low-risk married women having their first babies and attending routine antenatal classes (96 in the intervention group; 98 in the control group) were enrolled at > 28 weeks of pregnancy in a teaching hospital in China. Women with a personal or family history of depression were excluded
Interventions	Intervention group: routine antenatal classes (as per control group); 2 2-hour IPT-oriented group antenatal classes by trained midwives; and 1 telephone call at 2 weeks postpartum from the same midwife.The extra classes were done immediately following the routine antenatal class and the group size was <= 10 participants
Outcomes	Outcomes included depression (EPDS > 12); psychological well-being (General Helath Questionnaire) and satisfaction with interpersonal relationships (researcher-developed scale) at 6 weeks postpartum

Gao 2010 (*Continued*)

Notes	13.4% of overall sample had EPDS scores of >= 13 at enrolment. 95.8% of women in the intervention group attended all the extra antenatal classes

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Computer-generated 'table of random numbers'.
Allocation concealment (selection bias)	Unclear risk	Eligiblity screen by prenatal educator. Consent was obtained by the principal investigator. The list of treatment allocations were stored on the computer of the same principal investigator who obtained consent to participate
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment was done by "research assistant who was blinded to the treatment condition"
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rate at 6 weeks postpartum was 90.2%.
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	No other sources of bias noted.

Gjerdingen 2002

Methods	RCT.
Participants	151 couples having their first baby (77 in intervention group and 74 in the control group) were enrolled from prenatal classes in Minnesota, USA
Interventions	Intervention group: 2 30-minute breakout sessions run by a psychologist that occurred during the regular prenatal class program. 1 session dealt with supportive behaviours between the couple and the other discussed planned household work tasks Control group: regular prenatal class program which included a video about being a new parent and discussion of infant care during the breakout session times
Outcomes	Outcomes included mental health (5-item SF36 mental health scale), parent support and work measures at 26 weeks postpartum

Gjerdingen 2002 (*Continued*)

Notes	Only data from the mothers were used. Parent/social support was measured with 1 item -"How often did your partner make you feel he cared about you?" (responses from 1 = never to 7 = frequently). Marital discord was measured with 1 item - "How satisfied are you with your relationship with your partner?" (responses 1 = very dissatisfied to 7 = very satisfied)

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	"computer generated permuted block random number schedule. "
Allocation concealment (selection bias)	Low risk	"a research assistant randomly assigned couples to groups." "The participants were informed of assignment at next class." We have assumed that the group assignment was done away from the prenatal class itself
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment by participant-completed questionnaire sent by mail
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rate at 24 weeks postpartum was 87.4%.
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	No other sources of bias noted.

Gorman 1997

Methods	RCT with stratification for past history of depression.
Participants	45 pregnant women (24 in the intervention group; 21 in the control group) at-risk for postpartum depression who attended various obstetric clinics in Iowa City and St. Louis, USA
Interventions	Intervention group: 5 individual sessions based on interpersonal psychotherapy, beginning in late pregnancy and ending at approximately 4 weeks postpartum. The intervention was given by a PhD psychology student
Outcomes	Outcomes included depression (EPDS > 12 and SCID) at 4 and 24 weeks postpartum
Notes	

Gorman 1997 (*Continued*)

Risk of bias		
Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	"using a random numbers table" with blocking.
Allocation concealment (selection bias)	Low risk	"allocations stored securely in student's supervisor's office. Student enrolling women would notify supervisor and he would verbally tell her the group assignment" [personal communication]
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Data collection done by advanced clinical graduate students who were blind to treatment allocation
Incomplete outcome data (attrition bias) All outcomes	Low risk	A questionnaire was completed and a SCID assessment was done at 4 and 24 weeks postpartum. The completion rates for the SCID were 86.6% and 82.2%, The completion rates for the questionnaire were 73.3% and 66.6%
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	No other sources of bias noted.

Gunn 1998

Methods	RCT stratified by recruiting centre.
Participants	683 healthy mothers (number of women randomised to each group not stated) who gave birth in 1 rural and 1 metropolitan hospital in Victoria, Australia. Women were excluded if they were patients of general practitioners who were the trial reference group, attended the teenage clinic, or delivered by an emergency caesarean section
Interventions	All participants received a letter and appointment date to see a general practitioner for a check-up: the intervention group for 1 week after hospital discharge and the control group for 6 weeks postpartum
Outcomes	Outcomes included depression (EPDS > 12), maternal physical and mental well-being (SF-36), and breastfeeding duration at 12 and 24 weeks postpartum

Gunn 1998 (*Continued*)

Notes		
Risk of bias		
Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	"variable block randomisation schedule."
Allocation concealment (selection bias)	Low risk	"via telephone through a centrally controlled randomisation centre."
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment by participant-completed questionnaire sent by mail
Incomplete outcome data (attrition bias) All outcomes	High risk	Follow-up rates at 12 and 24 weeks postpartum were 69.7% and 65.3% respectively
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	No other sources of bias noted.

Harris 2006

Methods	RCT.
Participants	Pregnant women were screened and those thought to be at risk for depression were contacted about the study. Women with psychotic illness, serious suicidal risk or poor fluency in English were excluded. 117 were found to be at risk during screening and were randomised (61 in intervention group and 56 in control group). 71 of these women consented and completed baseline information at 30 weeks of pregnancy (range 24-36) (32 in the intervention group and 39 in the control group). 3 women in each group had major depression at baseline (8% of total sample) and were excluded at that time
Interventions	Intervention group: NEWPIN (New Parent Infant Network). The NEWPIN program provides antenatal and postnatal social support with 1-to-1 befriending and psychoeducational group meetings by trained volunteers who themselves are mothers Control group: usual care.
Outcomes	Outcome was onset of major depression; minor depression requiring medication; or if already depressed, a failure to recover during the time from baseline and follow-up. Outcome data were measured using SCAN (Schedules for assessment in Neuropsychiatry) and yields a diagnosis of depression according to DSM-IV criteria. Personal communi-

Harris 2006 (*Continued*)

	cation with the authors provided data from the SCAN at 12 weeks postpartum
Notes	The reference provided outlines the registration of the trial. The trial is complete and the principal investigator was Dr Tirril Harris. She provided slides that outlined many aspects of the trial

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	The allocation sequence was created by a research assistant not involved in enrolment. S/he filled opaque envelopes with treatment allocations which were sealed, shuffled randomly and then numbered
Allocation concealment (selection bias)	Low risk	Randomisation was done by a phone call to the research assistant at a site away from the location of enrolment. She opened the next envelope
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Outcome assessment was done by face-to-face interviews and authors state that "interviewers rarely remained unblinded"
Incomplete outcome data (attrition bias) All outcomes	High risk	60.7% of those randomised completed the baseline interview and 55.5% of those randomised provided outcome data at 12 weeks postpartum
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	No other sources of bias noted.

Heinicke 1999

Methods	RCT.
Participants	70 women receiving prenatal care in California, USA (35 to intervention group and 35 to control group) were enrolled in the 3rd trimester of pregnancy. They were having their first baby, had no current mental illness and were identified as 'at risk' by a social history interview. All participants were poor and lacked social support
Interventions	Intervention group: home visiting by mental health professionals, possible referral to community resources and the availability of a weekly mother-infant group. Visits were done for the first 2 years postpartum. They began at the end of pregnancy, were weekly during pregnancy and the first year, every other week in the second year and 60 minutes

Heinicke 1999 (*Continued*)

	in length. Telephone follow-up contacts were done in the 3rd and 4th years Control group: paediatric follow-up which entailed developmental evaluation, referrals as needed but no visits or access to the mother-infant group
Outcomes	Outcomes included depression (BDI), anxiety (STAI), maternal support (Cutrona Support Inventory), marital discord (Locke-Wallace Marital Inventory), maternal-infant attachment (Attachment Q-set) and infant development (Bayley Scales of Infant Development) at 4, 24 and 52 weeks postpartum
Notes	All outcomes except the Bayley were combined into factors in the publication. The authors were unable to supply the raw data As depression data were not available (the primary outcome of this review) no data from this trial were included in the review

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	No allocation sequence was used. A coin toss was done for every 2 families
Allocation concealment (selection bias)	Low risk	"Once two consecutive families agreed to participate a coin toss by a person who had had no contact with the families determined the group
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	"Assessments done by staff unaware of treatment assignment."
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rate at 4, 24 and 52 weeks postpartum were 100%, 91.1% and 91.1% respectively
Selective reporting (reporting bias)	Unclear risk	All outcomes were reported but were combined into factors. No raw data numbers except Bayley were available
Other bias	Low risk	No other sources of bias noted.

Ickovics 2011

Methods	RCT with stratification by site and expected month of delivery
Participants	1047 medically low-risk pregnant women (653 in the intervention group; 394 in the control group) were recruited antenatally from 2 US hospital antenatal clinics (Atlanta GA and New Haven CT). The women were 25 years old or less and < 24 weeks' gestation

	(mean 18 weeks SD 3.3) at enrolment
Interventions	Intervention group: group prenatal care. Each prenatal visit was done in a group setting and led by a health professional (midwife or obstetrician). It was integrative prenatal care combining assessment, education, skill building and support. There were 10 2-hour sessions from 16-40 weeks of gestation (20 hours in total) Usual care: individual prenatal care. Individual contact was made at the same time points as the group sessions. Each contact was 10-15 minutes (2 hours in total)
Outcomes	Outcomes included depression (CES-D), stress (Perceived Stress Scale) and social support (Social Relationship Scale) at 24 and 52 weeks postpartum
Notes	In the trial there were 2 study groups that received group prenatal care. 1 received the standard group care and the other received more information about HIV and sexual risk reduction. For this review the 2 groups will be combined and considered to be the intervention group

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	Computer-generated randomisation sequence. 40% to control group and 60% to the 2 intervention groups (see notes section above)
Allocation concealment (selection bias)	Low risk	"Allocation was concealed from participant and research staff until eligibility screening was completed and study condition was assigned." "Randomization sequence was password protected to recruitment staff and participants."
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	"All measurement and data collection were conducted in blinded fashion independently of the care setting."
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	Follow-up rate at 24 and 52 weeks postpartum were 75.2% and 80.2% respectively
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	No other sources of bias noted.

Lavender 1998

Methods	RCT.
Participants	114 primiparous mothers (60 in the intervention group; 60 in the control group) in a UK teaching hospital. Inclusion criteria: singleton pregnancy, cephalic presentation, spontaneous labour at term, normal vaginal delivery
Interventions	Intervention group: 1 debriefing session before hospital discharge, which lasted 30 to 120 minutes, provided by a midwife who received no formal training. Control group: standard care with no midwifery-led debriefing session
Outcomes	Outcomes included depression (HADS) and anxiety (HADS) at 3 weeks postpartum
Notes	59.6% of the participants were single mothers.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	"simple random sampling using computer generated numbers. "
Allocation concealment (selection bias)	Low risk	"opening consecutively numbered, sealed opaque envelopes." Done by ward staff
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment by participant-completed questionnaire sent by mail
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rate at 3 weeks postpartum was 95%. The completion rate by group was not reported
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	No other sources of bias noted.

Le 2011

Methods	RCT.
Participants	217 pregnant Latino women (112 in intervention group; 105 in control group) $\leq$ 24 weeks' gestation were enrolled from a healthcare centre and hospital clinic in Washington DC. They were screened and considered to be at high risk of depression (CES-D $\geq$ 16 or self report of personal or family history of depression) but did not currently have a major depressive illness

Le 2011 (*Continued*)

Interventions	Intervention group:cognitive behavioural group therapy sessions. Research staff provided 8 weekly sessions during pregnancy and 3 booster sessions at 6, 16 and 52 weeks post-partum. Participants attended a mean of 4.1 sessions during pregnancy (SD 2.9) and 2. 0 (SD 1.3) booster sessions Usual care: usual prenatal care. This may have included services that participants chose for themselves
Outcomes	Outcomes included depression (Beck and Mood Screener) measured post intervention and at 6, 16 and 52 weeks postpartum
Notes	It is unknown how many women had a CES-D score > 16 at recruitment.

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	Allocation list prepared by principal investigator using a coin toss.[personal communication]
Allocation concealment (selection bias)	Low risk	Allocations were put in consecutively numbered, sealed opaque envelopes [personal communication]. "Group membership was assigned by the first author; neither participant nor interviewer knew the result of the random assignment until this envelope was opened."
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	High risk	Outcome assessors were not blinded.
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rate at 6, 16 and 52 weeks postpartum were 82.9%, 80.2% and 69.1% respectively
Selective reporting (reporting bias)	Low risk	All outcomes were reported on. Raw data numbers were available
Other bias	Unclear risk	It is unknown how many women had a CES-D score > 16 at recruitment.

Lumley 2006

Methods	RCT with cluster-randomisation stratified on rural and metropolitan. Unit of randomisation was local government authority
Participants	Local government authorities in Victoria, Australia were matched on location (rural or metropolitan), size, rating of current and recent community activity, annual number of births and non-contiguous boundaries. 16 local government authorities were included (8 in the intervention group and 8 in the control group) No individual consent was sought from participants. All women giving birth in the participating local government authorities over a 10 month period (19,193) were sent postal questionnaires (10,471 in the intervention group and 8722 in the control group) . A pre-paid reply envelope was included and reminder cards were sent at 2 and 4 weeks
Interventions	Intervention group: PRISM program which 'aimed to refocus the existing postnatal health care contact on maternal physical and mental health, to implement community strategies to increase the availability and accessibility of "time-out", provide better information about common health problems and local services, with encouragement and incentives to use them'. It included an education program for general practitioners and maternal child heath nurses, an information kit given to new mothers at hospital discharge, a community information officer for 2 years, and local steering committees to help with local initiatives Control group:usual care. No further details noted.
Outcomes	Outcomes included depression (EPDS), general health status (physical and mental component score of the SF36) and women's views at 24 weeks postpartum
Notes	

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	The local government authorities were matched (see details above). "randomisation occurred within pairs assigning one to intervention and one to control."
Allocation concealment (selection bias)	Unclear risk	"Randomisation took place at a public event." No further details were provided
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment by participant-completed questionnaire sent by mail
Incomplete outcome data (attrition bias) All outcomes	Low risk	The response rates at 24 weeks postpartum was 59.0% (59.9% in the intervention

		group and 58.0% in the control group). We assessed this as 'very high' for a community mail out
Selective reporting (reporting bias)	Low risk	All outcomes were reported on. Analysis was done using logistic-normal characterised as 'cluster-specific'
Other bias	Low risk	Bias risk for cluster trial: Community mail outs were done rather than individual consent and thus prior knowledge of cluster group is not applicable to this trial. Clusters were matched and randomisation was done in pairs. There were no differences in the social and perinatal baseline characteristics between the 2 groups. No full clusters were lost to follow-up

MacArthur 2002

Methods	RCT with cluster design. Unit of randomisation was general practice
Participants	The general practices had on average 2 or more general practitioners and $\geq$ 2 midwives. 17 practices were randomised to the intervention group and 19 practices to the control group 2064 UK postpartum mothers (1087 in the intervention group; 977 in the control group). Only mothers expected to move out of the general practice area were excluded
Interventions	Intervention group: flexible, individualised, extended home visits by a midwife to 28 days postpartum that included (1) screening with a symptoms checklist and the EPDS, (2) a referral to a general practitioner as necessary, and (3) a 10-12 week discharge visit Control group: standard care that included 7 midwifery home visits to 10-14 days postpartum (may extend to 28 days) and care by health visitors thereafter. General practitioners completed routine home visits and a final check-up at 6 to 8 weeks postpartum
Outcomes	Outcomes included depression (EPDS > 12) at 16 and 52 weeks postpartum
Notes	Additional information (including standard deviations for continuous outcomes) were provided by the trial authors

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	"customised, computer program using minimization with 2 factors were included, socioeconomic deprivation and midwife caseload."

MacArthur 2002 (*Continued*)

Allocation concealment (selection bias)	Low risk	Done by a "member of the clinical trial unit who was independent of the trial team."
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Recruitment of the participants from the clusters was done by unblinded staff. Blinding of participants and caregivers was not possible
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment by participant-completed questionnaire sent by mail
Incomplete outcome data (attrition bias) All outcomes	High risk	Follow-up rates at 12 and 52 weeks postpartum were 72.8% and 73.3% respectively
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	Bias risk for cluster trial: it is not stated whether participants were aware of the group allocation of their cluster before enrolling in the study. Recruitment rates did not differ between clusters. Randomisation of clusters used minimisation based on socioeconomic deprivation and midwife caseload. Mulitvariate model analysis was used to test whether baseline characteristics differed more than would be expected given cluster-randomisation and showed no significant differences. For any proportional differences the ones generally indicative of worse health outcome were biased again the intervention group. 1 cluster was lost from the trial when the single midwife in the cluster went on long-term sick leave and could not be replaced

Morrell 2000

Methods	RCT.
Participants	623 UK postpartum mothers (311 in the intervention group; 312 in the control group) . Exclusion criteria: insufficient English to complete questionnaires and an infant in the special care unit for more than 48 hours
Interventions	Intervention group: postnatal care at home by community midwives plus up to 10 home visits in the first month postpartum lasting up to 3 hours provided by a community postnatal support worker Control group: postnatal care at home by community midwives.

Morrell 2000 (*Continued*)

Outcomes	Outcomes included depression (EPDS > 12), maternal physical and mental well-being (SF-36), social support (Duke Functional Social Support), and breastfeeding duration at 6 and 24 weeks postpartum
Notes	There were more twins (9/311 vs 1/312) and more women had an adult living with them (87% vs 79%) in the intervention group

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	"prepared in advance by using random digit tables in the research office." Done by a statistician
Allocation concealment (selection bias)	Low risk	"opening consecutively numbered, sealed opaque envelopes."
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment by participant-completed questionnaire sent by mail
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rates at 6 and 24 weeks postpartum were 88.4% and 79.1% respectively
Selective reporting (reporting bias)	Low risk	All outcomes were reported on. Satisfaction with services was not asked as a general question of all participants. Questions were asked for specific care in each group. EPDS scores were reported as ≥12, rather than the more usual > 12
Other bias	Low risk	No other sources of bias noted.

Priest 2003

Methods	RCT with stratification for parity and mode of delivery.
Participants	1745 postpartum mothers (875 in the intervention group; 870 in the control group) from 2 large maternity hospitals in Perth, Australia. Exclusion criteria: insufficient English to complete questionnaires, being under psychological care at the time of delivery, maternal age < 18 years, and infant needing neonatal intensive care
Interventions	Intervention group: a single, standardised debriefing session provided in-hospital immediately after randomisation or the next day; duration ranged from 15 minutes to 1 hour and all research midwives received training in critical incident stress debriefing. Control group: standard postpartum care.

Priest 2003 (*Continued*)

Outcomes	Outcomes included depression (EPDS > 12) at 8, 24, and 52 weeks postpartum	
Notes		
Risk of bias		
Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not stated.
Allocation concealment (selection bias)	Low risk	Each woman selected an envelope from a group of at least 6 sealed, opaque envelopes containing random allocation
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment by participant-completed questionnaire sent by mail. Some participants were interviewed by clinical psychologist who was blinded to study group
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rates at 8, 24, and 52 weeks postpartum were 94.1%, 91.2% and 80.2% respectively
Selective reporting (reporting bias)	Unclear risk	Clinical interviews were used to determine depression and post traumatic stress based on DSM IV criteria. However interviews were not done for all participants. Interviews were done if: 1) the EPDS score was > 12; 2) women were currently receiving treatment or medication for a psychological disorder; and 3) for a stratified sample of women with lower EPDS scores (59% for those with scores 10-12, 10% with scores 5-9 and 5% with scores < 5). If a woman did not have a clinical interview she was categorised as 'not depressed'. Post traumatic stress was determined during the same clinical interview (driven mostly by the EPDS score) and women with elective caesarean delivery were excluded from the total reported. The denominator for post traumatic stress was not reported

Priest 2003 (*Continued*)

Other bias	Low risk	No other sources of bias noted.

Reid 2002

Methods	RCT with a 2 x 2 factorial design, stratified by centre.
Participants	1004 UK mothers (503 in the intervention group; 501 in the control group). Inclusion criteria: all primiparous women attending antenatal clinics in 2 participating hospitals. Exclusion criteria: women whose infant subsequently died or was admitted to the special care unit for more than 2 weeks
Interventions	2 postpartum interventions incorporating 4 groups: 1) control, 2) mailed self-help materials, 3) invitation to support group, and 4) self-help materials plus invitation to support group. The support groups were run on a weekly basis for 2 hours facilitated by trained midwives
Outcomes	Outcomes included depression (EPDS > 11), maternal physical and mental well-being (SF-36), and social support (SSQ6) at 12 and 24 weeks postpartum
Notes	For this review data were analysed by combining groups 1 and 2 vs groups 3 and 4 to achieve a comparison of support group vs no support group. Only 18% of participants in the intervention group attended a support group session

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	"computer generated scheme with randomised permuted blocks."
Allocation concealment (selection bias)	Low risk	Done by trial co-ordinator after delivery of a live baby was confirmed. The trial co-ordinator was off-site
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment by participant-completed questionnaire sent by mail
Incomplete outcome data (attrition bias) All outcomes	High risk	Follow-up rates at 12 and 24 weeks postpartum were 73.3% and 71.4% respectively
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	No other sources of bias noted.

Sen 2006

Methods	RCT with stratification by parity.
Participants	162 pregnant women with an uncomplicated twin pregnancy were enrolled at < 20 weeks' gestation (80 in the intervention group and 82 in the control group) from a hospital in the UK. Women having fetal or infant death were excluded (3 in each group)
Interventions	Intervention group: care, advice and support from a Twin Midwife Advisor which included: at least 2 home visits (1 antenatal and 1 in the early postpartum); specially designed antenatal preparation for parenting program (4-5 antenatal group classes and 1 postnatal class); care in-hospital and at out-patient hospital clinic Control group: standard care and advice which included:shared antenatal care between general practitioner (GP) and consultant obstetrician at a twin clinic; allocation to a community midwife who may provide care in conjunction with GP; invitation to attend community-based antenatal education sessions (normally without a focus on twins) ; invitation to a breastfeeding workshop (rarely with focus on twins); self-referral to Childbirth Trust antenatal sessions (without focus on twins)
Outcomes	Outcomes included depression (EPDS), anxiety (HADS subscale for anxiety); parental stress (PSI); mother-infant attachment (Green scale), social support (subscale of Satisfaction with Motherhood scale), marital relationship (VAS developed by researcher), general outlook on life, emotional well being and satisfaction with care at 6, 12, 24 and 52 weeks postpartum
Notes	For mother-infant attachment data were collected for each twin. We took the 'worst' score so we did not miss a 'bad outcome'

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	"on-line web based electronic randomisation procedure provided by Centre for Health Service Research, Newcaslte University." Used permuted block design
Allocation concealment (selection bias)	Low risk	"During the enrolment home visits a laptop was connected to a mobile phone for Internet access to the randomisation service. The participant pressed the randomisation button to obtain group allocation."
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment by participant-completed questionnaire sent by mail

Sen 2006 (*Continued*)

Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rates at 6, 12, 24, and 52 weeks postpartum were 81.5%, 79.0%, 82.1% and 75.3% respectively
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	No other sources of bias noted.

Small 2000

Methods	RCT stratified by research midwife who would give the intervention
Participants	1041 mothers (520 in the intervention group; 521 in the control group) who had an operative delivery in a large maternity teaching hospital in Melbourne, Australia
Interventions	Intervention group: a midwifery-led debriefing session before discharge to provide women with an opportunity to discuss their labour, birth, and postdelivery events and experiences. Control group: standard care which included a brief visit from a midwife on discharge to give a pamphlet on sources of assistance
Outcomes	Outcomes included depression (EPDS > 12) and overall maternal health status (SF-36) at 24 weeks postpartum. Depression was measured at 4-6 years but not included in the review
Notes	

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	"allocation determined by computer generated, adaptive biased coin randomisation schedule."
Allocation concealment (selection bias)	Low risk	"telephone randomisation."
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment by participant-completed questionnaire sent by mail
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rate at 24 weeks was 88.1% and 51.3% at 4-6 years.

Small 2000 (*Continued*)

Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	No other sources of bias noted.

Stamp 1995

Methods	RCT with stratification by parity.
Participants	144 pregnant women (73 in the intervention group; 71 in the control group) who screened at-risk for postpartum depression during antenatal clinic visits in Adelaide, Australia. Inclusion criteria: English-speaking, singleton fetus, and < 24 weeks' gestation
Interventions	Intervention group: routine antenatal care plus 2 antenatal and 1 postnatal midwifery-led group sessions. Control group: routine antenatal and postnatal care which included a class at 6 weeks postpartum that incorporated a video on postpartum depression
Outcomes	Outcomes included depression (EPDS > 12) at 6, 12, and 24 weeks postpartum
Notes	A high number of women were screened 'vulnerable' and only 31% of participants in the intervention group attended all 3 sessions

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	"randomisation schedules were prepared in advance by a researcher not involved in the trial." Variable balanced blocks were used
Allocation concealment (selection bias)	Low risk	"allocated by telephone call from clinic to independent researcher who opened the next in a series of sequentially numbered envelopes."
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment by participant-completed questionnaire sent by mail
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rates at 6, 12, and 24 weeks postpartum were 92.1%, 92.8% and 87.1% respectively
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.

Stamp 1995 (*Continued*)

Other bias	Low risk	No other sources of bias noted.

Tam 2003

Methods	RCT.
Participants	560 in-hospital mothers (280 in each group) from Hong Kong, China with at least 1 sub-optimal outcome in the perinatal period ranging from antenatal complications requiring hospitalisation, elective caesarean section, labour induction, postpartum haemorrhage, infant admission to special care unit, etc
Interventions	Intervention group: routine postpartum care plus 1 to 4 sessions of "educational counselling" by a research nurse before hospital discharge that included information related to the adverse event and counselling to assist the mother to "come to terms with her losses and find solutions to specific difficulties" (median total time was 35 minutes). 24 women also received 1 session by a physician
Outcomes	Outcomes included depression (HADS > 4) at 6 and 24 weeks postpartum
Notes	

Risk of bias

Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	"computer generated numbers."
Allocation concealment (selection bias)	Low risk	"done by research nurse using sealed, opaque, sequentially numbered envelopes."
Blinding of participants and personnel (performance bias) All outcomes	Unclear risk	Blinding of participants was not possible and health professionals were not blinded to group allocation
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Outcome assessment done before hospital discharge, at 6 weeks postpartum during the routine postnatal follow-up visit and at 24 weeks with a mailed questionnaire. The process of data collection in-hospital and at the follow-up visit is not stated
Incomplete outcome data (attrition bias) All outcomes	Unclear risk	The authors state that "560 patients were invited to participate, 180 declined", "1 case in the control group was excluded" and "161 participants in the counselling group and 255 in the control completed the study". The numbers at each of the follow-up time points is not stated. The actual numbers of participants at each stage of the study are unclear based on these numbers. The authors have been contacted for clarification

Tam 2003 (*Continued*)

Selective reporting (reporting bias)	Low risk	All outcomes were reported but the time points are unclear.
Other bias	Low risk	No other sources of bias noted.

Tripathy 2010

Methods	RCT with cluster design stratified by district and pre-existence of a women's group. Unit of randomisation was geographic area. The existing women's groups carried out financial savings and credit activities
Participants	12 clusters were identified in each of 3 contiguous districts in eastern India (36 in total) (18 in the intervention group and 18 in the control group). The mean cluster size was 6338 (range 3605-7467) and the proportion of Adivasis (indigenous groups) was 58%-70%. The Adivasis are an under-serviced population with lower rates of employment, lower rates of education for children, higher mortality rates and poorer access to health services than non-indigenous populations Women were part of clusters based on where they lived. They attended the women's group (for those in the intervention group) during pregnancy if they wished to. Study consent was not required to attend the group. After delivery women, aged 15-49, living in the participating regions during the study period were asked if they would consent to a study interview. Those who consented were the participants in the study. A total of 19,030 women participated (9770 in the intervention group and 9260 in the control group)
Interventions	Intervention group: existing women's groups expanded their function (172 groups) and 72 groups were created. Each group had a local leader and met monthly for a total of 20 meetings. The groups took part in a participatory learning and action cycle that identified problems, planned strategies, put strategies into practice and assessed the effect. Clean obstetrics delivery practices and care-seeking behaviour were shared through stories and games at the groups Control group: existing women's groups maintained their financial function but did not add anything else. Clusters without women's groups did not create any In both groups health committees were formed so that community members could express their opinions about the design and management of local health services
Outcomes	Outcomes included neonatal mortality, maternal depression (Kessler-10), stillbirths, maternal and perinatal deaths and health resource use. Each month 'key informants' told the researchers about any births or maternal deaths that had occurred in women of reproductive age in their allocated area. The 'key informant' was usually a traditional birth attendant or active village member. A researcher interviewed all women at 6 weeks postpartum who consented and obtained all study outcomes
Notes	Maternal depression was only measured starting in Year 2 of the trial because of 'delays in identification of a contextually appropriate scale'. Group attendance in Year 1 of the study was 18% of newly pregnant women and rose to 55% in Year 3

Risk of bias

Tripathy 2010 (*Continued*)

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Clusters were assigned a number and these numbers were written on pieces of paper and folded. For each region the papers where separated into 2 sets, those clusters with existing women's groups and those without. Each set of numbers was put into a basket
Allocation concealment (selection bias)	Low risk	An external observer drew the papers 1 after the other from the basket to assign group allocations evenly for each set. The first numbers drawn were allocated to the intervention group, the rest were allocated to the control group. The authors presented a chart showing how this process was done in each region based on the size of each set. For sets with an even number of clusters the first half were intervention and the second half were control (i.e. 8 total clusters, the first 4 were intervention, the second 4 were control). For sets with an odd number of clusters the process was the same but it varied if the larger number was in the intervention group or control (i.e. a set with 5 total clusters had 2 allocated to intervention and 3 to control; a set with 9 total clusters had 5 allocated to intervention and 4 to control) . How the decision was made for each set was not stated
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	The staff doing the interviews were from different villages than those giving the intervention. They had their training done separately and had review meetings on separate days
Incomplete outcome data (attrition bias) All outcomes	Low risk	The follow-up rate for neonatal morbidity (done on the full sample) was 98.6%. As outlined above maternal depression started to be collected in Year 2. There is no evidence presented that the follow-up rate changed over the course of the study so we assumed that the follow-up rate was similar

Tripathy 2010 (*Continued*)

		for the depression outcome
Selective reporting (reporting bias)	Low risk	All outcomes were reported on. As outlined above the sample size for the depression outcome is smaller as it was only collected from Year 2 on
Other bias	Low risk	Bias risk for cluster trial: it is possible that the participants were aware of the group allocation of their cluster before enrolling in the study however, this was not directly discussed during the consent process [personal communication]. Randomisation of clusters was stratified by district and existence of pre-existing women's group. Baseline differences in household assets, maternal education, literacy and tribal membership were noted between the intervention and control groups with women in the intervention group generally poorer and more disadvantaged than those in the control group. No full clusters were lost to follow-up. It is possible that the cluster randomisation resulted in a 'herd-effect' where more women attended a women's group than if individual randomisation had occurred

Waldenstrom 2000

Methods	RCT.
Participants	1000 pregnant mothers (495 in the intervention group; 505 in the control group) attending an antenatal clinic in Melbourne, Australia. Inclusion criteria: > 25 weeks' gestation, English-speaking, and low medical risk
Interventions	Intervention group: team midwifery care provided antenatally and postnatally in hospital with a focus on continuity. Control group: standard antenatal and postnatal care by physicians and midwives with no focus on continuity
Outcomes	Outcomes included depression (EPDS > 12) at 8 weeks postpartum
Notes	The primary outcome of this study was satisfaction with care. Of the 1000 women randomised there were 83 unavoidable exclusions due to miscarriage, termination, transfer to another hospital and perinatal death (intervention group = 39; control group = 44). 3 of these women were excluded for psychiatric problems (2 in the intervention group and 1 in the control group). Demographic differences were found between questionnaire responders and non-responders

Waldenstrom 2000 (*Continued*)

Risk of bias		
Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Low risk	"based on a computerized random procedure" [personal communication]
Allocation concealment (selection bias)	Low risk	"research midwife telephoned a clerk at hospital's information desk who opened an opaque numbered envelope which contained information about the allocated group."
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment by participant-completed questionnaire sent by mail
Incomplete outcome data (attrition bias) All outcomes	High risk	Follow-up rate at 8 weeks postpartum was 68.4%
Selective reporting (reporting bias)	Low risk	Data about depression and satisfaction reported. No details were presented for other outcomes but the authors acknowledge this
Other bias	Low risk	No other sources of bias noted.

Weidner 2010

Methods	RCT.
Participants	92 pregnant women admitted to a high-risk antenatal unit in Dreseden, Germany (46 to intervention group and 46 to control group) with elevated scores on the HADS or the Giessen Subjective Complaints List. 17.4% had elevated HADS (depression) scores; 40.2% had elevated HADS (anxiety) scores and 77.2% had elevated complaints scores. The gestational age at entry was not collected (personal communication)
Interventions	Intervention group: individualised psychosomatic intervention by trained psychologist or psychiatrist. 'The activation of resources and the dialogue about current conflicts are central aspects of the intervention.' 1-5 session were done while in hospital and continuation on an out-patient basis could be done if needed Control group: standard care.
Outcomes	Outcomes included depression (HADS subscale), anxiety (HADS subscale) and physical complaints at 52 weeks post-randomisation. The number of weeks postpartum was not collected (personal communication)

Weidner 2010 (*Continued*)

Notes	7 women in the intervention group (15%) were discharged before receiving the intervention

Risk of bias

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	"list was generated by an independent Institute for Informatics and Biometry in Medicine of the University Hosptial."
Allocation concealment (selection bias)	High risk	"according to the mail order of the incoming questionnaires, the next letter (A or B) in the list was assigned to the respective subject and scratched from the list." The person recruiting participants assigned the group
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Low risk	Outcome assessment by participant-completed questionnaire sent by mail
Incomplete outcome data (attrition bias) All outcomes	High risk	Follow-up rate at 52 weeks post-randomisation was 47.8%.
Selective reporting (reporting bias)	Low risk	All outcomes were reported on.
Other bias	Low risk	No other sources of bias noted.

Zlotnick 2001

Methods	RCT.
Participants	37 pregnant women (18 in the intervention group; 19 in the control group) on public assistance who had at least 1 risk factor for postpartum depression and were attending a prenatal clinic at a general hospital in the northeast USA
Interventions	Intervention group: "Survival Skills for New Moms", which involved 4 60-minute group sessions over a 4-week period based on the principles of interpersonal psychotherapy. The authors did not state who provided the intervention Control group: standard antenatal care.
Outcomes	Outcomes included depression (SCID) at 12 weeks postpartum.
Notes	50% of eligible women declined trial participation. 77% of participants were single women

Zlotnick 2001 (*Continued*)

Risk of bias		
Bias	**Authors' judgement**	**Support for judgement**
Random sequence generation (selection bias)	Unclear risk	Not stated. Authors have been contacted for details.
Allocation concealment (selection bias)	Unclear risk	"random assignment." No further details reported. Authors have been contacted
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	Outcome assessment was done by structured interview. Exact process not stated so assessment of blinding not possible. Authors have been contacted
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rate at 12 weeks postpartum was 94.6%.
Selective reporting (reporting bias)	Low risk	All outcomes were reported.
Other bias	Low risk	No other sources of bias noted.

Zlotnick 2006

Methods	RCT.
Participants	99 pregnant women (53 in the intervention group and 46 in the control group) who screened at-risk for postpartum depression during antenatal clinic visits in Rhode Island, USA. They were 23-32 weeks' gestation and on public assistance. Those women currently receiving mental health treatment or who met criteria for current depressive disorder or substance abuse were excluded
Interventions	Intervention group: The ROSE Program (Reach Out, Stand strong, Essentials for new mothers) which involved 4 x 60-minute group session over 4 weeks and 1 x 50-minute individual booster session post-delivery. The intervention was given by nurses who had received intensive training and supervision Control group: standard antenatal care
Outcomes	Outcomes included depression (Beck) and social adjustment (Range of Impaired Functioning Tool)
Notes	This is a separate trial from Zlotnick 2001. The same intervention (re-named) was used but with a larger sample size
Risk of bias	

Zlotnick 2006 (*Continued*)

Bias	Authors' judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	"win randomization." Not stated who created the sequence.
Allocation concealment (selection bias)	Unclear risk	"randomly assigned." No details of the process stated. The authors have been contacted
Blinding of participants and personnel (performance bias) All outcomes	Low risk	Blinding of participants and caregivers was not possible.
Blinding of outcome assessment (detection bias) All outcomes	Unclear risk	The process for outcome collection was not stated. The authors have been contacted
Incomplete outcome data (attrition bias) All outcomes	Low risk	Follow-up rate at 12 weeks postpartum was 86.9%.
Selective reporting (reporting bias)	Low risk	All outcomes were reported.
Other bias	Low risk	No other sources of bias noted.

BDI: Beck Depression Inventory
CES-D: Center for Epidemiologic Studies Depression Scale
DSM-IV: Diagnostic and Statistical Manual of Mental Disorders
EPDS: Edinburgh Postnatal Depression Scale
HADS: Hospital Anxiety and Depression Scale
MINI: Mini International Neuropsychiatric Inrterview
PSI: Parenting Stress Index
RCT: randomised controlled trial
SCID: Structured Clinical Interview for DSM-IV
SD: standard deviation
SF36: Short Form (36) Health Survey
SSQ6- Social Support Questionnaire - Short Form
STAI: State Trait Anxiety Inventory
VAS: visual analogue scale
vs: versus

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

Study	Reason for exclusion
Ajh 2006	Not an RCT. Odd and even days were used for group allocation
Appleby 1998	Intervention not targeting prevention; all participants had a depressive illness
Armstrong 2004	Intervention (pram-walking vs play group) was not psychosocial or psychological, all participants were depressed and the trial began when babies were 6 weeks to 18 months old
Bang 2009	Not an RCT. The authors state it was a 'quasi-experimental study'
Barnes 2009	Methodological concerns that could lead to selection and outcome bias. This was a cluster design where Home-Start schemes (informal volunteer family support program) were the unit of randomisation. Randomisation allocation scheme was done by the project manager using a coin toss during a phone call with the Home-Start scheme co-ordinator. The participants were aware of the group allocation of their cluster before enrolling in the study. The study began by only following those in the intervention group that accepted the intervention. Started to follow everyone part way through the study. This resulted in a 8-week follow-up rate of 61.3% in the intervention group and 77.1 in the control group (overall 68.9%). At 52 weeks the rates were: intervention 66.8%, control 70.8%, overall 68.7%
Bastani 2005	Postpartum depression was not an outcome. Intervention (applied relaxation therapy) was not psychosocial or psychological
Buist 1999	Pilot trial with unclear randomisation method. Significant group differences in baseline characteristics. No usable outcome data; published data were mean scores without standard deviations
Bulgay-Morschel 2010	Intervention (progressive muscle relaxation) was not psychosocial or psychological
Chabrol 2002	Not an RCT. Odd versus even number group assignment was used. Data were not analysed using 'intent-to-treat'
Chabrol 2007	Intervention was not psychosocial or psychological, but rather included a single educational session about postpartum blues, provided antenatally by a midwife
Cho 2008	Intervention not targeting prevention; all participants had a depressive illness
Cooper 2002	Not an RCT. Study examined the impact of a mother-infant intervention through the comparison of 2 matched groups
D'Andrea 1994	Postpartum depression was not a study outcome.
Dennis 2003	Women were 8-12 weeks postpartum on enrolment.
Duggan 2009	28% of participants had a depressive illness at entry.
El-Mohandes 2006	62.5% of participants had a depressive illness at entry.

(*Continued*)

El-Mohandes 2008	50.7% of participants had a depressive illness at entry.
Elliott 2000	Not an RCT. Group allocation based on delivery date. Potential selection bias with significant differences between participating and non-participating eligible women. Data were presented using median instead of mean results
Fagan 2010	RCT trial participants were not women. This is a descriptive report of mother's satisfaction from an RCT for fathers
Gordon 1960	Not an RCT. Inexplicit non-random group allocation. Primary outcome was 'emotional upset' using a subjective measure. All participant characteristics were lacking and 46% of mothers were lost to follow-up
Gordon 1999	A poor measure of postpartum depression was used that included a single item question and subscore on the mental health index of the SF-36. In addition, 30% women were excluded post randomisation
Goyal 2009	Intervention (strategies to improve sleep) was not psychosocial or psychological
Grote 2009	Intervention not targeting prevention; all participants had a depressive illness (EPDS > 12)
Hayes 2001	Intervention was not psychosocial or psychological, but rather included a single educational session about postpartum depression, provided antenatally by a midwife
Heh 2003	Intervention was not psychosocial or psychological but rather included only information related to postpartum depression
Hiscock 2001	Intervention (strategies to improve infant sleep) was not psychosocial or psychological. Mothers were enrolled when their Infants were 6-12 months old
Ho 2009	Intervention was not psychosocial or psychological, but rather included discharge education, provided by the postpartum nurse, and a booklet about postpartum depression
Hodnett 2002	The intervention (continuous intrapartum support) was neither psychological nor psychosocial. Postpartum depression was not the primary or secondary outcome
Imura 2006	Not an RCT. Participants were consecutively enrolled to intervention or control group. Intervention (aromatherapy and massage) was not psychosocial or psychological
Izzo 2005	Outcomes were measured 15 years post delivery. No reliable depression measure was used. Women were asked how often they had experienced depression in the last month
Katz 2009	Intervention not targeting prevention; all participants had a depressive illness
Katz 2009a	Intervention not targeting prevention; all participants had a depressive illness
Kealy 2003	Not an RCT.
Keller 2011	Participants were women who had given birth within 6-26 weeks

(*Continued*)

Kershaw 2005	Postpartum depression was not an outcome. Outcomes were fear of childbirth and post-traumatic stress
King 2009	Participants were women who had given birth within 12 months. 19% were currently taking medication for depression or anxiety
Kleeb 2005	Intervention was not psychosocial or psychological, but rather oral and written information about baby blues and postpartum depression
Koltyn 1997	The intervention (aerobic exercise) was neither psychological nor psychosocial
Lara 2010	Methodological concerns that could lead to selection and outcome bias. Inconsistant application of inclusion criteria. The first 44% of sample were assessed before randomisation for depression and those with depressive illness (measured with SCID) were to be ineligible. Howerver, 17.4% of those with a positive SCID were included in the study as decided by researcher. The report states that 'they showed no signs of great distress during the interview, reported having social support, were accepting of their pregnancy, had low anxiety scores and were unlikely to get treatment elsewhere'. The second 55% of the sample were assessed for depression after randomisation to increase recruitment numbers. There was also a differential rate of follow-up. At 6 weeks postpartum follow-up data were obtained on 61.4% of those in the control group and 28. 4% in the intervention group. At 4-6 months postpartum the same difference occurred (61.4% vs 31.2%)
Leung 2011	Not an RCT. Was a 'quasi-experimental design'.
Lewis 2011	Intervention (telephone based exercise program) was not psychosocial or psychological
Lieu 2000	Premature assessment of postpartum depression (2 weeks after delivery), which was neither the primary nor secondary outcome
Logsdon 2005	56% of participants 'showed evidence of depression'. The mean CES-D score at entry was 18.0 with standard deviation of 4.7
Marks 2003	Approximately 25% of participants were currently suffering from depression at recruitment and 49% had a depressive episode sometime during the perinatal period
McKee 2006	Intervention was not targeting prevention; non-depressed women were excluded and the mean BDI-II was 21.5 for those included
Milgrom 2010	50% of participants had a depressive illness at entry (EPDS > 12). Was the pilot trial for Milgrom 2011.
Milgrom 2011	30% of participants had a depressive illness at entry (EPDS > 12). Is an RCT that followed the pilot trial (Milgrom 2010)
Mohammadi 2010	Intervention (exercise) was not psychosocial or psychological
Morrell 2009	Women were 6 weeks postpartum at first assessment and 8 weeks at start of intervention
Munoz 2007	All participants had a depressive illness at entry (CES-D > 16).

(*Continued*)

Murphy 1989	Premature assessment of postpartum depression (4-15 days after delivery)
Ngai 2009	Improper randomisation procedure used. The characteristics of the study population and type of intervention met inclusion criteria for this review however, randomisation of women was not done. 2 hospitals were randomised to provide a childbirth psycho-education program or not. The authors stated that 'randomisation by woman was not feasible because of potential for contamination between study groups'. We considered including this trial as a cluster design but decided against it for the following reasons: 1) the number of clusters was very low (2 hospitals); 2) cluster size was small (92 women per cluster); 3) there were large differences in the baseline characteristics of age, education and income between the groups all favouring the experimental group (older, more educated and higher income); 4) the analysis was not done taking into account the cluster randomisation; and 5) no intra-class correlation coefficient was provided
Norman 2010	The intervention (physical therapy exercise) was neither psychological nor psychosocial
Oakley 1991	Intervention was not targeting the prevention of postpartum depression but depression among mothers of young children
Okano 1998	Not an RCT. Study examined an educational session retrospectively involving 2 non-randomised groups of women who sought psychiatric care postnatally
Parry 2010	Intervention not targeting prevention; all participants had a depressive illness
Rees 1995	Intervention was not targeting the prevention of postpartum depression but rather the treatment of antenatal depression
Roman 2009	32% of participants had a depressive illness at entry (CES-D $\geq$ 24)
Ryding 2004	Not an RCT. Women were placed in groups based on 18 pre-determined days of the month
Saisto 2001	Postpartum depression was neither a primary or secondary outcome; statistical results related to postpartum depression were not reported
Selkirk 2006	Not an RCT. Consents were numbered as they arrived, odd numbers were treatment and even numbers were control
Serwint 1991	Not an RCT. Group allocation was based on a 2-week period.
Shields 1997	Study reports on an element of a larger trial where the primary and secondary outcome was not postpartum depression. Furthermore, 1 EPDS item (self-harm) was excluded rendering the clinical interpretability of the outcome data questionable
Spinelli 1997	Not an RCT. A single-group study evaluating an interpersonal psychotherapy intervention for the treatment of antenatal depression
Spinelli 2003	Intervention was not targeting the prevention of postpartum depression but rather the treatment of antenatal depression

(*Continued*)

Sun 2004	Postpartum depression was neither a primary or secondary outcome; outcome was maternal adaptation
Taghizadeh 2008	Postpartum depression was neither a primary or secondary outcome; outcome was post-traumatic stress
Tandon 2011	Women with a child less than 6 months old were enrolled.
Tang 2009	Not an RCT. 'Divided into two groups according to their date of hospital visit.'
Teissedre 2004	Not an RCT. Group allocated based on pre-numbered questionnaires (odd vs even numbers)
Tezel 2006	Not an RCT. Women were matched on BDI score, parity and education level and then placed in treatment or control group
Tseng 2010	Postpartum depression was neither a primary or secondary outcome;outcomes were anxiety and stress. The intervention (listening to music) was neither psychological nor psychosocial
Urech 2009	Postpartum depression was neither a primary or secondary outcome;outcome was maternal affect. The intervention (progressive muscle relaxation and guided imagery) was neither psychological nor psychosocial
Vieten 2008	31% of participants had a depressive illness at entry (CES-D > 16)
Webster 2003	The intervention was not psychosocial or psychological but rather included antenatal identification as high-risk, an educational booklet and discussion about the risk of developing postpartum depression, and a letter to the woman's referring general practitioner and local Child Health Nurse alerting them of the woman's risk
Wiggins 2005	Intervention began at 10 weeks postpartum.
Wolman 1993	The researchers significantly changed the study protocol before trial completion. Inability to assess selection bias. Trial had a 21% loss to follow-up and a poor measure of postpartum depression (Pitt Depression Inventory) was used for the main portion of the trial
Xu 2003	Translation of original article used. Intervention described as 'participants and husbands participate in a nursing course'; 'women visit the maternity ward'. No psychosocial or psychological component described
Zayas 2002	While the author identified the study as an RCT, no information was provided related to the randomisation process or the intervention. It is also unknown whether the outcome assessor was blinded or whether the data were analysed using 'intent-to-treat'. 51% of sample had depressive illness at entry

BDI: Beck Depression Inventory
CES-D: Center for Epidemiologic Studies Depression Scale
EPDS: Edinburgh Postnatal Depression Scale
RCT: randomised controlled trial
SCID: Structured clinical interview for the diagnostic and statistical manual of mental disorders
SF-36: Short Form (36) Health Survey
vs: versus

Characteristics of studies awaiting assessment *[ordered by study ID]*

Ammaniti 2006

Methods	RCT with stratification by 3 risk categories: 1) low risk; 2) depressive risk but no psychosocial risk, and 3) psychosocial risk but no depressive risk
Participants	110 women were enrolled during the 2nd trimester of pregnancy in Rome, Italy. The number of women randomised to each group was not stated. We have contacted the authors for this information. Screening was done for depression (CES-D > 20) and psychosocial variables (such as education level, socioeconomic status, single motherhood, lack of social support) to determine stratification categories. No participants were receiving treatment for depression
Interventions	Intervention group: home visits starting in the 8th month of pregnancy and continuing up to 1 year postpartum, with weekly visits in the first half of the programme and every 2 weeks thereafter. The visits were carried out by psychologists and social workers and aimed to improve maternal-infant interaction Control group:standard care with home visits for data collection only. No further details provided
Outcomes	Outcomes included maternal-infant attachment (Scales of Mother-Infant Interactional System), depression (CES-D) and maternal representations after birth at 12, 24 and 52 weeks postpartum. ACTUAL NUMBERS FOR DEPRESSION OUTCOME NOT REPORTED. AUTHORS HAVE BEEN CONTACTED FOR THIS INFORMATION AND STUDY WILL BE INCLUDED IN THE REVIEW WHEN WE RECEIVE THE DEPRESSION DATA
Notes	We used the Cooperation subscale of the Scales of Mother-Infant Interactional System for the Maternal-Infant attachment outcome in this review. It was collected from a videotape of the mother feeding the infant. 2 independent judges rated the behaviours on the video. The Pearson correlation coefficient between judges for this measure was 0. 72 (0.55-0.89)

Bernard 2011

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Bittner 2009

Methods	RCT.
Participants	Women were screened antenatally for stress, anxiety and depression. Those with elevated levels were enrolled. Women with a current severe psychiatric disorder where excluded
Interventions	Intervention group: in second trimester of pregnancy women took part in a group programme with psycho-educational and cognitive behavioural elements on how to deal with stress, anxiety and depression. There were 8 weekly sessions lasting 90 minutes each

Bittner 2009 (*Continued*)

	Control group: standard care.
Outcomes	Outcomes included depression (BDI-V), stress (Prenatal Distress Questionnaire), anxiety (STAI) and cortisol levels. Time when outcome data collected not stated
Notes	Only an abstract with early enrolment numbers is available. We contact the authors for more information. They state that the trial is completed and a publication is being prepared. When data are available we will include this trial in the review

Caritis 2012

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Cook 2012

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Creedy 2011

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Crockett 2008

Methods	RCT.
Participants	36 pregnant low-income, rural, African American women (19 in intervention group and 17 in usual care group) from Mississippi, USA who screened as being at risk for postpartum depression were enrolled at 24-31 weeks' gestation. Those women who met criteria for current depressive disorder or substance abuse were excluded
Interventions	Intervention group: The ROSE Program (Reach Out, Stand strong, Essentials for new mothers) which involved 4 60-minute group session over 4 weeks and 1 50-minute individual booster session post-delivery. The intervention was given by trained counsellors Control group: standard antenatal care which included the usual information pamphlets given to all prenatal women
Outcomes	The outcomes were depression (EPDS), social adjustment (Social Adjustment Scale), postpartum adjustment (Postpartum Adjustment Questionnaire) and parenting stress (Parenting Stress Index) at 2-3 and 12 weeks postpartum
Notes	The number of women providing outcome data at each time point by group was not noted in the publication. Results were presented as repeated measures of variance. The authors have been contacted for this information. If such data are available this trial will be included in the review

Feinstein 2000

Methods	RCT.
Participants	106 pregnant women (49 in intervention group and 57 in control group) who admitted to hospital in pre-term labour in Rochester, USA. Women with evidence of psychiatric problems were excluded
Interventions	Intervention group: information and support about preterm labour, coping with role changes and strategies to seek control over their environments given in mid-pregnancy and then again 1-2 weeks later. The intervention included keeping an activity journal, bi-weekly phone calls from the researcher, information was given by audiotape and written materials Control group: audiotapes and written material about nutrition during pregnancy and when to notify healthcare providers given at the same times as intervention group
Outcomes	Outcomes included depression (POMS - depression subscale), Anxiety (STAI) and pregnancy anxiety (Pregnancy Anxiety Scale) twice during pregnancy and 3-4 weeks after the baby was discharged home
Notes	All data presented as adjusted means. The authors have been contacted for the raw data. If such data are available this trial will be included in the review

Fenwick 2011

Methods	
Participants	
Interventions	
Outcomes	

Fenwick 2011 (*Continued*)

Notes	

Fu 2012

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Gao 2012

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Hoseininasab 2009

Methods	Unclear. Report states 'randomised in two matched groups'.
Participants	80 pregnant women (40 to intervention group and 40 to control group) in Tabriz, Iran
Interventions	Education in special classes at 24-30 weeks of pregnancy. No details about what this entailed
Outcomes	Depression (BDI) at 3-10 and 15-21 days postpartum.
Notes	Short abstract that does not provide enough detail to determine eligibility for this review. The authors have been contacted for additional information about randomisation process and details of the intervention

Howell 2011

Methods	
Participants	
Interventions	

Howell 2011 (*Continued*)

Outcomes	
Notes	

Howell 2012

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Kenyon 2012

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Kitamura 2007

Methods	Unclear. Report states 'randomly assigned'.
Participants	Study 1: 140 pregnant women in Japan. No further details provided
Interventions	Intervention: 8 1-hour interviews during pregnancy and 5 group sessions based on interpersonal therapy (4 during pregnancy and 1 postpartum)
Outcomes	Depression (EPDS) at 12 weeks postpartum.
Notes	2 studies were outlined in the brief abstract. Study #2 appears to be an observational study. There are insufficient details about Study #1 to determine eligibility for this review and no data were presented. The author has been contacted for additional information

Kozinszky 2012

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Matthey 2004

Methods	RCT with cluster-randomisation. Unit of randomisation was prenatal class
Participants	3 prenatal classes were randomised to 1 of 3 conditions (empathy class, baby play class and usual class) For the purposes of this review the empathy class will be considered the intervention group and the baby play and usual class will be combined as the control group. Thus there was 1 cluster in the intervention group and 2 in the control group. The number of classes conducted in each cluster during the 18 months of the study was not stated 268 couples attending prenatal classes were enrolled (89 in the intervention group and 179 in the control group). Only mothers expected to move out of the general practice area were excluded
Interventions	Intervention group: empathy prenatal classes which included 6 regular classes, 1 additional class focusing on postpartum psychosocial issues and mailouts reinforcing the content of the extra class Control group: 1) baby play classes which included 6 regular classes, 1 additional class focusing on baby play with no postpartum psychosocial focus and mailouts reinforcing the content of the extra class; 2) usual classes (6 regular sessions only)
Outcomes	Outcomes included depression (EPDS, POMS, CES-D, SCID), social support (Significan Others Scale), self-esteem, parenting competence and infant care tasks at 6 and 26 weeks postpartum
Notes	The researchers acknowledged the likelihood of contamination if individual couples within 1 prenatal class were randomised but stated 'there is no reason to expect that the within cluster correlation is likely to be different from the between cluster correlation and therefor sample size was not based upon cluster analysis'. No intra-cluster correlation coefficient was provided The data presented as adjusted scores and split by level of self-esteem at baseline. The authors have been contacted for data split by study group only. If such data are available this trial will be included in the review as a cluster trial

Meijer 2011

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Morrell 2011

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Morrell 2011a

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Petrou 2006

Methods	
Participants	
Interventions	
Outcomes	
Notes	This reference is an economic analysis. A co-author on this paper (Peter Cooper) appears to be the principal investigator of the main trial and has been contacted for information

Phipps 2008

Methods	
Participants	
Interventions	
Outcomes	
Notes	This is a trial registration only. It is the same trial as Phipps 2011.

Phipps 2011

Methods	
Participants	106 pregnant adolescent mothers < 18 years of age at first prenatal visit
Interventions	5 interpersonal psychotherapy sessions delivered during the prenatal period
Outcomes	Clinical diagnosis of depression (KID-SCID) at 6, 12, and 24 weeks postpartum
Notes	Published abstract. The authors have been contacted for more information

Richter 2012

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Silverstein 2011

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Surkan 2012

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Timpano 2011

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Urizar 2011

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Varipatis-Baker 2006

Methods	
Participants	
Interventions	
Outcomes	
Notes	This is a trial registration only. The contact person Golda Ginsburg states the trial is complete has been asked for additional details

Vidas 2011

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Willis 2012

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Wimmer-Puchinger 2007

Methods	?RCT Authors state it was a 'prospective randomised controlled trial' and that women were 'divided'. No further details provided
Participants	3000 pregnant women at high risk for postpartum depression from Vienna Austria
Interventions	Intervention group: offered psychotherapy. No further details provided
Outcomes	Depression (EPDS) at 12 and 26 weeks postpartum.
Notes	This reference was a short abstract and no data were included. The author has been contacted for additional information

Wimmer-Puchinger 2011

Methods	
Participants	
Interventions	
Outcomes	
Notes	

Zlotnick 2008

Methods	
Participants	
Interventions	
Outcomes	
Notes	This is a trial registration. The authors have been contacted for more information

BDI: Beck Depression Inventory
CES-D: Center for Epidemiologic Studies Depression Scale
EPDS: Edinburgh Postnatal Depression Scale
POMS: Profile of Mood States
RCT: randomised controlled trial
SCID: Structured clinical interview for the diagnostic and statistical manual of mental disorders
STAI: State Trait Anxiety Inventory

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

Griffiths 2009

Trial name or title	Online cognitive behavioural therapy (MoodGYM)BDI for the prevention of postnatal depression in at-risk mothers: a randomised controlled trial
Methods	
Participants	175 English-speaking women at 1-5 days postpartum with no clinical diagnosis of depression (as per MINI) but have an EPDS score > 9 (secondary preventative)
Interventions	Online cognitive behavioural therapy (MoodGYM) - 5 modules which take between 20-40 minutes to complete; mothers to complete 1 module per week at their own pace
Outcomes	Clinical diagnosis of depression (MINI) at baseline and 12 months following randomisation; EPDS at baseline, 6, 24, 52 weeks post randomisation
Starting date	Recruitment to start 2012.
Contact information	Bethany Jones, Centre for Mental Health Research, The Australian National University Email: bethany.jones@anu.edu.au
Notes	

Mann 2001

Trial name or title	A randomised controlled trial of a psychological intervention given in pregnancy to reduce the risk of postnatal depression in a sample of high risk women in India
Methods	
Participants	423 pregnant Indian women identified as high-risk based on a researcher developed risk score
Interventions	Home-based 'listening visits' provided from 30 weeks' gestation to 10 weeks postpartum
Outcomes	Postpartum depression at 6, 12, and 24 weeks as measured using the EPDS and a revised clinical interview schedule providing a diagnosis according to ICD-10 criteria

Mann 2001 (*Continued*)

Starting date	Data collection to end June 2004.
Contact information	Dr Anthony Mann, Institute of Psychiatry, De Crespigny Park, Denmark Hill, London, UK, Email: spjuahm@iop.kcl.ac.uk. When contacted Dr Mann stated that the trial was completed and Dr Marcus Hughes was in charge of publication Dr Marcus Hughes, South West London and St George's Mental Health NHS Trust, London, UK Email: marcus.hughes@swlstg-tr.nhs.uk
Notes	Dr Hughes was contacted for additional information.

EPDS: Edinburgh Postnatal Depression Scale
ICD: International Classification of Diseases
MINI: Mini International Neuropsychiatric Inrterview

DATA AND ANALYSES

Comparison 1. All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Depressive symptomatology at final study assessment	20	14727	Risk Ratio (M-H, Random, 95% CI)	0.78 [0.66, 0.93]
2 Mean depression scores at final study assessment	19	12376	Std. Mean Difference (IV, Random, 95% CI)	-0.13 [-0.28, 0.01]
3 Diagnosis of depression at final study assessment	5	939	Risk Ratio (M-H, Random, 95% CI)	0.50 [0.32, 0.78]
4 Depressive symptomatology at 8, 16, 24, and > 24 weeks	20		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
4.1 Immediate outcomes 0-8 weeks	13	4907	Risk Ratio (M-H, Random, 95% CI)	0.73 [0.56, 0.95]
4.2 Short-term outcome 9-16 weeks	10	3982	Risk Ratio (M-H, Random, 95% CI)	0.73 [0.56, 0.97]
4.3 Intermediate outcome 17-24 weeks	9	10636	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.82, 1.05]
4.4 Long-term outcome > 24 weeks	5	2936	Risk Ratio (M-H, Random, 95% CI)	0.66 [0.54, 0.82]
5 Mean depression scores at 8, 16, 24, and > 24 weeks	19		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
5.1 Immediate outcomes: 0-8 weeks	6	1234	Std. Mean Difference (IV, Random, 95% CI)	-0.16 [-0.41, 0.09]
5.2 Short-term outcome 9-16 weeks	9	3628	Std. Mean Difference (IV, Random, 95% CI)	-0.26 [-0.72, 0.20]
5.3 Intermediate outcome 17-24 weeks	10	9944	Std. Mean Difference (IV, Random, 95% CI)	0.01 [-0.03, 0.05]
5.4 Long-term outcome > 24 weeks	7	2447	Std. Mean Difference (IV, Random, 95% CI)	-0.17 [-0.58, 0.25]
6 Diagnosis of depression at 8, 16, 24, and > 24 weeks	5		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
6.1 Immediate outcomes 0-8 weeks	1	39	Risk Ratio (M-H, Random, 95% CI)	0.09 [0.01, 1.47]
6.2 Short-term outcomes 9-16 weeks postpartum	4	902	Risk Ratio (M-H, Random, 95% CI)	0.49 [0.31, 0.77]
6.3 Intermediate outcome: 17-24 weeks	1	37	Risk Ratio (M-H, Random, 95% CI)	0.64 [0.17, 2.46]
7 Maternal mortality at > 24 weeks	1	234	Risk Ratio (M-H, Random, 95% CI)	0.97 [0.06, 15.27]
8 Maternal-infant attachment at 8, 16, and 24 weeks	1		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
8.1 Immediate outcomes 0-8 weeks	1	133	Risk Ratio (M-H, Random, 95% CI)	1.01 [0.64, 1.59]
8.2 Short-term outcome 9-16 weeks	1	126	Risk Ratio (M-H, Random, 95% CI)	1.29 [0.78, 2.13]

8.3 Intermediate outcome 17-24 weeks	1	127	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.59, 1.34]
9 Mean maternal-infant attachment scores at 8, 16, 24, and > 24 weeks	2		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
9.1 Immediate outcomes 0-8 weeks	1	176	Std. Mean Difference (IV, Random, 95% CI)	-0.11 [-0.40, 0.19]
9.2 Short-term outcome 9-16 weeks	1	160	Std. Mean Difference (IV, Random, 95% CI)	-0.20 [-0.51, 0.11]
9.3 Intermediate outcome 17-24 weeks	1	152	Std. Mean Difference (IV, Random, 95% CI)	-0.22 [-0.54, 0.10]
9.4 Long-term outcome > 24 weeks	1	116	Std. Mean Difference (IV, Random, 95% CI)	-0.12 [-0.49, 0.24]
9.5 At final study assessment	2	268	Std. Mean Difference (IV, Random, 95% CI)	-0.18 [-0.42, 0.06]
10 Anxiety at 8, 16, and 24 weeks	4		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
10.1 Immediate outcomes 0-8 weeks	2	245	Risk Ratio (M-H, Random, 95% CI)	0.35 [0.05, 2.34]
10.2 Short-term outcome 9-16 weeks	3	843	Risk Ratio (M-H, Random, 95% CI)	0.41 [0.12, 1.41]
10.3 Intermediate outcome 17-24 weeks	1	130	Risk Ratio (M-H, Random, 95% CI)	0.94 [0.25, 3.60]
10.4 At final study assessment	4	959	Risk Ratio (M-H, Random, 95% CI)	0.40 [0.14, 1.14]
11 Mean anxiety scores at 8, 16, 24, and > 24 weeks	4		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
11.1 Immediate outcomes 0-8 weeks	2	163	Std. Mean Difference (IV, Random, 95% CI)	-0.09 [-0.39, 0.22]
11.2 Short-term outcome 9-16 weeks	2	740	Std. Mean Difference (IV, Random, 95% CI)	-0.15 [-0.30, -0.01]
11.3 Intermediate outcome 17-24 weeks	2	160	Std. Mean Difference (IV, Random, 95% CI)	-0.24 [-0.55, 0.07]
11.4 Long-term outcome > 24 weeks	1	43	Std. Mean Difference (IV, Random, 95% CI)	-0.17 [-0.77, 0.43]
11.5 At final study assessment	4	815	Std. Mean Difference (IV, Random, 95% CI)	-0.16 [-0.30, -0.03]
12 Maternal stress at 16 weeks	1		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
12.1 Short-term outcome 9-16 weeks	1	103	Risk Ratio (M-H, Random, 95% CI)	0.44 [0.20, 0.96]
13 Mean maternal stress scores at 24 and > 24 weeks	1		Mean Difference (IV, Random, 95% CI)	Subtotals only
13.1 Intermediate outcome 17-24 weeks	1	787	Mean Difference (IV, Random, 95% CI)	0.0 [-1.02, 1.02]
13.2 Long-term outcome > 24 weeks	1	840	Mean Difference (IV, Random, 95% CI)	0.5 [-0.51, 1.51]
14 Mean parental stress scores at 8, 24, and > 24 weeks	3		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
14.1 Immediate outcomes 0-8 weeks	1	176	Std. Mean Difference (IV, Random, 95% CI)	-0.08 [-0.37, 0.22]
14.2 Intermediate outcome 17-24 weeks	1	124	Std. Mean Difference (IV, Random, 95% CI)	-0.27 [-0.62, 0.09]
14.3 Long-term outcome > 24 weeks	2	341	Std. Mean Difference (IV, Random, 95% CI)	0.27 [0.05, 0.48]
14.4 At final study assessment	3	465	Std. Mean Difference (IV, Random, 95% CI)	0.11 [-0.25, 0.48]

15 Perceived social support at 8 and 16 weeks	2		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
15.1 Immediate outcomes 0-8 weeks	1	528	Risk Ratio (M-H, Random, 95% CI)	0.68 [0.45, 1.05]
15.2 Short-term outcome 9-16 weeks	1	190	Risk Ratio (M-H, Random, 95% CI)	1.02 [0.34, 3.05]
15.3 At final study assessment	2	718	Risk Ratio (M-H, Random, 95% CI)	0.72 [0.48, 1.08]
16 Mean perceived social support scores at 8, 16, 24, and > 24 weeks	7		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
16.1 Immediate outcomes 0-8 weeks	3	822	Std. Mean Difference (IV, Random, 95% CI)	0.02 [-0.13, 0.17]
16.2 Short-term outcome 9-16 weeks	2	863	Std. Mean Difference (IV, Random, 95% CI)	0.16 [-0.21, 0.53]
16.3 Intermediate outcome 17-24 weeks	6	8122	Std. Mean Difference (IV, Random, 95% CI)	0.03 [-0.06, 0.12]
16.4 Long-term outcome > 24 weeks	2	955	Std. Mean Difference (IV, Random, 95% CI)	-0.07 [-0.20, 0.06]
16.5 At final study assessment	7	8290	Std. Mean Difference (IV, Random, 95% CI)	0.01 [-0.08, 0.10]
17 Maternal dissatisfaction with care provided at 8, 16, and 24 weeks	4		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
17.1 Immediate outcomes 0-8 weeks	2	825	Risk Ratio (M-H, Random, 95% CI)	0.56 [0.29, 1.09]
17.2 Short-term outcome 9-16 weeks	1	1278	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.65, 1.19]
17.3 Intermediate outcome 17-24 weeks	1	911	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.44, 1.25]
17.4 At final study assessment	4	3014	Risk Ratio (M-H, Random, 95% CI)	0.67 [0.44, 1.00]
18 Mean maternal dissatisfaction scores at 8 and 16 weeks	2		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
18.1 Immediate outcomes 0-8 weeks	1	516	Std. Mean Difference (IV, Random, 95% CI)	0.0 [-0.17, 0.17]
18.2 Short-term outcome 9-16 weeks	1	160	Std. Mean Difference (IV, Random, 95% CI)	0.90 [0.58, 1.23]
18.3 At final study assessment	2	676	Std. Mean Difference (IV, Random, 95% CI)	0.44 [-0.44, 1.32]
19 Infant health parameters - not fully immunized at > 24 weeks	1	884	Risk Ratio (M-H, Random, 95% CI)	1.16 [0.39, 3.43]
20 Infant development > 24 weeks	1	280	Mean Difference (IV, Random, 95% CI)	-0.90 [-2.90, 1.10]
20.1 Bayley (BSID-II)	1	280	Mean Difference (IV, Random, 95% CI)	-0.90 [-2.90, 1.10]
21 Child abuse at 8 and > 24 weeks	1		Mean Difference (IV, Random, 95% CI)	Subtotals only
21.1 Immediate outcomes 0-8 weeks	1	176	Mean Difference (IV, Random, 95% CI)	-35.66 [-62.65, -8.67]
21.2 Long-term outcome > 24 weeks	1	66	Mean Difference (IV, Random, 95% CI)	-41.90 [-87.48, 3.68]
22 Mean marital discord scores at 8, 16, and 24 weeks	3		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
22.1 Immediate outcomes 0-8 weeks	2	163	Std. Mean Difference (IV, Random, 95% CI)	-0.03 [-0.34, 0.28]

22.2 Short-term outcome 9-16 weeks	1	127	Std. Mean Difference (IV, Random, 95% CI)	-0.28 [-0.63, 0.07]
22.3 Intermediate outcome 17-24 weeks	3	291	Std. Mean Difference (IV, Random, 95% CI)	-0.14 [-0.37, 0.09]
22.4 At final study assessment	3	291	Std. Mean Difference (IV, Random, 95% CI)	-0.14 [-0.37, 0.09]

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

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 All psychosocial interventions - depressive symptomatology	12		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
1.1 Immediate outcome - 0-8 weeks	6	2138	Risk Ratio (M-H, Random, 95% CI)	0.77 [0.52, 1.14]
1.2 Short-term outcomes 9-16 weeks	8	3705	Risk Ratio (M-H, Random, 95% CI)	0.80 [0.61, 1.06]
1.3 Intermediate outcomes 17-24 weeks	6	8116	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.78, 1.00]
1.4 Long-term outcomes >24 weeks	3	1385	Risk Ratio (M-H, Random, 95% CI)	0.59 [0.46, 0.76]
1.5 At final study assessment	12	11322	Risk Ratio (M-H, Random, 95% CI)	0.83 [0.70, 0.99]
2 All psychosocial interventions - mean depression scores	12		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
2.1 Immediate outcomes 0-8 weeks	3	849	Std. Mean Difference (IV, Random, 95% CI)	-0.12 [-0.47, 0.23]
2.2 Short-term outcomes 9-16 weeks	6	3333	Std. Mean Difference (IV, Random, 95% CI)	-0.32 [-0.90, 0.25]
2.3 Intermediate outcomes 17-24 weeks	8	8998	Std. Mean Difference (IV, Random, 95% CI)	0.00 [-0.04, 0.05]
2.4 Long-term outcomes > 24 weeks	5	2254	Std. Mean Difference (IV, Random, 95% CI)	-0.26 [-0.76, 0.24]
2.5 At final study assessment	12	10944	Std. Mean Difference (IV, Random, 95% CI)	-0.14 [-0.33, 0.04]
3 All psychosocial interventions - diagnosis of depression	3		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
3.1 Short-term outcomes 9-16 weeks	3	867	Risk Ratio (M-H, Fixed, 95% CI)	0.52 [0.33, 0.83]
4 All psychosocial interventions: depressive symptomatology at final study assessment	12	11322	Risk Ratio (M-H, Random, 95% CI)	0.83 [0.70, 0.99]
5 All psychosocial interventions: mean depression scores	12	10944	Std. Mean Difference (IV, Random, 95% CI)	-0.14 [-0.33, 0.04]

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

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 All psychological interventions - depressive symptomatology	8		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
1.1 Immediate outcomes 0-8 weeks	7	2760	Risk Ratio (M-H, Random, 95% CI)	0.69 [0.47, 1.02]
1.2 Short-term outcomes 9-16 weeks	2	277	Risk Ratio (M-H, Random, 95% CI)	0.40 [0.18, 0.89]
1.3 Intermediate outcomes 17-24 weeks	3	2520	Risk Ratio (M-H, Random, 95% CI)	1.04 [0.83, 1.30]
1.4 Long-term outcomes >24 weeks	2	1551	Risk Ratio (M-H, Random, 95% CI)	0.86 [0.58, 1.28]
1.5 At final study assessment	8	3405	Risk Ratio (M-H, Random, 95% CI)	0.61 [0.39, 0.96]
2 All psychological interventions - mean depression scores	7		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
2.1 immediate outcome 0-8 weeks	3	385	Std. Mean Difference (IV, Random, 95% CI)	-0.20 [-0.63, 0.22]
2.2 Short-term outcomes 9-16 weeks	3	295	Std. Mean Difference (IV, Random, 95% CI)	-0.03 [-0.27, 0.21]
2.3 Intermediate outcomes 17-24 weeks	2	946	Std. Mean Difference (IV, Random, 95% CI)	0.08 [-0.05, 0.20]
2.4 Long-term outcomes > 24 weeks	2	193	Std. Mean Difference (IV, Random, 95% CI)	0.11 [-0.17, 0.39]
2.5 At final study assessment	7	1432	Std. Mean Difference (IV, Random, 95% CI)	-0.10 [-0.32, 0.13]
3 All psychological interventions - diagnosis of depression	2		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
3.1 Diagnosis of depression - 0-8 weeks	1	39	Risk Ratio (M-H, Random, 95% CI)	0.09 [0.01, 1.47]
3.2 Short-term outcomes 9-16 weeks	1	35	Risk Ratio (M-H, Random, 95% CI)	0.08 [0.00, 1.34]
3.3 Intermediate outcomes 17-24 weeks	1	37	Risk Ratio (M-H, Random, 95% CI)	0.64 [0.17, 2.46]
3.4 At final study assessment	2	72	Risk Ratio (M-H, Random, 95% CI)	0.31 [0.04, 2.52]

Comparison 4. Subgroup analysis: variations in psychosocial interventions

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology at final study assessment	12	11322	Risk Ratio (M-H, Random, 95% CI)	0.83 [0.70, 0.99]
1.1 Antenatal and postnatal classes	4	1488	Risk Ratio (M-H, Random, 95% CI)	1.01 [0.77, 1.32]

1.2 Postpartum professional-based home visits	2	1262	Risk Ratio (M-H, Random, 95% CI)	0.56 [0.43, 0.73]
1.3 Postpartum lay-based home visits	1	493	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.62, 1.25]
1.4 Postpartum lay-based telephone support	1	612	Risk Ratio (M-H, Random, 95% CI)	0.54 [0.38, 0.77]
1.5 Early postpartum follow-up	1	446	Risk Ratio (M-H, Random, 95% CI)	0.90 [0.55, 1.49]
1.6 Continuity model of care	3	7021	Risk Ratio (M-H, Random, 95% CI)	0.99 [0.71, 1.36]
2 TEST FOR SUBGROUP DIFFERENCES: mean depression score at final study assessment	4	1411	Std. Mean Difference (IV, Fixed, 95% CI)	-0.01 [-0.12, 0.10]
2.1 Antenatal and postnatal classes	3	1124	Std. Mean Difference (IV, Fixed, 95% CI)	0.01 [-0.11, 0.13]
2.2 Antenatal and postnatal lay-based home visits and telephone support	1	287	Std. Mean Difference (IV, Fixed, 95% CI)	-0.10 [-0.33, 0.14]

Comparison 5. Subgroup analysis: variations in psychological interventions

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology at final study assessment	6	3200	Risk Ratio (M-H, Random, 95% CI)	0.59 [0.35, 1.01]
1.1 Psychological debriefing	5	3050	Risk Ratio (M-H, Random, 95% CI)	0.57 [0.31, 1.03]
1.2 Cognitive behavioural therapy	1	150	Risk Ratio (M-H, Random, 95% CI)	0.74 [0.29, 1.88]
2 TEST FOR SUBGROUP DIFFERENCES: mean depression score at final study assessment	6	516	Std. Mean Difference (IV, Random, 95% CI)	-0.16 [-0.43, 0.11]
2.1 Interpersonal psychotherapy	5	366	Std. Mean Difference (IV, Random, 95% CI)	-0.27 [-0.52, -0.01]
2.2 Cognitive behavioural therapy	1	150	Std. Mean Difference (IV, Random, 95% CI)	0.13 [-0.20, 0.45]

Comparison 6. Subgroup analysis: variations in intervention provider

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Professionally-based interventions - depressive symptomatology	15		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
1.1 Immediate outcomes 0-8 weeks	10	3699	Risk Ratio (M-H, Random, 95% CI)	0.65 [0.45, 0.93]
1.2 Short-term outcome 9-16 weeks	8	3196	Risk Ratio (M-H, Random, 95% CI)	0.79 [0.57, 1.09]
1.3 Intermediate outcome 17-24 weeks	7	3929	Risk Ratio (M-H, Random, 95% CI)	1.03 [0.87, 1.23]
1.4 Long-term outcome > 24 weeks	4	2786	Risk Ratio (M-H, Random, 95% CI)	0.68 [0.51, 0.90]
2 Professionally-based interventions - mean depression scores	12		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
2.1 Immediate outcomes: 0-8 weeks	4	512	Std. Mean Difference (IV, Random, 95% CI)	-0.34 [-0.56, -0.12]
2.2 Short-term outcome 9-16 weeks	6	2807	Std. Mean Difference (IV, Random, 95% CI)	-0.31 [-0.95, 0.34]
2.3 Intermediate outcome 17-24 weeks	7	3161	Std. Mean Difference (IV, Random, 95% CI)	0.02 [-0.05, 0.09]
2.4 Long-term outcome >24 weeks	5	2010	Std. Mean Difference (IV, Random, 95% CI)	-0.24 [-0.79, 0.31]
3 Professionally-based interventions - diagnosis of depression	2		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
3.1 Immediate outcomes 0-8 weeks	1	39	Risk Ratio (M-H, Fixed, 95% CI)	0.09 [0.01, 1.47]
3.2 Short-term outcomes 9-16 weeks postpartum	1	190	Risk Ratio (M-H, Fixed, 95% CI)	0.51 [0.13, 1.98]
3.3 Intermediate outcome: 17-24 weeks	1	37	Risk Ratio (M-H, Fixed, 95% CI)	0.64 [0.17, 2.46]
4 Lay-based interventions - depressive symptomatology	4		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
4.1 Immediate outcomes 0-8 weeks	3	1208	Risk Ratio (M-H, Fixed, 95% CI)	0.91 [0.70, 1.18]
4.2 Short-term outcome 9-16 weeks	2	786	Risk Ratio (M-H, Fixed, 95% CI)	0.55 [0.40, 0.75]
4.3 Intermediate outcome 17-24 weeks	1	493	Risk Ratio (M-H, Fixed, 95% CI)	0.88 [0.62, 1.25]
4.4 Long-term outcome > 24 weeks	1	150	Risk Ratio (M-H, Fixed, 95% CI)	0.74 [0.29, 1.88]
5 Lay-based interventions - mean depression scores	5		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
5.1 Immediate outcomes: 0-8 weeks	2	722	Std. Mean Difference (IV, Random, 95% CI)	0.11 [-0.04, 0.25]

5.2 Short-term outcome 9-16 weeks	2	786	Std. Mean Difference (IV, Random, 95% CI)	-0.08 [-0.35, 0.19]
5.3 Intermediate outcome 17-24 weeks	2	633	Std. Mean Difference (IV, Random, 95% CI)	-0.06 [-0.22, 0.09]
5.4 Long-term outcome > 24 weeks	2	437	Std. Mean Difference (IV, Random, 95% CI)	-0.01 [-0.22, 0.20]
6 Lay-based interventions - diagnosis of depression	2		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
6.1 Short-term outcomes 9-16 weeks postpartum	2	677	Risk Ratio (M-H, Fixed, 95% CI)	0.52 [0.32, 0.86]
7 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology: at final study assessment	19		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
7.1 Professionally-based interventions	15	6790	Risk Ratio (M-H, Random, 95% CI)	0.78 [0.60, 1.00]
7.2 Lay-based interventions	4	1723	Risk Ratio (M-H, Random, 95% CI)	0.70 [0.54, 0.90]
8 TEST FOR SUBGROUP DIFFERENCES: mean depression scores: at final study assessment	17		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
8.1 Professionally-based interventions	12	4509	Std. Mean Difference (IV, Random, 95% CI)	-0.15 [-0.40, 0.10]
8.2 Lay-based interventions	5	1682	Std. Mean Difference (IV, Random, 95% CI)	-0.10 [-0.20, 0.01]
9 TEST FOR SUBGROUP DIFFERENCES: diagnosis of depression: at final study assessment	4		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
9.1 Professionally-based interventions	2	227	Risk Ratio (M-H, Fixed, 95% CI)	0.56 [0.22, 1.47]
9.2 Lay-based interventions	2	677	Risk Ratio (M-H, Fixed, 95% CI)	0.52 [0.32, 0.86]

Comparison 7. Subgroup analysis: variations in professionally-based intervention provider

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology at final study assessment	15		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
1.1 Intervention provided by nurses	3	837	Risk Ratio (M-H, Random, 95% CI)	0.73 [0.51, 1.04]
1.2 Intervention provided by physicians	1	446	Risk Ratio (M-H, Random, 95% CI)	0.90 [0.55, 1.49]
1.3 Intervention provided by midwives	10	5477	Risk Ratio (M-H, Random, 95% CI)	0.76 [0.54, 1.07]
1.4 Intervention provided by mental health specialists	1	30	Risk Ratio (M-H, Random, 95% CI)	1.0 [0.24, 4.18]

2 TEST FOR SUBGROUP DIFFERENCES: mean depression score at final study assessment	4		Std. Mean Difference (IV, Fixed, 95% CI)	Subtotals only
2.1 Intervention provided by nurses	1	86	Std. Mean Difference (IV, Fixed, 95% CI)	-0.08 [-0.51, 0.34]
2.2 Intervention provided by midwives	1	840	Std. Mean Difference (IV, Fixed, 95% CI)	0.05 [-0.09, 0.19]
2.3 Intervention provided by mental health specialists	2	175	Std. Mean Difference (IV, Fixed, 95% CI)	0.04 [-0.26, 0.34]

Comparison 8. Subgroup analysis: variations in intervention mode

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Individually-based interventions - depressive symptomatology	14		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
1.1 Immediate outcomes 0-8 weeks	9	3947	Risk Ratio (M-H, Random, 95% CI)	0.70 [0.49, 1.00]
1.2 Short-term outcomes 9-16 weeks	6	2757	Risk Ratio (M-H, Random, 95% CI)	0.66 [0.47, 0.91]
1.3 Intermediate outcomes 17-24 weeks	7	9806	Risk Ratio (M-H, Random, 95% CI)	0.88 [0.80, 0.98]
1.4 Long-term outcomes > 24 weeks	4	2786	Risk Ratio (M-H, Random, 95% CI)	0.68 [0.51, 0.90]
2 Individually-based interventions - mean depression scores	11		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
2.1 Immediate outcomes 0-8 weeks	4	882	Std. Mean Difference (IV, Random, 95% CI)	-0.11 [-0.41, 0.19]
2.2 Short-term outcomes 9-16 weeks	5	2601	Std. Mean Difference (IV, Random, 95% CI)	-0.40 [-1.07, 0.26]
2.3 Intermediate outcomes 17-24 weeks	6	8156	Std. Mean Difference (IV, Random, 95% CI)	0.01 [-0.03, 0.05]
2.4 Long-term outcomes > 24 weeks	5	1457	Std. Mean Difference (IV, Random, 95% CI)	-0.28 [-0.78, 0.23]
3 Individually-based interventions - diagnosis of depression	3		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
3.1 Immediate outcomes 0-8 weeks	1	39	Risk Ratio (M-H, Fixed, 95% CI)	0.09 [0.01, 1.47]
3.2 Short-term outcomes 9-16 weeks	2	677	Risk Ratio (M-H, Fixed, 95% CI)	0.52 [0.32, 0.86]
3.3 Intermediate outcomes 17-24 weeks	1	37	Risk Ratio (M-H, Fixed, 95% CI)	0.64 [0.17, 2.46]
4 Group-based interventions - depressive symptomatology	6		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
4.1 Immediate outcomes 0-8 weeks	4	946	Risk Ratio (M-H, Random, 95% CI)	0.64 [0.45, 0.91]

4.2 Short-term outcomes 9-16 weeks	4	1225	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.60, 1.39]
4.3 Intermediate outcomes 17-24 weeks	2	830	Risk Ratio (M-H, Random, 95% CI)	1.20 [0.85, 1.71]
4.4 Long-term outcomes > 24 weeks	1	150	Risk Ratio (M-H, Random, 95% CI)	0.74 [0.29, 1.88]
5 Group-based interventions - mean depression scores	8		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
5.1 Immediate outcomes 0-8 weeks	2	352	Std. Mean Difference (IV, Random, 95% CI)	-0.24 [-0.80, 0.31]
5.2 Short-term outcomes 9-16 weeks	4	1027	Std. Mean Difference (IV, Random, 95% CI)	0.04 [-0.09, 0.16]
5.3 Intermediate outcomes 17-24 weeks	4	1788	Std. Mean Difference (IV, Random, 95% CI)	0.01 [-0.08, 0.11]
5.4 Long-term outcomes > 24 weeks	2	990	Std. Mean Difference (IV, Random, 95% CI)	0.06 [-0.07, 0.19]
6 Group-based interventions - diagnosis of depression	2		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
6.1 Short-term outcomes 9-16 weeks	2	225	Risk Ratio (M-H, Random, 95% CI)	0.30 [0.05, 1.66]
7 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology: at final study assessment	20	14727	Risk Ratio (M-H, Random, 95% CI)	0.78 [0.66, 0.93]
7.1 Individually-based interventions	14	12914	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.61, 0.92]
7.2 Group-based interventions	6	1813	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.71, 1.19]
8 TEST FOR SUBGROUP DIFFERENCES: mean depression scores: at final study assessment	19	12376	Std. Mean Difference (IV, Random, 95% CI)	-0.13 [-0.28, 0.01]
8.1 Individually-based interventions	11	10092	Std. Mean Difference (IV, Random, 95% CI)	-0.15 [-0.37, 0.07]
8.2 Group-based interventions	8	2284	Std. Mean Difference (IV, Random, 95% CI)	-0.08 [-0.23, 0.06]
9 TEST FOR SUBGROUP DIFFERENCES: diagnosis of depression: at final study assessment	5	939	Risk Ratio (M-H, Random, 95% CI)	0.50 [0.32, 0.78]
9.1 Individually-based interventions	3	714	Risk Ratio (M-H, Random, 95% CI)	0.53 [0.33, 0.84]
9.2 Group-based interventions	2	225	Risk Ratio (M-H, Random, 95% CI)	0.30 [0.05, 1.66]

Comparison 9. Subgroup analysis: variations in intervention duration

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Single-contact interventions - depressive symptomatology	4		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
1.1 Immediate outcomes 0-8 weeks	2	1756	Risk Ratio (M-H, Random, 95% CI)	0.39 [0.07, 2.16]
1.2 Short-term outcomes 9-16 weeks	1	476	Risk Ratio (M-H, Random, 95% CI)	1.24 [0.81, 1.91]
1.3 Intermediate outcomes 17-24 weeks	3	2936	Risk Ratio (M-H, Random, 95% CI)	1.01 [0.82, 1.26]
1.4 Long-term outcomes > 24 weeks	1	1401	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.58, 1.37]
2 Single-contact interventions - mean depression scores	2		Mean Difference (IV, Fixed, 95% CI)	Subtotals only
2.1 Short-term outcomes 9-16 weeks	1	476	Mean Difference (IV, Fixed, 95% CI)	-0.10 [-1.06, 0.86]
2.2 Intermediate outcomes 17-24 weeks	2	1362	Mean Difference (IV, Fixed, 95% CI)	0.21 [-0.37, 0.79]
3 Multiple-contact interventions - depressive symptomatology	16		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
3.1 Immediate outcomes 0-8 weeks	11	3137	Risk Ratio (M-H, Random, 95% CI)	0.77 [0.60, 0.99]
3.2 Short-term outcomes 9-16 weeks	9	3506	Risk Ratio (M-H, Random, 95% CI)	0.69 [0.52, 0.91]
3.3 Intermediate outcomes 17-24 weeks	6	7700	Risk Ratio (M-H, Random, 95% CI)	0.89 [0.77, 1.01]
3.4 Long-term outcomes > 24 weeks	4	1535	Risk Ratio (M-H, Random, 95% CI)	0.60 [0.47, 0.76]
4 Multiple-contact interventions - mean depression scores	17		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
4.1 Immediate outcomes 0-8 weeks	6	1234	Std. Mean Difference (IV, Random, 95% CI)	-0.16 [-0.41, 0.09]
4.2 Short-term outcomes 9-16 weeks	8	3152	Std. Mean Difference (IV, Random, 95% CI)	-0.30 [-0.81, 0.22]
4.3 Intermediate outcomes 17-24 weeks	8	8582	Std. Mean Difference (IV, Random, 95% CI)	0.01 [-0.04, 0.05]
4.4 Long-term outcomes > 24 weeks	7	2447	Std. Mean Difference (IV, Random, 95% CI)	-0.17 [-0.58, 0.25]
5 Multiple-contact interventions - diagnosis of depression	5		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
5.1 Immediate outcomes 0-8 weeks	1	39	Risk Ratio (M-H, Fixed, 95% CI)	0.09 [0.01, 1.47]
5.2 Short-term outcomes 9-16 weeks	4	902	Risk Ratio (M-H, Fixed, 95% CI)	0.47 [0.30, 0.74]
5.3 Intermediate outcomes 17-24 weeks	1	37	Risk Ratio (M-H, Fixed, 95% CI)	0.64 [0.17, 2.46]
5.4 At final study assessment	5	939	Risk Ratio (M-H, Fixed, 95% CI)	0.48 [0.31, 0.74]

6 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology: at final study assessment	20	14727	Risk Ratio (M-H, Random, 95% CI)	0.78 [0.66, 0.93]
6.1 Single contact intervention	4	2877	Risk Ratio (M-H, Random, 95% CI)	0.70 [0.38, 1.28]
6.2 Multiple contact intervention	16	11850	Risk Ratio (M-H, Random, 95% CI)	0.78 [0.66, 0.93]
7 TEST FOR SUBGROUP DIFFERENCES: mean depression scores: at final study assessment	19	12376	Std. Mean Difference (IV, Random, 95% CI)	-0.13 [-0.28, 0.01]
7.1 Single contact intervention	2	1362	Std. Mean Difference (IV, Random, 95% CI)	0.04 [-0.07, 0.15]
7.2 Multiple contact intervention	17	11014	Std. Mean Difference (IV, Random, 95% CI)	-0.15 [-0.32, 0.02]

Comparison 10. Subgroup analysis: variations in intervention onset

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Interventions with antenatal only component - mean depression scores	4		Std. Mean Difference (IV, Fixed, 95% CI)	Subtotals only
1.1 Short-term outcomes 9-16 weeks	1	35	Std. Mean Difference (IV, Fixed, 95% CI)	-0.44 [-1.11, 0.23]
1.2 Intermediate outcomes 17-24 weeks	2	919	Std. Mean Difference (IV, Fixed, 95% CI)	0.06 [-0.07, 0.19]
1.3 Long-term outcomes > 24 weeks	2	883	Std. Mean Difference (IV, Fixed, 95% CI)	0.05 [-0.09, 0.19]
2 Interventions with antenatal only component - diagnosis of depression	1		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
2.1 Short-term outcomes 9-16 weeks	1	35	Risk Ratio (M-H, Fixed, 95% CI)	0.08 [0.00, 1.34]
3 Interventions with antenatal and postnatal components - depressive symptomatology	8		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
3.1 Immediate outcomes 0-8 weeks	7	1794	Risk Ratio (M-H, Random, 95% CI)	0.75 [0.52, 1.08]
3.2 Short-term outcomes 9-16 weeks	4	621	Risk Ratio (M-H, Random, 95% CI)	0.66 [0.45, 0.97]
3.3 Intermediate outcomes 17-24 weeks	3	284	Risk Ratio (M-H, Random, 95% CI)	0.87 [0.41, 1.85]
3.4 Long-term outcomes > 24 weeks	2	273	Risk Ratio (M-H, Random, 95% CI)	0.82 [0.46, 1.46]
4 Interventions with antenatal and postnatal components - mean depression scores	7		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only

4.1 Immediate outcomes 0-8 weeks	4	518	Std. Mean Difference (IV, Random, 95% CI)	-0.18 [-0.47, 0.11]
4.2 Short-term outcomes 9-16 weeks	3	388	Std. Mean Difference (IV, Random, 95% CI)	-0.05 [-0.25, 0.15]
4.3 Intermediate outcomes 17-24 weeks	3	315	Std. Mean Difference (IV, Random, 95% CI)	-0.22 [-0.45, -0.00]
4.4 Long-term outcomes > 24 weeks	3	560	Std. Mean Difference (IV, Random, 95% CI)	-0.03 [-0.20, 0.13]
5 Interventions with antenatal and postnatal components - diagnosis of depression	3		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
5.1 Immediate outcomes 0-8 weeks	1	39	Risk Ratio (M-H, Fixed, 95% CI)	0.09 [0.01, 1.47]
5.2 Short-term outcomes 9-16 weeks	2	255	Risk Ratio (M-H, Fixed, 95% CI)	0.40 [0.21, 0.79]
5.3 Intermediate outcomes 17-24 weeks	1	37	Risk Ratio (M-H, Fixed, 95% CI)	0.64 [0.17, 2.46]
6 Interventions with postnatal only component - depressive symptomatology	12		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
6.1 Immediate outcomes 0-8 weeks	6	3099	Risk Ratio (M-H, Random, 95% CI)	0.63 [0.41, 0.98]
6.2 Short-term outcomes 9-16 weeks	6	3361	Risk Ratio (M-H, Random, 95% CI)	0.76 [0.53, 1.11]
6.3 Intermediate outcomes 17-24 weeks	6	10352	Risk Ratio (M-H, Random, 95% CI)	0.93 [0.82, 1.06]
6.4 Long-term outcomes >24 weeks	3	2663	Risk Ratio (M-H, Random, 95% CI)	0.66 [0.46, 0.93]
7 Interventions with postnatal only component - mean depression scores	8		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
7.1 Immediate outcomes 0-8 weeks	2	716	Std. Mean Difference (IV, Random, 95% CI)	-0.14 [-0.69, 0.42]
7.2 Short-term outcomes 9-16 weeks	5	3205	Std. Mean Difference (IV, Random, 95% CI)	-0.35 [1.00, 0.31]
7.3 Intermediate outcomes 17-24 weeks	5	8710	Std. Mean Difference (IV, Random, 95% CI)	0.01 [-0.03, 0.06]
7.4 Long-term outcomes > 24 weeks	2	1004	Std. Mean Difference (IV, Random, 95% CI)	-0.59 [-1.39, 0.21]
8 Interventions with postnatal only component - diagnosis of depression	1		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
8.1 Short-term outcomes 9-16 weeks	1	612	Risk Ratio (M-H, Fixed, 95% CI)	0.65 [0.34, 1.23]
9 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology: at final study assessment	20	14727	Risk Ratio (M-H, Random, 95% CI)	0.78 [0.66, 0.93]
9.1 Antenatal and postnatal intervention	8	1941	Risk Ratio (M-H, Random, 95% CI)	0.96 [0.75, 1.22]

9.2 Postnatal intervention only	12	12786	Risk Ratio (M-H, Random, 95% CI)	0.73 [0.59, 0.90]
10 TEST FOR SUBGROUP DIFFERENCES: mean depression scores: at final study assessment	19	12376	Std. Mean Difference (IV, Random, 95% CI)	-0.13 [-0.28, 0.01]
10.1 Antenatal intervention only	4	1050	Std. Mean Difference (IV, Random, 95% CI)	0.03 [-0.09, 0.16]
10.2 Antenatal and postnatal intervention	7	1000	Std. Mean Difference (IV, Random, 95% CI)	-0.14 [-0.31, 0.02]
10.3 Postnatal intervention only	8	10326	Std. Mean Difference (IV, Random, 95% CI)	-0.16 [-0.40, 0.08]
11 TEST FOR SUBGROUP DIFFERENCES: diagnosis of depression: at final study assessment	5	939	Risk Ratio (M-H, Fixed, 95% CI)	0.48 [0.31, 0.74]
11.1 Antenatal intervention only	1	35	Risk Ratio (M-H, Fixed, 95% CI)	0.08 [0.00, 1.34]
11.2 Antenatal and postnatal intervention	3	292	Risk Ratio (M-H, Fixed, 95% CI)	0.44 [0.24, 0.80]
11.3 Postnatal intervention only	1	612	Risk Ratio (M-H, Fixed, 95% CI)	0.65 [0.34, 1.23]

Comparison 11. Subgroup analysis: variations in sample selection criteria

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Interventions for at-risk women - depressive symptomatology	9		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
1.1 Immediate outcomes 0-8 weeks	7	1301	Risk Ratio (M-H, Random, 95% CI)	0.67 [0.51, 0.88]
1.2 Short-term outcomes 9-16 weeks	6	1368	Risk Ratio (M-H, Random, 95% CI)	0.59 [0.47, 0.75]
1.3 Intermediate outcomes 17-24 weeks	2	151	Risk Ratio (M-H, Random, 95% CI)	1.34 [0.60, 2.98]
1.4 Long-term outcomes > 24 weeks	2	281	Risk Ratio (M-H, Random, 95% CI)	0.60 [0.29, 1.24]
2 Interventions for at-risk women - mean depression scores	7		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
2.1 Immediate outcomes 0-8 weeks	3	387	Std. Mean Difference (IV, Random, 95% CI)	-0.17 [-0.52, 0.18]
2.2 Short-term outcomes 9-16 weeks	5	1067	Std. Mean Difference (IV, Random, 95% CI)	-0.14 [-0.26, -0.02]
2.3 Intermediate outcomes 17-24 weeks	1	30	Std. Mean Difference (IV, Random, 95% CI)	-0.02 [-0.74, 0.70]
2.4 Long-term outcomes >24 weeks	3	324	Std. Mean Difference (IV, Random, 95% CI)	-0.00 [-0.22, 0.22]

3 Interventions for at-risk women - diagnosis of depression	5		Risk Ratio (M-H, Fixed, 95% CI)	Subtotals only
3.1 Immediate outcomes 0-8 weeks	1	39	Risk Ratio (M-H, Fixed, 95% CI)	0.09 [0.01, 1.47]
3.2 Short-term outcomes 9-16 weeks	4	902	Risk Ratio (M-H, Fixed, 95% CI)	0.47 [0.30, 0.74]
3.3 Intermediate outcomes 17-24 weeks	1	37	Risk Ratio (M-H, Fixed, 95% CI)	0.64 [0.17, 2.46]
3.4 At final study assessment	5	939	Risk Ratio (M-H, Fixed, 95% CI)	0.48 [0.31, 0.74]
4 Interventions for general population - depressive symptomatology	12		Risk Ratio (M-H, Random, 95% CI)	Subtotals only
4.1 Immediate outcomes 0-8 weeks	7	3767	Risk Ratio (M-H, Random, 95% CI)	0.69 [0.46, 1.03]
4.2 Short-term outcomes 9-16 weeks	4	2614	Risk Ratio (M-H, Random, 95% CI)	0.91 [0.58, 1.42]
4.3 Intermediate outcomes 17-24 weeks	7	10485	Risk Ratio (M-H, Random, 95% CI)	0.92 [0.81, 1.06]
4.4 Long-term outcomes > 24 weeks	3	2655	Risk Ratio (M-H, Random, 95% CI)	0.71 [0.51, 0.99]
5 Interventions for general population - mean depression scores	12		Std. Mean Difference (IV, Random, 95% CI)	Subtotals only
5.1 Immediate outcomes 0-8 weeks	3	847	Std. Mean Difference (IV, Random, 95% CI)	-0.15 [-0.56, 0.25]
5.2 Short-term outcomes 9-16 weeks	4	2561	Std. Mean Difference (IV, Random, 95% CI)	-0.40 [-1.24, 0.44]
5.3 Intermediate outcomes 17-24 weeks	9	9914	Std. Mean Difference (IV, Random, 95% CI)	0.01 [-0.03, 0.05]
5.4 Long-term outcomes > 24 weeks	4	2123	Std. Mean Difference (IV, Random, 95% CI)	-0.28 [-0.87, 0.30]
6 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology: at final study assessment	20	14727	Risk Ratio (M-H, Random, 95% CI)	0.78 [0.66, 0.93]
6.1 Interventions for at-risk women	8	1853	Risk Ratio (M-H, Random, 95% CI)	0.66 [0.50, 0.88]
6.2 General population	12	12874	Risk Ratio (M-H, Random, 95% CI)	0.83 [0.68, 1.02]
7 TEST FOR SUBGROUP DIFFERENCES: mean depression scores: at final study assessment	19	12376	Std. Mean Difference (IV, Random, 95% CI)	-0.13 [-0.28, 0.01]
7.1 Interventions for at risk women	7	1087	Std. Mean Difference (IV, Random, 95% CI)	-0.13 [-0.25, -0.01]
7.2 General population	12	11289	Std. Mean Difference (IV, Random, 95% CI)	-0.15 [-0.33, 0.04]

Analysis 1.1. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 1 Depressive symptomatology at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 1 Depressive symptomatology at final study assessment

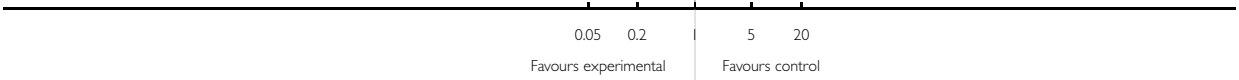
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Gorman 1997	3/15	3/15		1.2 %	1.00 [0.24, 4.18]
Armstrong 1999	4/65	9/66		1.8 %	0.45 [0.15, 1.39]
Gamble 2005	4/50	17/53		2.2 %	0.25 [0.09, 0.69]
Stamp 1995	9/60	6/61		2.3 %	1.53 [0.58, 4.02]
Le 2011	7/77	9/73		2.5 %	0.74 [0.29, 1.88]
Lavender 1998	5/58	31/56		2.8 %	0.16 [0.07, 0.37]
Gao 2010	9/87	17/88		3.4 %	0.54 [0.25, 1.14]
Sen 2006	11/63	12/60		3.5 %	0.87 [0.42, 1.83]
Brugha 2000	15/94	18/96		4.3 %	0.85 [0.46, 1.59]
Tripathy 2010	20/243	25/225		4.8 %	0.74 [0.42, 1.30]
Gunn 1998	25/218	29/228		5.4 %	0.90 [0.55, 1.49]
Tam 2003	26/261	35/255		5.7 %	0.73 [0.45, 1.17]
Priest 2003	37/696	42/705		6.2 %	0.89 [0.58, 1.37]
Waldenstrom 2000	58/361	39/323		6.8 %	1.33 [0.91, 1.94]
Reid 2002	49/339	46/370		6.9 %	1.16 [0.80, 1.69]
Morrell 2000	49/260	50/233		7.1 %	0.88 [0.62, 1.25]
Dennis 2009	40/297	78/315		7.2 %	0.54 [0.38, 0.77]
Small 2000	81/467	65/449		7.8 %	1.20 [0.89, 1.62]
MacArthur 2002	72/584	118/547		8.2 %	0.57 [0.44, 0.75]
Lumley 2006	540/3437	514/2777		9.9 %	0.85 [0.76, 0.95]
Total (95% CI)	**7732**	**6995**		**100.0 %**	**0.78 [0.66, 0.93]**

Total events: 1064 (Experimental), 1163 (Control)

Heterogeneity: $Tau^2 = 0.07$; $Chi^2 = 52.68$, df = 19 (P = 0.00005); $I^2 = 64\%$

Test for overall effect: Z = 2.82 (P = 0.0047)

Test for subgroup differences: Not applicable



Analysis 1.2. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 2 Mean depression scores at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

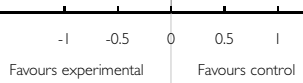
Outcome: 2 Mean depression scores at final study assessment

Study or subgroup	Favours experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Gorman 1997	13	7.9 (5.2)	17	8 (5.6)		2.6 %	-0.02 [-0.74, 0.70]
Zlotnick 2001	17	8.4 (7.8)	18	11.3 (4.8)		2.8 %	-0.44 [-1.11, 0.23]
Weidner 2010	20	5.48 (4.64)	23	5.22 (3.93)		3.2 %	0.06 [-0.54, 0.66]
Zlotnick 2006	46	9.39 (7.42)	40	10.1 (9.41)		4.3 %	-0.08 [-0.51, 0.34]
Sen 2006	63	7.2 (5)	60	7.6 (4.4)		4.9 %	-0.08 [-0.44, 0.27]
Armstrong 1999	65	5.25 (4.44)	66	6.02 (4.77)		5.0 %	-0.17 [-0.51, 0.18]
Gjerdingen 2002	69	24 (2.8)	63	23.9 (2.9)		5.0 %	0.03 [-0.31, 0.38]
Le 2011	77	7.68 (6.13)	73	6.92 (5.92)		5.1 %	0.13 [-0.20, 0.45]
Feinberg 2008	79	0.33 (0.35)	73	0.41 (0.45)		5.1 %	-0.20 [-0.52, 0.12]
Gao 2010	87	6.57 (4.07)	85	8.85 (4.5)		5.3 %	-0.53 [-0.83, -0.23]
Cupples 2011	138	70.3 (17.7)	149	72.1 (19.6)		5.8 %	-0.10 [-0.33, 0.14]
Gunn 1998	218	5.87 (5.37)	228	6.08 (5.14)		6.1 %	-0.04 [-0.23, 0.15]
Morrell 2000	252	6.6 (5.1)	229	6.7 (5.6)		6.2 %	-0.02 [-0.20, 0.16]
Dennis 2009	297	7.93 (4.68)	315	8.89 (5.24)		6.3 %	-0.19 [-0.35, -0.03]
Reid 2002	346	5.3 (5.4)	371	5.3 (4.84)		6.4 %	0.0 [-0.15, 0.15]
MacArthur 2002 (1)	451	6.2 (1.6)	422	7.6 (1.2)		6.4 %	-0.98 [-1.13, -0.84]
Ickovics 2011	534	10.5 (8.32)	306	10.1 (8.12)		6.4 %	0.05 [-0.09, 0.19]
Small 2000	467	7.16 (5.68)	449	6.72 (5.5)		6.5 %	0.08 [-0.05, 0.21]
Lumley 2006	3405	6.91 (6.42)	2745	6.83 (5.77)		6.8 %	0.01 [-0.04, 0.06]
Total (95% CI)	**6644**		**5732**			**100.0 %**	**-0.13 [-0.28, 0.01]**

Heterogeneity: $Tau^2 = 0.08$; $Chi^2 = 197.27$, df = 18 (P<0.00001); $I^2 = 91\%$

Test for overall effect: Z = 1.77 (P = 0.077)

Test for subgroup differences: Not applicable



(1) SDs provided by the trial author

Analysis 1.3. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 3 Diagnosis of depression at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 3 Diagnosis of depression at final study assessment

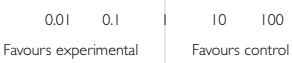
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Brugha 2000	3/94	6/96		10.3 %	0.51 [0.13, 1.98]
Dennis 2009	14/297	23/315		45.5 %	0.65 [0.34, 1.23]
Gorman 1997	3/20	4/17		10.4 %	0.64 [0.17, 2.46]
Harris 2006	6/30	19/35		31.4 %	0.37 [0.17, 0.80]
Zlotnick 2001	0/17	6/18		2.4 %	0.08 [0.00, 1.34]
Total (95% CI)	**458**	**481**		**100.0 %**	**0.50 [0.32, 0.78]**

Total events: 26 (Experimental), 58 (Control)

Heterogeneity: $Tau^2 = 0.0$; $Chi^2 = 2.97$, df = 4 (P = 0.56); $I^2 = 0.0\%$

Test for overall effect: Z = 3.10 (P = 0.0019)

Test for subgroup differences: Not applicable



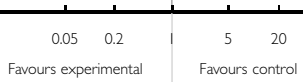
Analysis 1.4. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 4 Depressive symptomatology at 8, 16, 24, and > 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 4 Depressive symptomatology at 8, 16, 24, and > 24 weeks

Study or subgroup	Favours experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
1 Immediate outcomes 0-8 weeks					
Armstrong 1999	5/86	18/88		5.0 %	0.28 [0.11, 0.73]
Gamble 2005	16/49	18/53		8.7 %	0.96 [0.55, 1.67]
Gao 2010	9/87	17/88		6.6 %	0.54 [0.25, 1.14]
Gorman 1997	3/18	2/13		2.2 %	1.08 [0.21, 5.59]
Lavender 1998	5/58	31/56		5.5 %	0.16 [0.07, 0.37]
Le 2011	22/98	22/91		9.1 %	0.93 [0.55, 1.56]
Morrell 2000	50/282	48/269		11.2 %	0.99 [0.69, 1.42]
Priest 2003	54/809	63/833		11.3 %	0.88 [0.62, 1.25]
Sen 2006	6/69	13/64		5.3 %	0.43 [0.17, 1.06]
Stamp 1995	8/64	11/64		5.8 %	0.73 [0.31, 1.69]
Tam 2003	26/261	35/255		9.7 %	0.73 [0.45, 1.17]
Tripathy 2010	20/243	25/225		8.6 %	0.74 [0.42, 1.30]
Waldenstrom 2000	58/361	39/323		11.0 %	1.33 [0.91, 1.94]
Subtotal (95% CI)	**2485**	**2422**		**100.0 %**	**0.73 [0.56, 0.95]**
Total events: 282 (Favours experimental), 342 (Control)					
Heterogeneity: $Tau^2 = 0.13$; $Chi^2 = 31.03$, df = 12 (P = 0.002); $I^2 = 61\%$					
Test for overall effect: Z = 2.38 (P = 0.017)					
2 Short-term outcome 9-16 weeks					
Armstrong 1999	13/80	18/80		9.1 %	0.72 [0.38, 1.37]
Brugha 2000	15/94	18/96		9.3 %	0.85 [0.46, 1.59]
Dennis 2009	40/297	78/315		14.0 %	0.54 [0.38, 0.77]
Gamble 2005	4/50	17/53		5.2 %	0.25 [0.09, 0.69]
Gunn 1998	39/232	33/244		12.5 %	1.24 [0.81, 1.91]
Le 2011	9/87	16/87		7.6 %	0.56 [0.26, 1.20]
MacArthur 2002	98/681	127/597		15.8 %	0.68 [0.53, 0.86]



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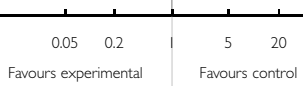
Study or subgroup	Favours experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Reid 2002	55/344	46/388		13.7 %	1.35 [0.94, 1.94]
Sen 2006	7/65	14/63		6.7 %	0.48 [0.21, 1.12]
Stamp 1995	7/64	10/65		6.1 %	0.71 [0.29, 1.75]
Subtotal (95% CI)	**1994**	**1988**		**100.0 %**	**0.73 [0.56, 0.97]**
Total events: 287 (Favours experimental), 377 (Control)					
Heterogeneity: $Tau^2 = 0.11$; $Chi^2 = 25.62$, df = 9 (P = 0.002); $I^2 = 65\%$					
Test for overall effect: Z = 2.20 (P = 0.028)					
3 Intermediate outcome 17-24 weeks					
Gorman 1997	3/15	3/15		0.7 %	1.00 [0.24, 4.18]
Gunn 1998	25/218	29/228		5.6 %	0.90 [0.55, 1.49]
Lumley 2006	540/3437	514/2777		45.7 %	0.85 [0.76, 0.95]
Morrell 2000	49/260	50/233		10.5 %	0.88 [0.62, 1.25]
Priest 2003	55/777	65/797		10.9 %	0.87 [0.61, 1.23]
Reid 2002	49/339	46/370		9.5 %	1.16 [0.80, 1.69]
Sen 2006	6/68	12/65		1.8 %	0.48 [0.19, 1.20]
Small 2000	81/467	65/449		13.8 %	1.20 [0.89, 1.62]
Stamp 1995	9/60	6/61		1.6 %	1.53 [0.58, 4.02]
Subtotal (95% CI)	**5641**	**4995**		**100.0 %**	**0.93 [0.82, 1.05]**
Total events: 817 (Favours experimental), 790 (Control)					
Heterogeneity: $Tau^2 = 0.01$; $Chi^2 = 9.42$, df = 8 (P = 0.31); $I^2 = 15\%$					
Test for overall effect: Z = 1.22 (P = 0.22)					
4 Long-term outcome > 24 weeks					
Armstrong 1999	4/65	9/66		3.5 %	0.45 [0.15, 1.39]
Le 2011	7/77	9/73		5.1 %	0.74 [0.29, 1.88]
MacArthur 2002	72/584	118/547		59.3 %	0.57 [0.44, 0.75]
Priest 2003	37/696	42/705		23.9 %	0.89 [0.58, 1.37]
Sen 2006	11/63	12/60		8.2 %	0.87 [0.42, 1.83]
Subtotal (95% CI)	**1485**	**1451**		**100.0 %**	**0.66 [0.54, 0.82]**
Total events: 131 (Favours experimental), 190 (Control)					
Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 4.04$, df = 4 (P = 0.40); $I^2 = 1\%$					
Test for overall effect: Z = 3.83 (P = 0.00013)					

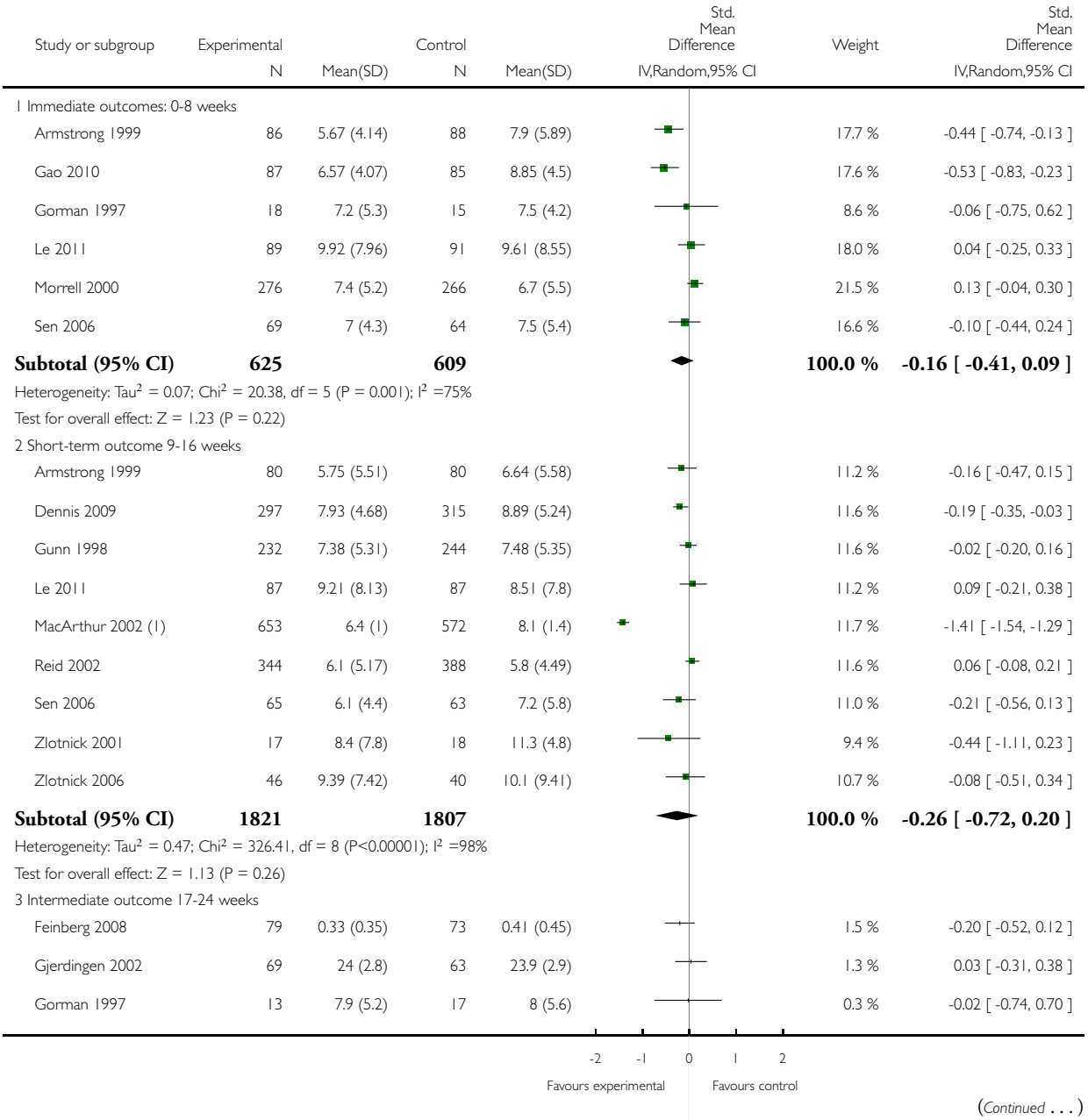


Analysis 1.5. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 5 Mean depression scores at 8, 16, 24, and > 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 5 Mean depression scores at 8, 16, 24, and > 24 weeks



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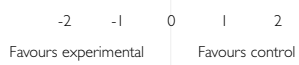
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Gunn 1998	218	5.87 (5.37)	228	6.08 (5.14)		4.5 %	-0.04 [-0.23, 0.15]
Ickovics 2011	491	10.2 (8.07)	296	9.7 (7.86)		7.5 %	0.06 [-0.08, 0.21]
Lumley 2006	3405	6.91 (6.42)	2745	6.83 (5.77)		61.9 %	0.01 [-0.04, 0.06]
Morrell 2000	252	6.6 (5.1)	229	6.7 (5.6)		4.9 %	-0.02 [-0.20, 0.16]
Reid 2002	346	5.3 (5.4)	371	5.3 (4.84)		7.3 %	0.0 [-0.15, 0.15]
Sen 2006	68	5.4 (4.5)	65	6.9 (5.5)		1.3 %	-0.30 [-0.64, 0.04]
Small 2000	467	7.16 (5.68)	449	6.72 (5.5)		9.3 %	0.08 [-0.05, 0.21]
Subtotal (95% CI)	**5408**		**4536**			**100.0 %**	**0.01 [-0.03, 0.05]**
Heterogeneity: Tau^2 = 0.0; Chi^2 = 6.77, df = 9 (P = 0.66); I^2 =0.0%							
Test for overall effect: Z = 0.53 (P = 0.59)							
4 Long-term outcome > 24 weeks							
Armstrong 1999	65	5.25 (4.44)	66	6.02 (4.77)		14.1 %	-0.17 [-0.51, 0.18]
Cupples 2011	138	70.3 (17.7)	149	72.1 (19.6)		14.9 %	-0.10 [-0.33, 0.14]
Ickovics 2011	534	10.5 (8.32)	306	10.1 (8.12)		15.4 %	0.05 [-0.09, 0.19]
Le 2011	77	7.68 (6.13)	73	6.92 (5.92)		14.3 %	0.13 [-0.20, 0.45]
MacArthur 2002 (2)	451	6.2 (1.6)	422	7.6 (1.2)		15.4 %	-0.98 [-1.13, -0.84]
Sen 2006	63	7.2 (5)	60	7.6 (4.4)		14.1 %	-0.08 [-0.44, 0.27]
Weidner 2010	20	5.48 (4.64)	23	5.22 (3.93)		11.8 %	0.06 [-0.54, 0.66]
Subtotal (95% CI)	**1348**		**1099**			**100.0 %**	**-0.17 [-0.58, 0.25]**
Heterogeneity: Tau^2 = 0.29; Chi^2 = 127.14, df = 6 (P<0.00001); I^2 =95%							
Test for overall effect: Z = 0.80 (P = 0.43)							



(1) SDs provided by the trial author

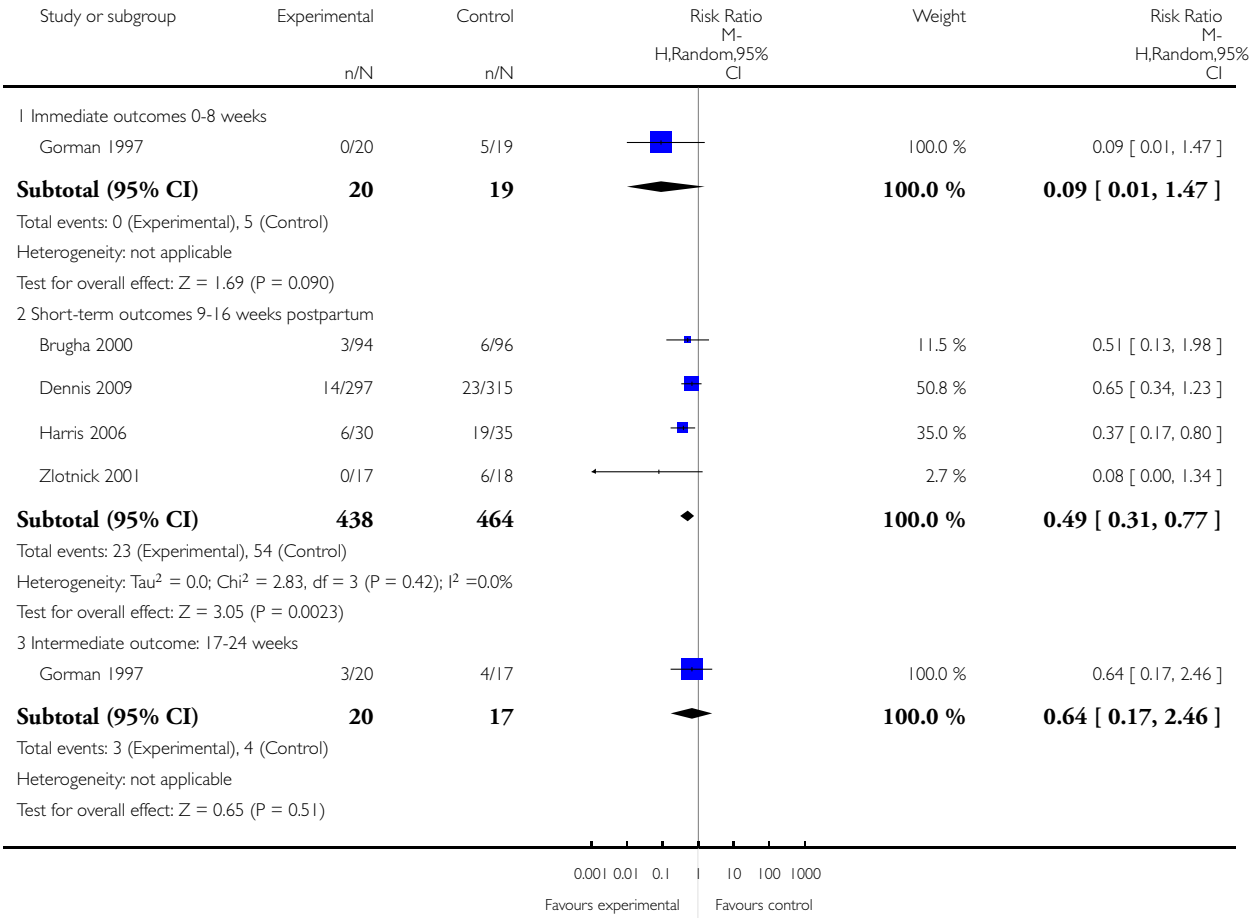
(2) SDs provided by trial author

Analysis 1.6. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 6 Diagnosis of depression at 8, 16, 24, and > 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 6 Diagnosis of depression at 8, 16, 24, and > 24 weeks

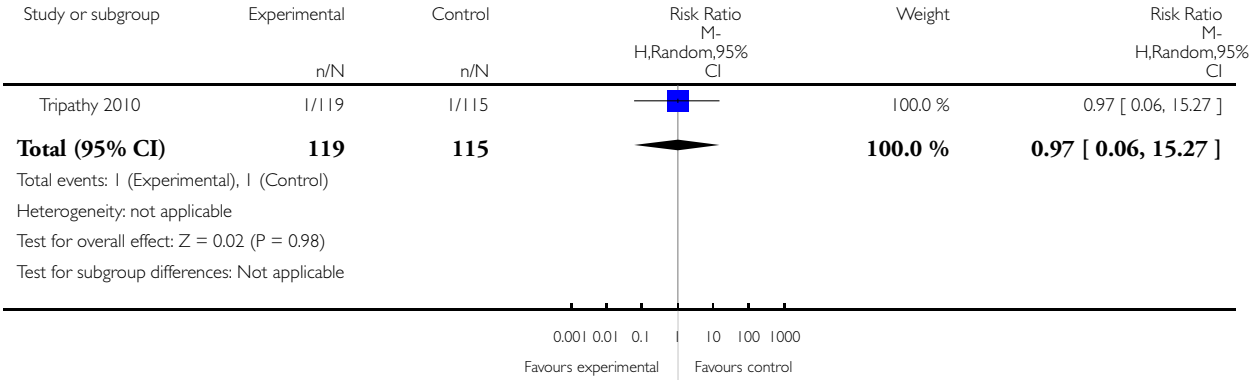


Analysis 1.7. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 7 Maternal mortality at > 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 7 Maternal mortality at > 24 weeks

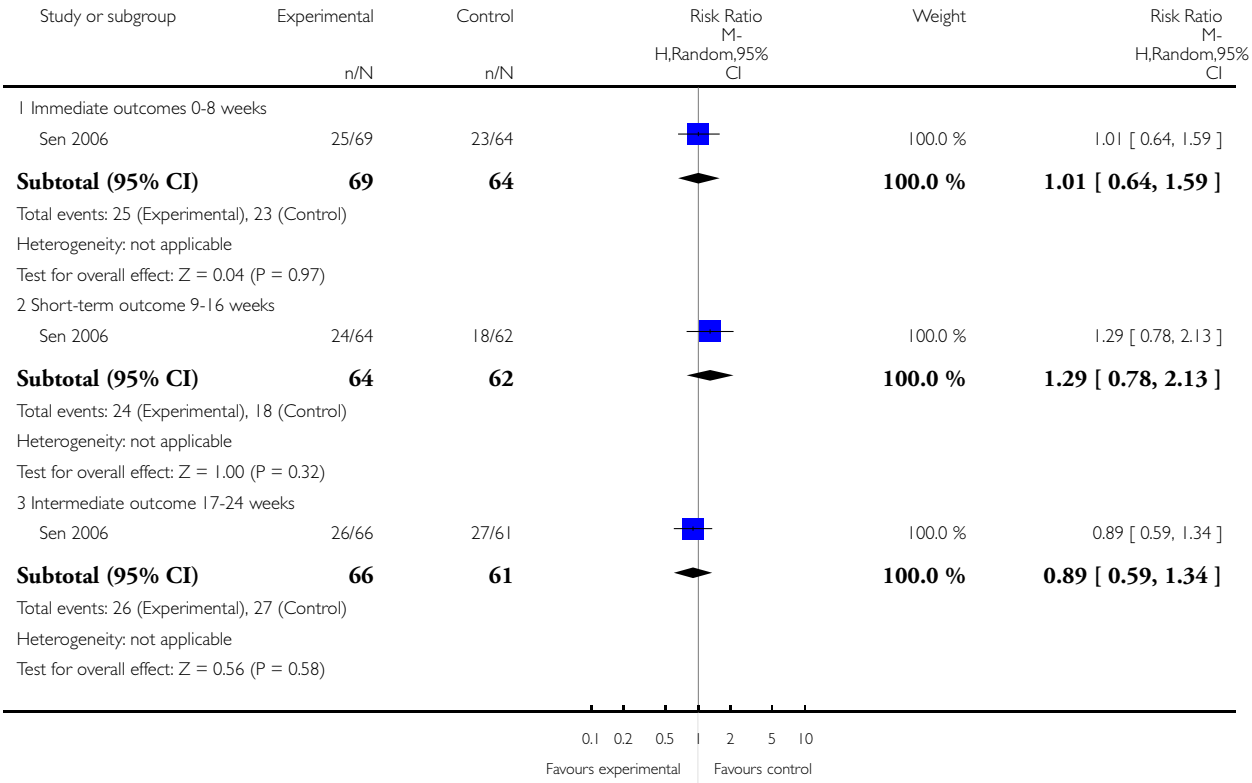


Analysis 1.8. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 8 Maternal-infant attachment at 8, 16, and 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 8 Maternal-infant attachment at 8, 16, and 24 weeks



Analysis 1.9. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 9 Mean maternal-infant attachment scores at 8, 16, 24, and > 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 9 Mean maternal-infant attachment scores at 8, 16, 24, and > 24 weeks

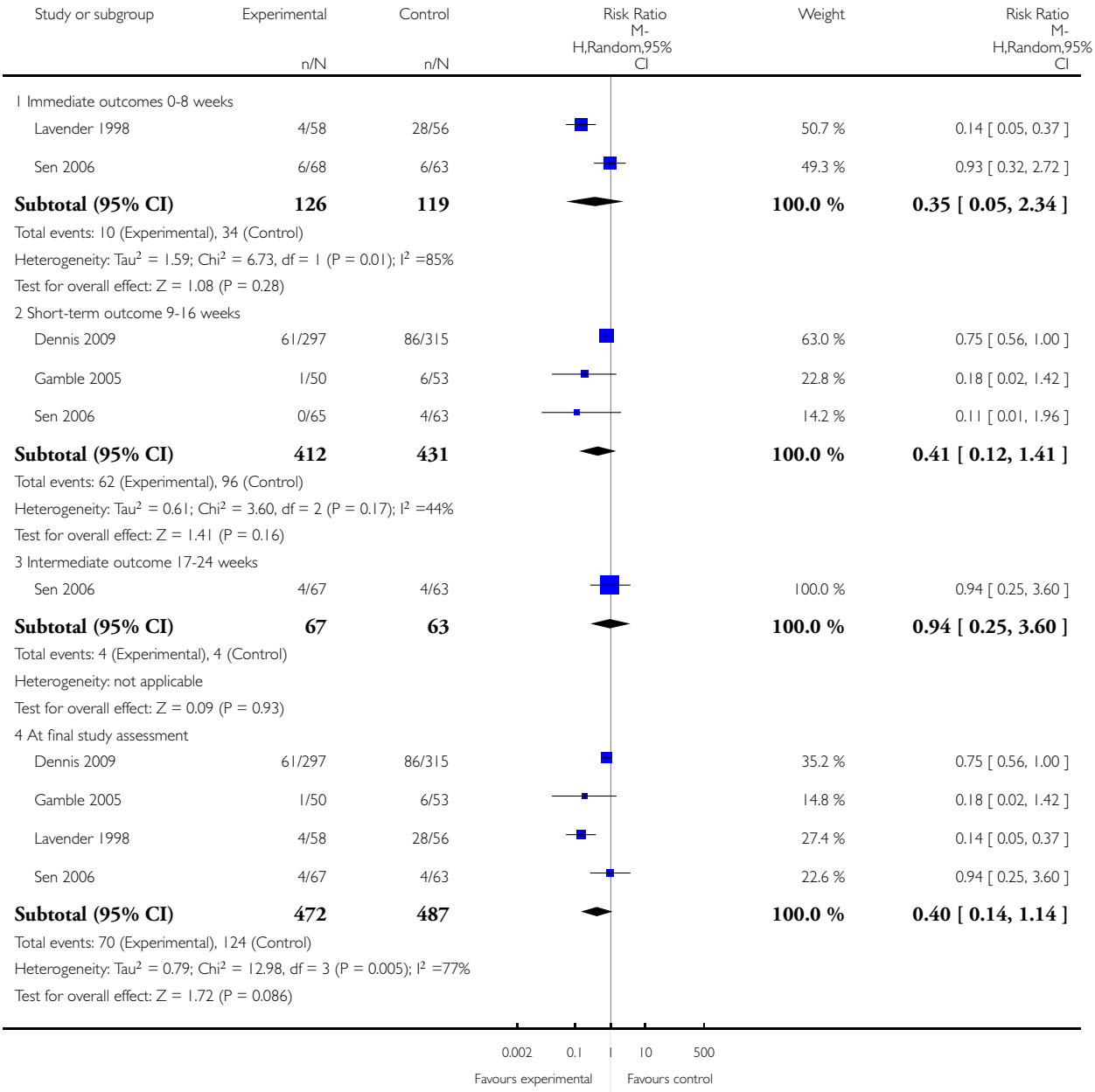
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 Immediate outcomes 0-8 weeks							
Armstrong 1999	87	13.22 (3.3)	89	13.6 (3.74)		100.0 %	-0.11 [-0.40, 0.19]
Subtotal (95% CI)	**87**		**89**			**100.0 %**	**-0.11 [-0.40, 0.19]**
Heterogeneity: not applicable							
Test for overall effect: Z = 0.71 (P = 0.48)							
2 Short-term outcome 9-16 weeks							
Armstrong 1999	80	12.05 (3.47)	80	12.78 (3.67)		100.0 %	-0.20 [-0.51, 0.11]
Subtotal (95% CI)	**80**		**80**			**100.0 %**	**-0.20 [-0.51, 0.11]**
Heterogeneity: not applicable							
Test for overall effect: Z = 1.28 (P = 0.20)							
3 Intermediate outcome 17-24 weeks							
Feinberg 2008	79	1.31 (0.41)	73	1.41 (0.5)		100.0 %	-0.22 [-0.54, 0.10]
Subtotal (95% CI)	**79**		**73**			**100.0 %**	**-0.22 [-0.54, 0.10]**
Heterogeneity: not applicable							
Test for overall effect: Z = 1.34 (P = 0.18)							
4 Long-term outcome > 24 weeks							
Armstrong 1999	59	12.66 (3.27)	57	13.05 (3.13)		100.0 %	-0.12 [-0.49, 0.24]
Subtotal (95% CI)	**59**		**57**			**100.0 %**	**-0.12 [-0.49, 0.24]**
Heterogeneity: not applicable							
Test for overall effect: Z = 0.65 (P = 0.52)							
5 At final study assessment							
Armstrong 1999	59	12.66 (3.27)	57	13.05 (3.13)		43.4 %	-0.12 [-0.49, 0.24]
Feinberg 2008	79	1.31 (0.41)	73	1.41 (0.5)		56.6 %	-0.22 [-0.54, 0.10]
Subtotal (95% CI)	**138**		**130**			**100.0 %**	**-0.18 [-0.42, 0.06]**
Heterogeneity: $Tau^2 = 0.0$; $Chi^2 = 0.16$, df = 1 (P = 0.69); $I^2 = 0.0\%$							
Test for overall effect: Z = 1.44 (P = 0.15)							

Analysis 1.10. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 10 Anxiety at 8, 16, and 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 10 Anxiety at 8, 16, and 24 weeks

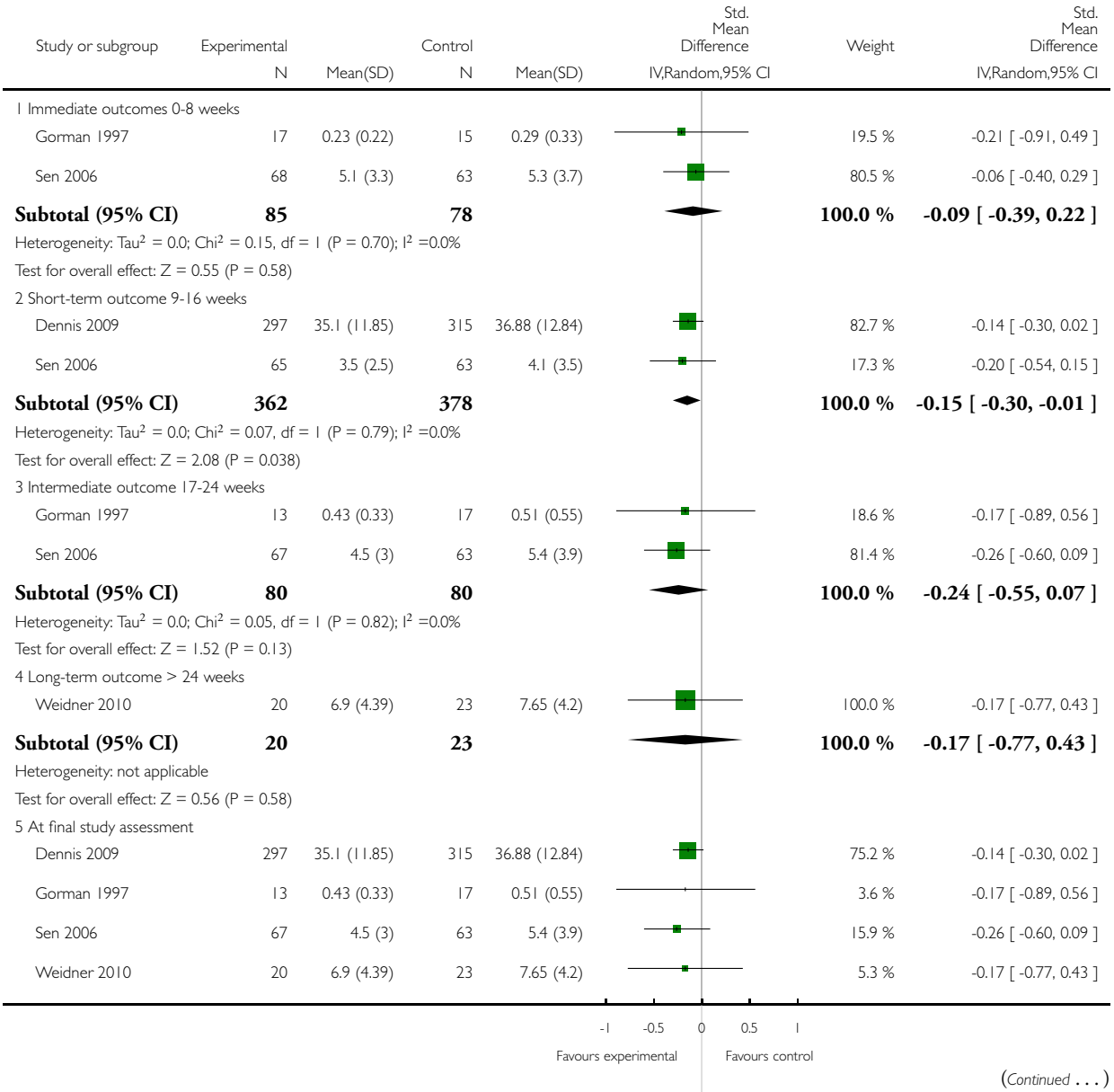


Analysis 1.11. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 11 Mean anxiety scores at 8, 16, 24, and > 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 11 Mean anxiety scores at 8, 16, 24, and > 24 weeks



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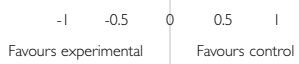
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Subtotal (95% CI)	**397**		**418**			**100.0 %**	**-0.16 [-0.30, -0.03]**
Heterogeneity: $Tau^2 = 0.0$; $Chi^2 = 0.35$, df = 3 (P = 0.95); $I^2 = 0.0\%$							
Test for overall effect: Z = 2.34 (P = 0.019)							



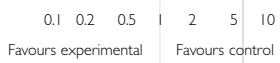
Analysis 1.12. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 12 Maternal stress at 16 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 12 Maternal stress at 16 weeks

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
1 Short-term outcome 9-16 weeks					
Gamble 2005	7/50	17/53		100.0 %	0.44 [0.20, 0.96]
Subtotal (95% CI)	**50**	**53**		**100.0 %**	**0.44 [0.20, 0.96]**
Total events: 7 (Experimental), 17 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 2.05 (P = 0.040)					



Analysis 1.13. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 13 Mean maternal stress scores at 24 and > 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 13 Mean maternal stress scores at 24 and > 24 weeks

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Mean Difference IV,Random,95% CI	Weight	Mean Difference IV,Random,95% CI
1 Intermediate outcome 17-24 weeks							
Ickovics 2011	491	16.3 (6.94)	296	16.3 (7.12)		100.0 %	0.0 [-1.02, 1.02]
Subtotal (95% CI)	**491**		**296**			**100.0 %**	**0.0 [-1.02, 1.02]**
Heterogeneity: not applicable							
Test for overall effect: Z = 0.0 (P = 1.0)							
2 Long-term outcome > 24 weeks							
Ickovics 2011	534	16.8 (7.1)	306	16.3 (7.29)		100.0 %	0.50 [-0.51, 1.51]
Subtotal (95% CI)	**534**		**306**			**100.0 %**	**0.50 [-0.51, 1.51]**
Heterogeneity: not applicable							
Test for overall effect: Z = 0.97 (P = 0.33)							

Analysis 1.14. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 14 Mean parental stress scores at 8, 24, and > 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 14 Mean parental stress scores at 8, 24, and > 24 weeks

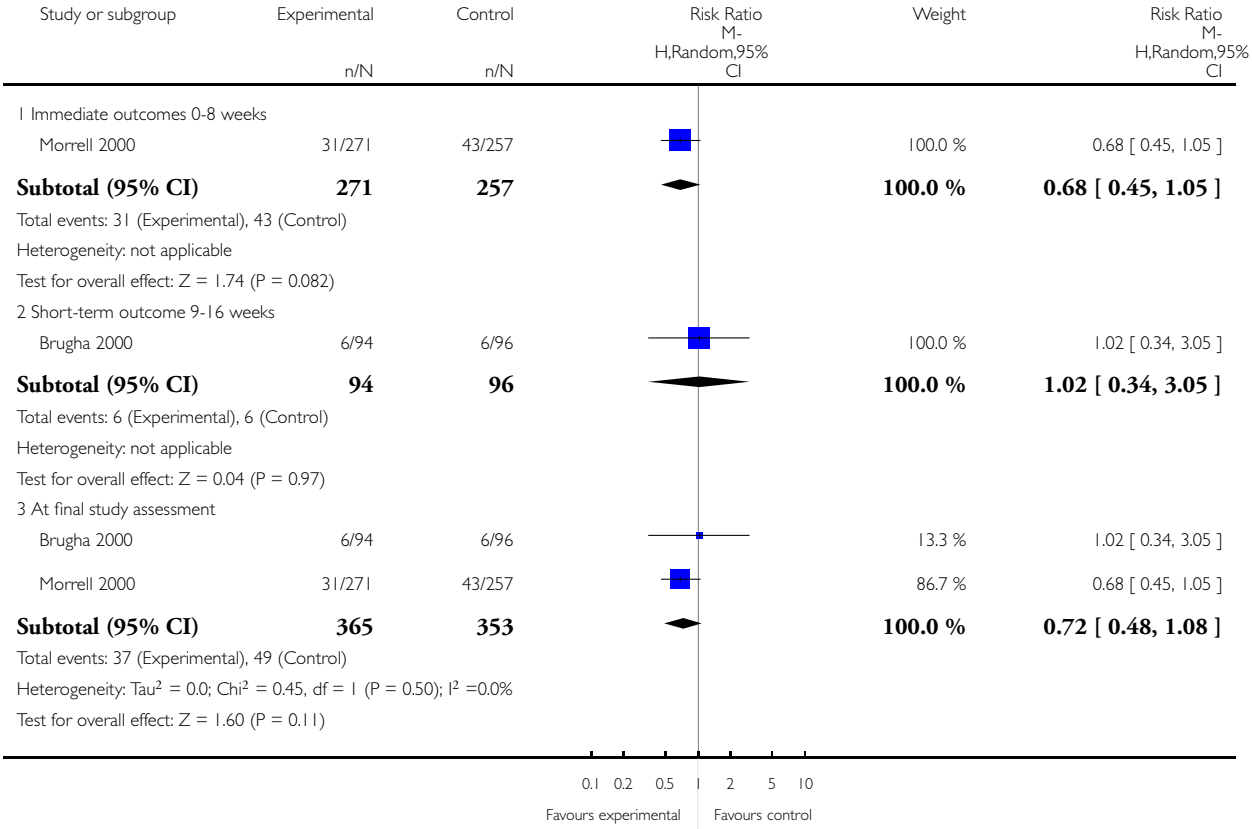
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 Immediate outcomes 0-8 weeks							
Armstrong 1999	87	128.85 (24.71)	89	130.78 (25.83)		100.0 %	-0.08 [-0.37, 0.22]
Subtotal (95% CI)	**87**		**89**			**100.0 %**	**-0.08 [-0.37, 0.22]**
Heterogeneity: not applicable							
Test for overall effect: Z = 0.50 (P = 0.61)							
2 Intermediate outcome 17-24 weeks							
Sen 2006	65	65.7 (14.2)	59	69.6 (14.7)		100.0 %	-0.27 [-0.62, 0.09]
Subtotal (95% CI)	**65**		**59**			**100.0 %**	**-0.27 [-0.62, 0.09]**
Heterogeneity: not applicable							
Test for overall effect: Z = 1.49 (P = 0.14)							
3 Long-term outcome > 24 weeks							
Armstrong 1999	42	234.61 (42.82)	44	217.88 (39.69)		24.9 %	0.40 [-0.03, 0.83]
Cupples 2011	126	67 (16.5)	129	63.4 (15.9)		75.1 %	0.22 [-0.02, 0.47]
Subtotal (95% CI)	**168**		**173**			**100.0 %**	**0.27 [0.05, 0.48]**
Heterogeneity: Tau^2 = 0.0; Chi^2 = 0.51, df = 1 (P = 0.47); I^2 =0.0%							
Test for overall effect: Z = 2.45 (P = 0.014)							
4 At final study assessment							
Armstrong 1999	42	234.61 (42.82)	44	217.88 (39.69)		28.6 %	0.40 [-0.03, 0.83]
Cupples 2011	126	67 (16.5)	129	63.4 (15.9)		38.8 %	0.22 [-0.02, 0.47]
Sen 2006	65	65.7 (14.2)	59	69.6 (14.7)		32.6 %	-0.27 [-0.62, 0.09]
Subtotal (95% CI)	**233**		**232**			**100.0 %**	**0.11 [-0.25, 0.48]**
Heterogeneity: Tau^2 = 0.07; Chi^2 = 6.95, df = 2 (P = 0.03); I^2 =71%							
Test for overall effect: Z = 0.61 (P = 0.54)							

Analysis 1.15. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 15 Perceived social support at 8 and 16 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 15 Perceived social support at 8 and 16 weeks



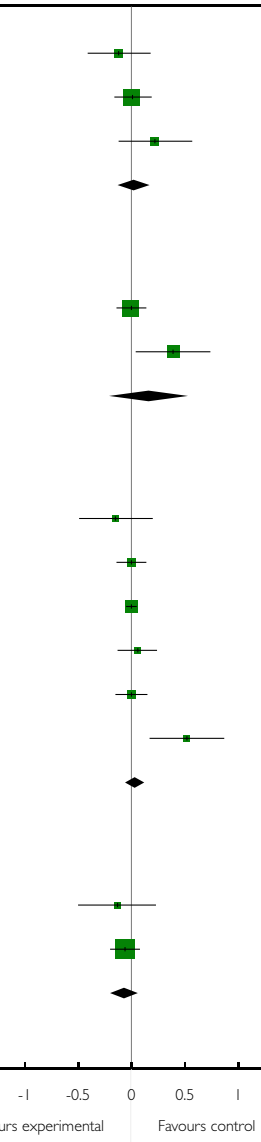
Analysis 1.16. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 16 Mean perceived social support scores at 8, 16, 24, and > 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 16 Mean perceived social support scores at 8, 16, 24, and > 24 weeks

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 Immediate outcomes 0-8 weeks							
Armstrong 1999	87	13.71 (4.28)	89	14.23 (4.47)		23.3 %	-0.12 [-0.41, 0.18]
Morrell 2000	260	16.7 (6.7)	253	16.6 (7.4)		58.8 %	0.01 [-0.16, 0.19]
Sen 2006	69	16 (3.1)	64	15.3 (3.1)		17.9 %	0.22 [-0.12, 0.57]
Subtotal (95% CI)	**416**		**406**			**100.0 %**	**0.02 [-0.13, 0.17]**
Heterogeneity: Tau² = 0.00; Chi² = 2.22, df = 2 (P = 0.33); I² =10%							
Test for overall effect: Z = 0.27 (P = 0.78)							
2 Short-term outcome 9-16 weeks							
Reid 2002	348	5.3 (0.76)	388	5.3 (0.82)		58.9 %	0.0 [-0.14, 0.14]
Sen 2006	64	16.4 (2.4)	63	15.3 (3.2)		41.1 %	0.39 [0.04, 0.74]
Subtotal (95% CI)	**412**		**451**			**100.0 %**	**0.16 [-0.21, 0.53]**
Heterogeneity: Tau² = 0.06; Chi² = 3.99, df = 1 (P = 0.05); I² =75%							
Test for overall effect: Z = 0.84 (P = 0.40)							
3 Intermediate outcome 17-24 weeks							
Gjerdingen 2002	69	5.3 (1.4)	63	5.5 (1.3)		5.6 %	-0.15 [-0.49, 0.20]
Ickovics 2011	491	29.5 (5.91)	296	29.5 (5.91)		19.3 %	0.0 [-0.14, 0.14]
Lumley 2006	3237	6.88 (8.42)	2655	6.85 (9.7)		35.9 %	0.00 [-0.05, 0.05]
Morrell 2000	240	17.1 (6.8)	225	16.7 (7.3)		14.7 %	0.06 [-0.13, 0.24]
Reid 2002	346	5.3 (0.66)	371	5.3 (0.71)		19.0 %	0.0 [-0.15, 0.15]
Sen 2006	66	16.1 (2.7)	63	14.6 (3)		5.4 %	0.52 [0.17, 0.87]
Subtotal (95% CI)	**4449**		**3673**			**100.0 %**	**0.03 [-0.06, 0.12]**
Heterogeneity: Tau² = 0.00; Chi² = 9.36, df = 5 (P = 0.10); I² =47%							
Test for overall effect: Z = 0.66 (P = 0.51)							
4 Long-term outcome > 24 weeks							
Armstrong 1999	58	14.6 (5.12)	57	15.28 (5.02)		12.9 %	-0.13 [-0.50, 0.23]
Ickovics 2011	534	29 (6.21)	306	29.4 (6.26)		87.1 %	-0.06 [-0.20, 0.08]
Subtotal (95% CI)	**592**		**363**			**100.0 %**	**-0.07 [-0.20, 0.06]**
Heterogeneity: Tau² = 0.0; Chi² = 0.12, df = 1 (P = 0.73); I² =0.0%							



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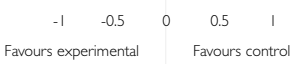
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Test for overall effect: Z = 1.09 (P = 0.28)							
5 At final study assessment							
Armstrong 1999	58	14.6 (5.12)	57	15.28 (5.02)		4.9 %	-0.13 [-0.50, 0.23]
Gjerdingen 2002	69	5.3 (1.4)	63	5.5 (1.3)		5.5 %	-0.15 [-0.49, 0.20]
Ickovics 2011	534	29 (6.21)	306	29.4 (6.26)		18.9 %	-0.06 [-0.20, 0.08]
Lumley 2006	3237	6.88 (8.42)	2655	6.85 (9.7)		33.4 %	0.00 [-0.05, 0.05]
Morrell 2000	240	17.1 (6.8)	225	16.7 (7.3)		14.1 %	0.06 [-0.13, 0.24]
Reid 2002	346	5.3 (0.66)	371	5.3 (0.71)		18.1 %	0.0 [-0.15, 0.15]
Sen 2006	66	16.1 (2.7)	63	14.6 (3)		5.2 %	0.52 [0.17, 0.87]
Subtotal (95% CI)	**4550**		**3740**			**100.0 %**	**0.01 [-0.08, 0.10]**
Heterogeneity: $Tau^2 = 0.01$; $Chi^2 = 10.91$, df = 6 (P = 0.09); $I^2 = 45\%$							
Test for overall effect: Z = 0.22 (P = 0.82)							

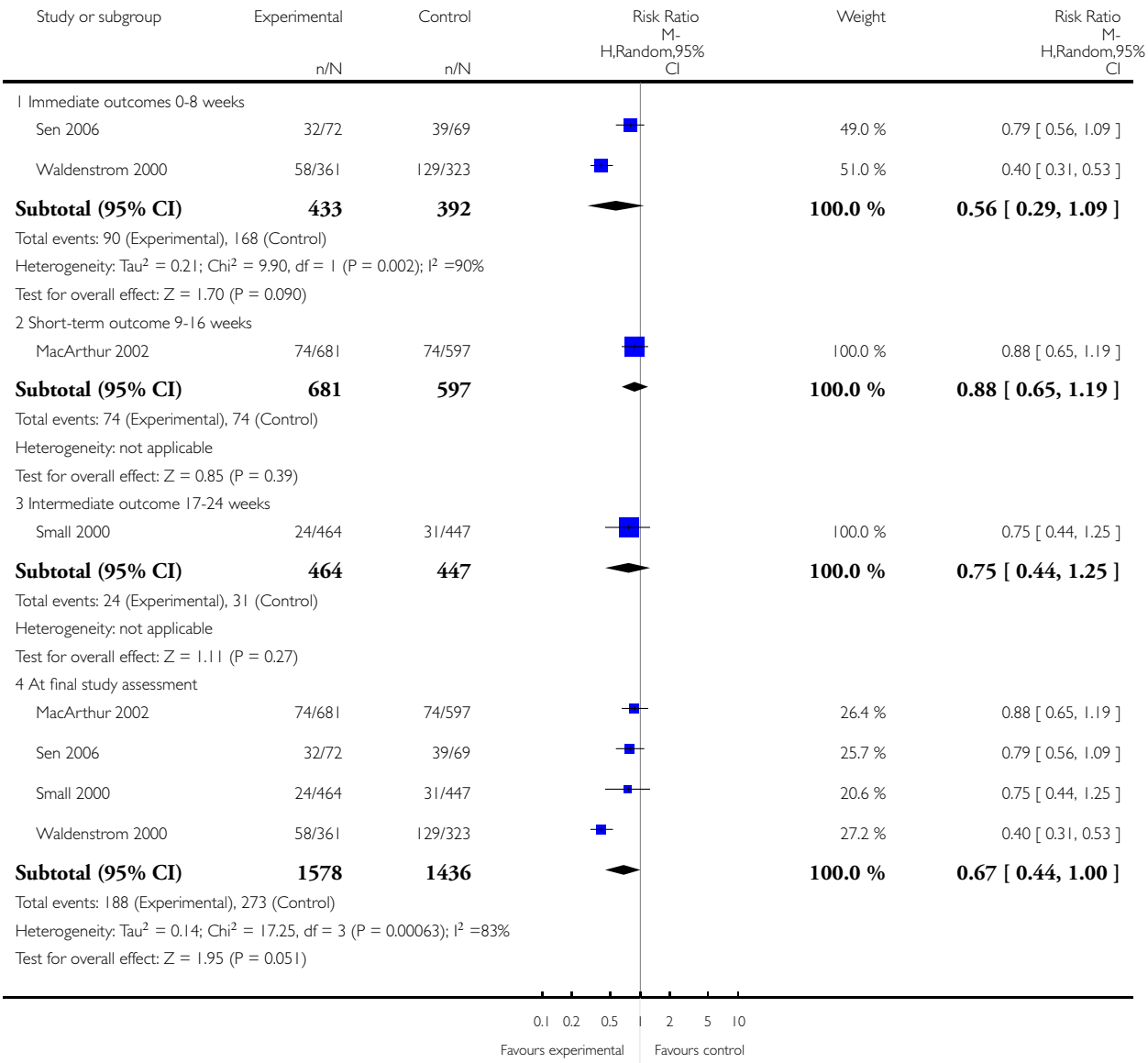


Analysis 1.17. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 17 Maternal dissatisfaction with care provided at 8, 16, and 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 17 Maternal dissatisfaction with care provided at 8, 16, and 24 weeks



Analysis 1.18. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 18 Mean maternal dissatisfaction scores at 8 and 16 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 18 Mean maternal dissatisfaction scores at 8 and 16 weeks

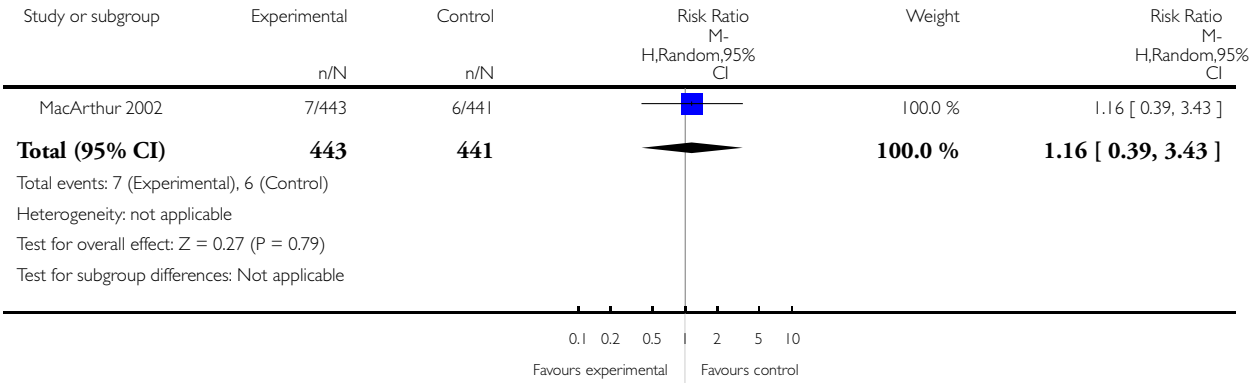
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 Immediate outcomes 0-8 weeks							
Tam 2003	261	24 (2.7)	255	24 (3)		100.0 %	0.0 [-0.17, 0.17]
Subtotal (95% CI)	**261**		**255**			**100.0 %**	**0.0 [-0.17, 0.17]**
Heterogeneity: not applicable							
Test for overall effect: Z = 0.0 (P = 1.0)							
2 Short-term outcome 9-16 weeks							
Armstrong 1999	80	44.83 (4.69)	80	39.03 (7.74)		100.0 %	0.90 [0.58, 1.23]
Subtotal (95% CI)	**80**		**80**			**100.0 %**	**0.90 [0.58, 1.23]**
Heterogeneity: not applicable							
Test for overall effect: Z = 5.43 (P < 0.00001)							
3 At final study assessment							
Armstrong 1999	80	44.83 (4.69)	80	39.03 (7.74)		48.8 %	0.90 [0.58, 1.23]
Tam 2003	261	24 (2.7)	255	24 (3)		51.2 %	0.0 [-0.17, 0.17]
Subtotal (95% CI)	**341**		**335**			**100.0 %**	**0.44 [-0.44, 1.32]**
Heterogeneity: Tau^2 = 0.39; Chi^2 = 23.01, df = 1 (P<0.00001); I^2 =96%							
Test for overall effect: Z = 0.98 (P = 0.33)							

Analysis 1.19. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 19 Infant health parameters - not fully immunized at > 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 19 Infant health parameters - not fully immunized at > 24 weeks

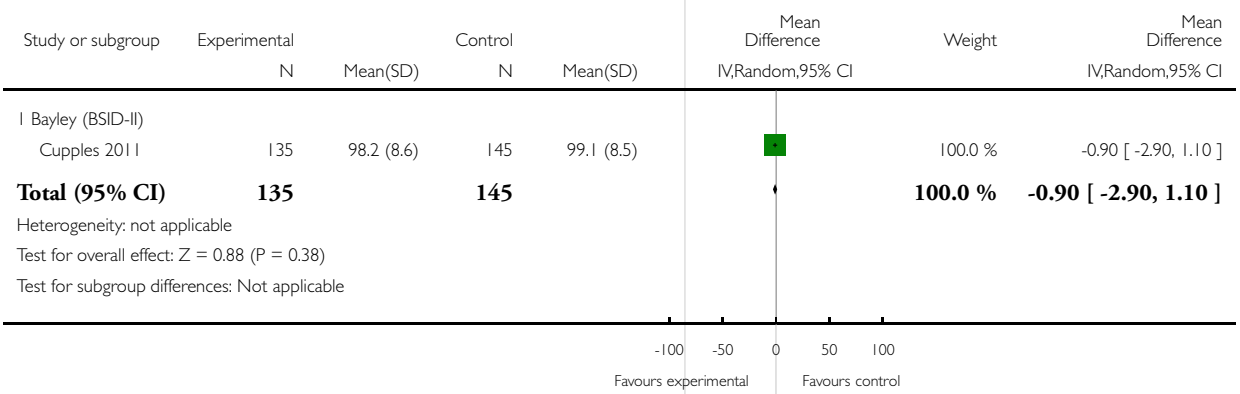


Analysis 1.20. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 20 Infant development > 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 20 Infant development > 24 weeks

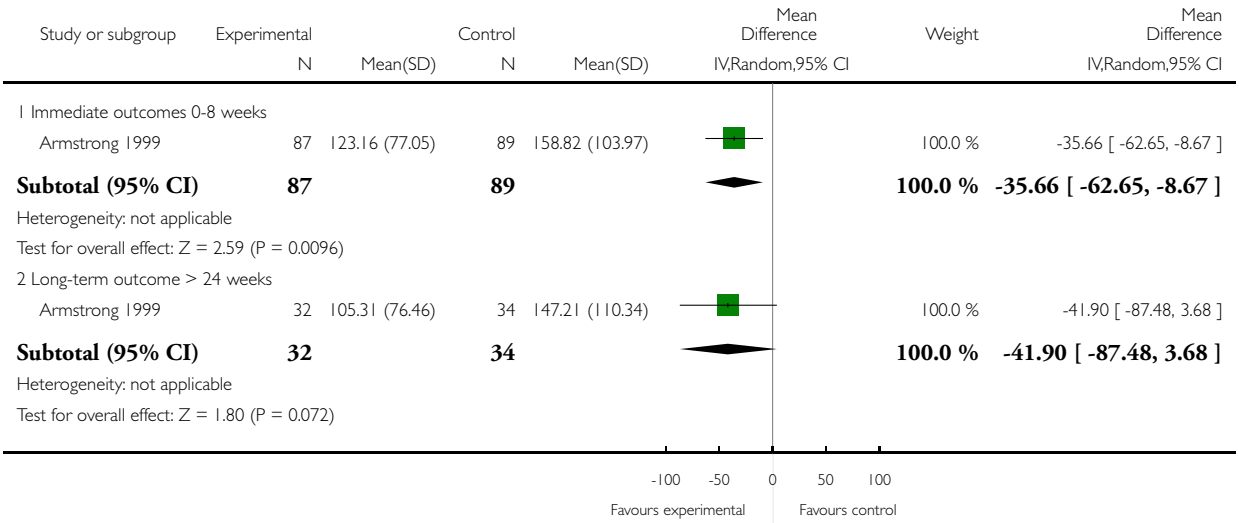


Analysis 1.21. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 21 Child abuse at 8 and > 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 21 Child abuse at 8 and > 24 weeks

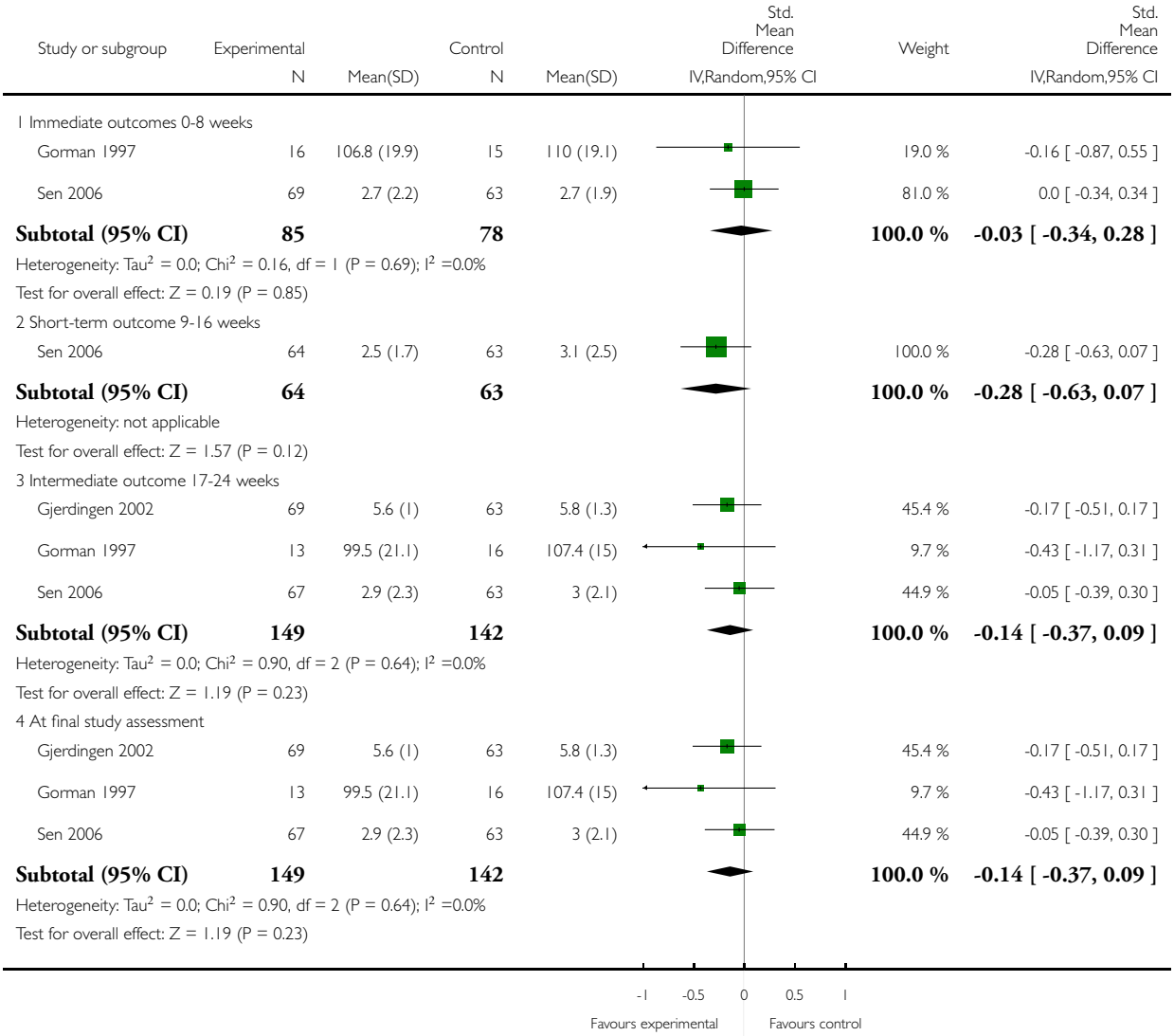


Analysis 1.22. Comparison 1 All psychosocial and psychological interventions versus usual care - various study outcomes, Outcome 22 Mean marital discord scores at 8, 16, and 24 weeks.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 1 All psychosocial and psychological interventions versus usual care - various study outcomes

Outcome: 22 Mean marital discord scores at 8, 16, and 24 weeks

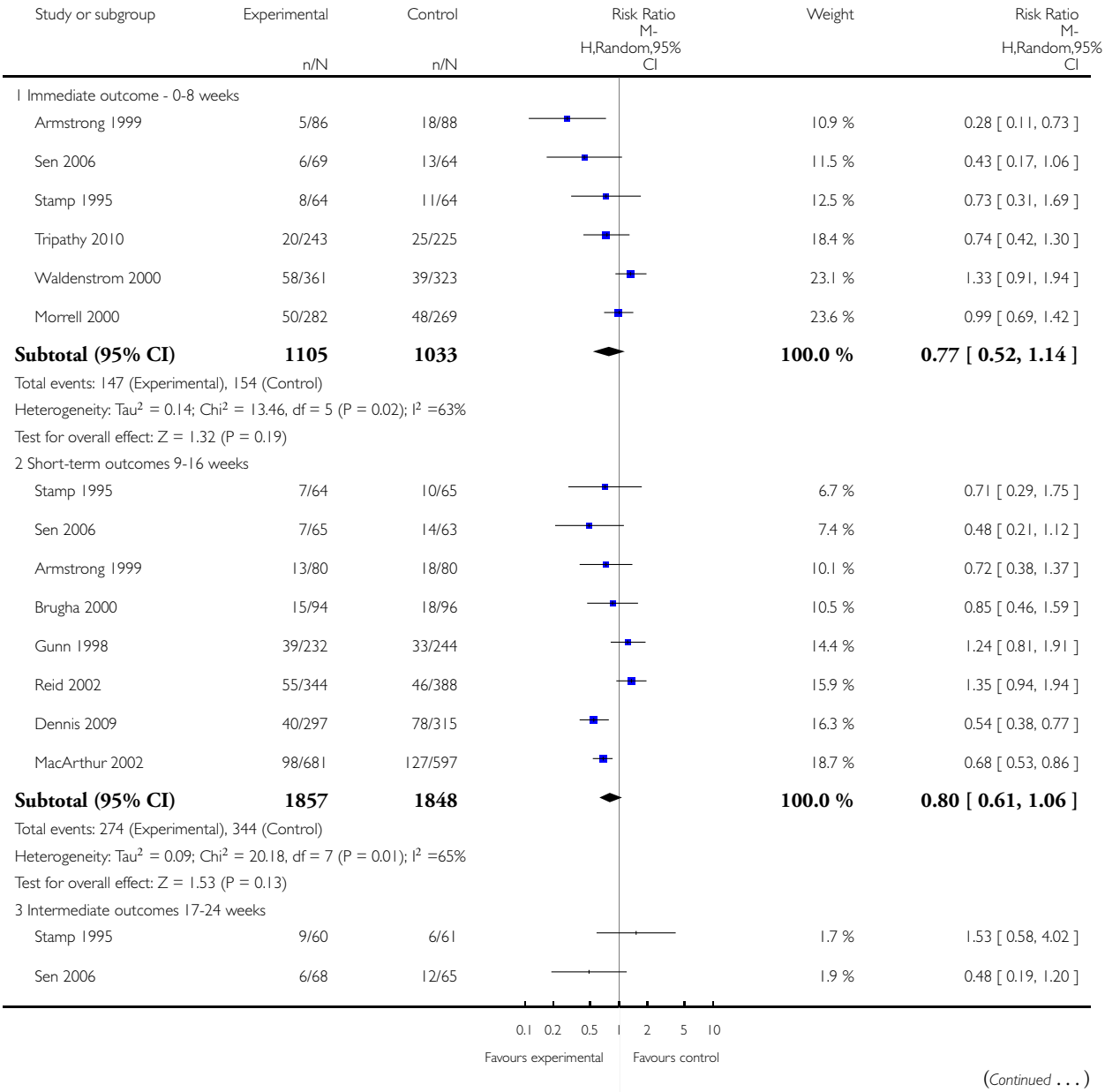


Analysis 2.1. Comparison 2 All psychosocial interventions versus usual care - variations in intervention type, Outcome 1 All psychosocial interventions - depressive symptomatology.

Review: Psychosocial and psychological interventions for preventing postpartum depression

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

Outcome: 1 All psychosocial interventions - depressive symptomatology



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Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Gunn 1998	25/218	29/228		6.1 %	0.90 [0.55, 1.49]
Reid 2002	49/339	46/370		10.6 %	1.16 [0.80, 1.69]
Morrell 2000	49/260	50/233		11.9 %	0.88 [0.62, 1.25]
Lumley 2006	540/3437	514/2777		67.8 %	0.85 [0.76, 0.95]
Subtotal (95% CI)	**4382**	**3734**		**100.0 %**	**0.88 [0.78, 1.00]**
Total events: 678 (Experimental), 657 (Control)					
Heterogeneity: Tau^2 = 0.00; Chi^2 = 5.44, df = 5 (P = 0.36); I^2 =8%					
Test for overall effect: Z = 1.91 (P = 0.057)					
4 Long-term outcomes >24 weeks					
Armstrong 1999	4/65	9/66		4.8 %	0.45 [0.15, 1.39]
Sen 2006	11/63	12/60		11.2 %	0.87 [0.42, 1.83]
MacArthur 2002	72/584	118/547		84.0 %	0.57 [0.44, 0.75]
Subtotal (95% CI)	**712**	**673**		**100.0 %**	**0.59 [0.46, 0.76]**
Total events: 87 (Experimental), 139 (Control)					
Heterogeneity: Tau^2 = 0.0; Chi^2 = 1.35, df = 2 (P = 0.51); I^2 =0.0%					
Test for overall effect: Z = 4.16 (P = 0.000032)					
5 At final study assessment					
Armstrong 1999	4/65	9/66		2.1 %	0.45 [0.15, 1.39]
Stamp 1995	9/60	6/61		2.8 %	1.53 [0.58, 4.02]
Sen 2006	11/63	12/60		4.3 %	0.87 [0.42, 1.83]
Brugha 2000	15/94	18/96		5.5 %	0.85 [0.46, 1.59]
Tripathy 2010	20/243	25/225		6.4 %	0.74 [0.42, 1.30]
Gunn 1998	25/218	29/228		7.3 %	0.90 [0.55, 1.49]
Waldenstrom 2000	58/361	39/323		10.0 %	1.33 [0.91, 1.94]
Reid 2002	49/339	46/370		10.0 %	1.16 [0.80, 1.69]
Morrell 2000	49/260	50/233		10.6 %	0.88 [0.62, 1.25]
Dennis 2009	40/297	78/315		10.7 %	0.54 [0.38, 0.77]
MacArthur 2002	72/584	118/547		12.9 %	0.57 [0.44, 0.75]
Lumley 2006	540/3437	514/2777		17.4 %	0.85 [0.76, 0.95]
Subtotal (95% CI)	**6021**	**5301**		**100.0 %**	**0.83 [0.70, 0.99]**
Total events: 892 (Experimental), 944 (Control)					
Heterogeneity: Tau^2 = 0.04; Chi^2 = 25.42, df = 11 (P = 0.01); I^2 =57%					
Test for overall effect: Z = 2.06 (P = 0.040)					

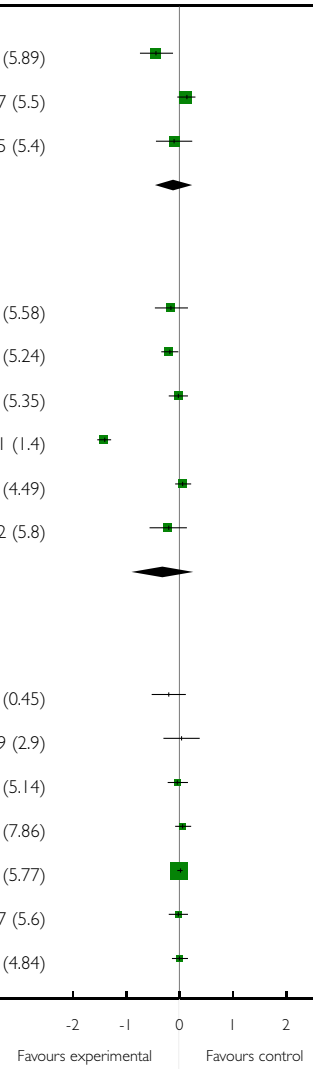
Analysis 2.2. Comparison 2 All psychosocial interventions versus usual care - variations in intervention type, Outcome 2 All psychosocial interventions - mean depression scores.

Review: Psychosocial and psychological interventions for preventing postpartum depression

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

Outcome: 2 All psychosocial interventions - mean depression scores

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 Immediate outcomes 0-8 weeks							
Armstrong 1999	86	5.67 (4.14)	88	7.9 (5.89)		32.0 %	-0.44 [-0.74, -0.13]
Morrell 2000	276	7.4 (5.2)	266	6.7 (5.5)		38.0 %	0.13 [-0.04, 0.30]
Sen 2006	69	7 (4.3)	64	7.5 (5.4)		30.0 %	-0.10 [-0.44, 0.24]
Subtotal (95% CI)	**431**		**418**			**100.0 %**	**-0.12 [-0.47, 0.23]**
Heterogeneity: $Tau^2 = 0.08$; $Chi^2 = 10.62$, df = 2 (P = 0.005); $I^2 = 81\%$							
Test for overall effect: Z = 0.67 (P = 0.50)							
2 Short-term outcomes 9-16 weeks							
Armstrong 1999	80	5.75 (5.51)	80	6.64 (5.58)		16.3 %	-0.16 [-0.47, 0.15]
Dennis 2009	297	7.93 (4.68)	315	8.89 (5.24)		16.9 %	-0.19 [-0.35, -0.03]
Gunn 1998	232	7.38 (5.31)	244	7.48 (5.35)		16.8 %	-0.02 [-0.20, 0.16]
MacArthur 2002 (1)	653	6.4 (1)	572	8.1 (1.4)		17.0 %	-1.41 [-1.54, -1.29]
Reid 2002	344	6.1 (5.17)	388	5.8 (4.49)		16.9 %	0.06 [-0.08, 0.21]
Sen 2006	65	6.1 (4.4)	63	7.2 (5.8)		16.1 %	-0.21 [-0.56, 0.13]
Subtotal (95% CI)	**1671**		**1662**			**100.0 %**	**-0.32 [-0.90, 0.25]**
Heterogeneity: $Tau^2 = 0.51$; $Chi^2 = 309.67$, df = 5 (P<0.00001); $I^2 = 98\%$							
Test for overall effect: Z = 1.10 (P = 0.27)							
3 Intermediate outcomes 17-24 weeks							
Feinberg 2008	79	0.33 (0.35)	73	0.41 (0.45)		1.7 %	-0.20 [-0.52, 0.12]
Gjerdingen 2002	69	24 (2.8)	63	23.9 (2.9)		1.5 %	0.03 [-0.31, 0.38]
Gunn 1998	218	5.87 (5.37)	228	6.08 (5.14)		5.0 %	-0.04 [-0.23, 0.15]
Ickovics 2011	491	10.2 (8.07)	296	9.7 (7.86)		8.3 %	0.06 [-0.08, 0.21]
Lumley 2006	3405	6.91 (6.42)	2745	6.83 (5.77)		68.5 %	0.01 [-0.04, 0.06]
Morrell 2000	252	6.6 (5.1)	229	6.7 (5.6)		5.4 %	-0.02 [-0.20, 0.16]
Reid 2002	346	5.3 (5.4)	371	5.3 (4.84)		8.1 %	0.0 [-0.15, 0.15]



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Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Sen 2006	68	5.4 (4.5)	65	6.9 (5.5)		1.5 %	-0.30 [-0.64, 0.04]
Subtotal (95% CI)	**4928**		**4070**			**100.0 %**	**0.00 [-0.04, 0.05]**
Heterogeneity: Tau² = 0.0; Chi² = 5.60, df = 7 (P = 0.59); I² =0.0%							
Test for overall effect: Z = 0.18 (P = 0.86)							
4 Long-term outcomes > 24 weeks							
Armstrong 1999	65	5.25 (4.44)	66	6.02 (4.77)		19.2 %	-0.17 [-0.51, 0.18]
Cupples 2011	138	70.3 (17.7)	149	72.1 (19.6)		20.2 %	-0.10 [-0.33, 0.14]
Ickovics 2011	534	10.5 (8.32)	306	10.1 (8.12)		20.8 %	0.05 [-0.09, 0.19]
MacArthur 2002 (2)	451	6.2 (1.6)	422	7.6 (1.2)		20.8 %	-0.98 [-1.13, -0.84]
Sen 2006	63	7.2 (5)	60	7.6 (4.4)		19.1 %	-0.08 [-0.44, 0.27]
Subtotal (95% CI)	**1251**		**1003**			**100.0 %**	**-0.26 [-0.76, 0.24]**
Heterogeneity: Tau² = 0.31; Chi² = 116.68, df = 4 (P<0.00001); I² =97%							
Test for overall effect: Z = 1.03 (P = 0.30)							
5 At final study assessment							
Armstrong 1999	65	5.25 (4.44)	66	6.02 (4.77)		7.2 %	-0.17 [-0.51, 0.18]
Cupples 2011	138	70.3 (17.7)	149	72.1 (19.6)		8.3 %	-0.10 [-0.33, 0.14]
Dennis 2009	297	7.93 (4.68)	315	8.89 (5.24)		8.9 %	-0.19 [-0.35, -0.03]
Feinberg 2008	79	0.33 (0.35)	73	0.41 (0.45)		7.4 %	-0.20 [-0.52, 0.12]
Gjerdingen 2002	69	24 (2.8)	63	23.9 (2.9)		7.2 %	0.03 [-0.31, 0.38]
Gunn 1998	218	5.87 (5.37)	228	6.08 (5.14)		8.7 %	-0.04 [-0.23, 0.15]
Ickovics 2011	534	10.5 (8.32)	306	10.1 (8.12)		9.0 %	0.05 [-0.09, 0.19]
Lumley 2006	3405	6.91 (6.42)	2745	6.83 (5.77)		9.4 %	0.01 [-0.04, 0.06]
MacArthur 2002 (3)	451	6.2 (1.6)	422	7.6 (1.2)		9.0 %	-0.98 [-1.13, -0.84]
Morrell 2000	252	6.6 (5.1)	229	6.7 (5.6)		8.7 %	-0.02 [-0.20, 0.16]
Reid 2002	346	5.3 (5.4)	371	5.3 (4.84)		9.0 %	0.0 [-0.15, 0.15]
Sen 2006	63	7.2 (5)	60	7.6 (4.4)		7.1 %	-0.08 [-0.44, 0.27]
Subtotal (95% CI)	**5917**		**5027**			**100.0 %**	**-0.14 [-0.33, 0.04]**
Heterogeneity: Tau² = 0.10; Chi² = 180.32, df = 11 (P<0.00001); I² =94%							
Test for overall effect: Z = 1.50 (P = 0.13)							

(1) SDs provided by trial author

(2) SDs provided by trial author

(3) SDs provided by trial author

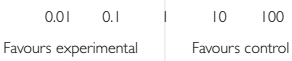
Analysis 2.3. Comparison 2 All psychosocial interventions versus usual care - variations in intervention type, Outcome 3 All psychosocial interventions - diagnosis of depression.

Review: Psychosocial and psychological interventions for preventing postpartum depression

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

Outcome: 3 All psychosocial interventions - diagnosis of depression

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Fixed,95% CI	Weight	Risk Ratio M-H,Fixed,95% CI
1 Short-term outcomes 9-16 weeks					
Brugha 2000	3/94	6/96		13.0 %	0.51 [0.13, 1.98]
Dennis 2009	14/297	23/315		48.7 %	0.65 [0.34, 1.23]
Harris 2006	6/30	19/35		38.3 %	0.37 [0.17, 0.80]
Subtotal (95% CI)	**421**	**446**		**100.0 %**	**0.52 [0.33, 0.83]**
Total events: 23 (Experimental), 48 (Control)					
Heterogeneity: Chi^2 = 1.19, df = 2 (P = 0.55); I^2 =0.0%					
Test for overall effect: Z = 2.75 (P = 0.0060)					



Analysis 2.4. Comparison 2 All psychosocial interventions versus usual care - variations in intervention type, Outcome 4 All psychosocial interventions: depressive symptomatology at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

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

Outcome: 4 All psychosocial interventions: depressive symptomatology at final study assessment

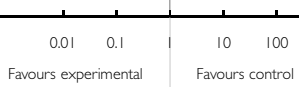
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Armstrong 1999	4/65	9/66		2.1 %	0.45 [0.15, 1.39]
Stamp 1995	9/60	6/61		2.8 %	1.53 [0.58, 4.02]
Sen 2006	11/63	12/60		4.3 %	0.87 [0.42, 1.83]
Brugha 2000	15/94	18/96		5.5 %	0.85 [0.46, 1.59]
Tripathy 2010	20/243	25/225		6.4 %	0.74 [0.42, 1.30]
Gunn 1998	25/218	29/228		7.3 %	0.90 [0.55, 1.49]
Waldenstrom 2000	58/361	39/323		10.0 %	1.33 [0.91, 1.94]
Reid 2002	49/339	46/370		10.0 %	1.16 [0.80, 1.69]
Morrell 2000	49/260	50/233		10.6 %	0.88 [0.62, 1.25]
Dennis 2009	40/297	78/315		10.7 %	0.54 [0.38, 0.77]
MacArthur 2002	72/584	118/547		12.9 %	0.57 [0.44, 0.75]
Lumley 2006	540/3437	514/2777		17.4 %	0.85 [0.76, 0.95]
Total (95% CI)	**6021**	**5301**		**100.0 %**	**0.83 [0.70, 0.99]**

Total events: 892 (Experimental), 944 (Control)

Heterogeneity: $Tau^2 = 0.04$; $Chi^2 = 25.42$, df = 11 (P = 0.01); $I^2 = 57\%$

Test for overall effect: Z = 2.06 (P = 0.040)

Test for subgroup differences: Not applicable



Analysis 2.5. Comparison 2 All psychosocial interventions versus usual care - variations in intervention type, Outcome 5 All psychosocial interventions: mean depression scores.

Review: Psychosocial and psychological interventions for preventing postpartum depression

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

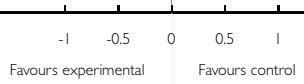
Outcome: 5 All psychosocial interventions: mean depression scores

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Sen 2006	63	7.2 (5)	60	7.6 (4.4)		7.1 %	-0.08 [-0.44, 0.27]
Armstrong 1999	65	5.25 (4.44)	66	6.02 (4.77)		7.2 %	-0.17 [-0.51, 0.18]
Gjerdingen 2002	69	24 (2.8)	63	23.9 (2.9)		7.2 %	0.03 [-0.31, 0.38]
Feinberg 2008	79	0.33 (0.35)	73	0.41 (0.45)		7.4 %	-0.20 [-0.52, 0.12]
Cupples 2011	138	70.3 (17.7)	149	72.1 (19.6)		8.3 %	-0.10 [-0.33, 0.14]
Gunn 1998	218	5.87 (5.37)	228	6.08 (5.14)		8.7 %	-0.04 [-0.23, 0.15]
Morrell 2000	252	6.6 (5.1)	229	6.7 (5.6)		8.7 %	-0.02 [-0.20, 0.16]
Dennis 2009	297	7.93 (4.68)	315	8.89 (5.24)		8.9 %	-0.19 [-0.35, -0.03]
Reid 2002	346	5.3 (5.4)	371	5.3 (4.84)		9.0 %	0.0 [-0.15, 0.15]
MacArthur 2002 (1)	451	6.2 (1.6)	422	7.6 (1.2)		9.0 %	-0.98 [-1.13, -0.84]
Ickovics 2011	534	10.5 (8.32)	306	10.1 (8.12)		9.0 %	0.05 [-0.09, 0.19]
Lumley 2006	3405	6.91 (6.42)	2745	6.83 (5.77)		9.4 %	0.01 [-0.04, 0.06]
Total (95% CI)	**5917**		**5027**			**100.0 %**	**-0.14 [-0.33, 0.04]**

Heterogeneity: $Tau^2 = 0.10$; $Chi^2 = 180.32$, df = 11 (P<0.00001); I^2 =94%

Test for overall effect: Z = 1.50 (P = 0.13)

Test for subgroup differences: Not applicable



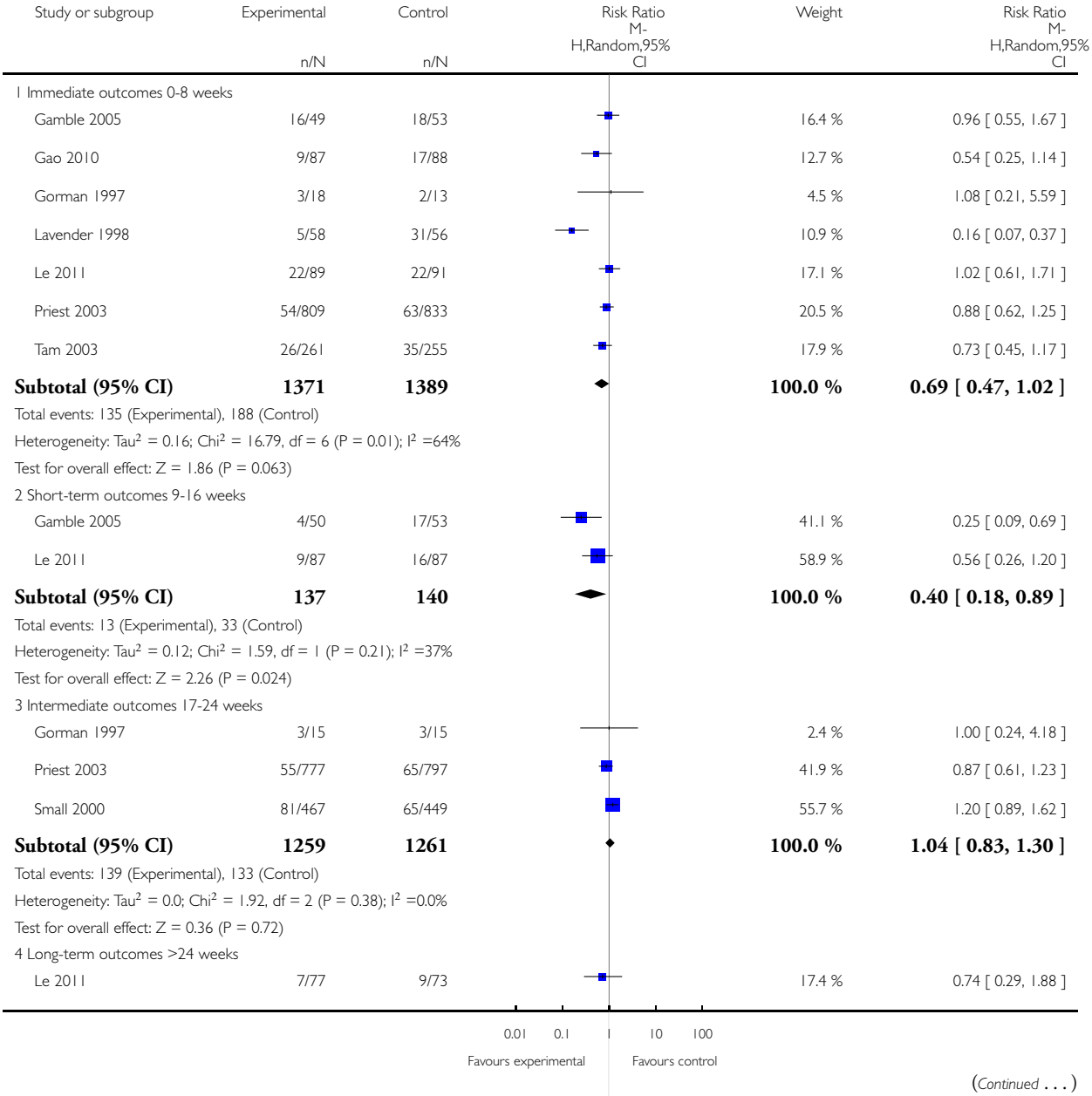
(1) SDs provided by trial author

Analysis 3.1. Comparison 3 All psychological interventions versus usual care - variations in intervention type, Outcome 1 All psychological interventions - depressive symptomatology.

Review: Psychosocial and psychological interventions for preventing postpartum depression

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

Outcome: 1 All psychological interventions - depressive symptomatology



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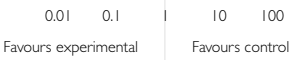
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Priest 2003	37/696	42/705		82.6 %	0.89 [0.58, 1.37]
Subtotal (95% CI)	**773**	**778**		**100.0 %**	**0.86 [0.58, 1.28]**
Total events: 44 (Experimental), 51 (Control)					
Heterogeneity: $Tau^2 = 0.0$; $Chi^2 = 0.13$, df = 1 (P = 0.72); $I^2 = 0.0\%$					
Test for overall effect: Z = 0.74 (P = 0.46)					
5 At final study assessment					
Gamble 2005	4/50	17/53		9.6 %	0.25 [0.09, 0.69]
Gao 2010	9/87	17/88		12.5 %	0.54 [0.25, 1.14]
Gorman 1997	3/15	3/15		6.5 %	1.00 [0.24, 4.18]
Lavender 1998	5/58	31/56		11.1 %	0.16 [0.07, 0.37]
Le 2011	7/77	9/73		10.4 %	0.74 [0.29, 1.88]
Priest 2003	37/696	42/705		16.4 %	0.89 [0.58, 1.37]
Small 2000	81/467	65/449		17.7 %	1.20 [0.89, 1.62]
Tam 2003	26/261	35/255		15.8 %	0.73 [0.45, 1.17]
Subtotal (95% CI)	**1711**	**1694**		**100.0 %**	**0.61 [0.39, 0.96]**
Total events: 172 (Experimental), 219 (Control)					
Heterogeneity: $Tau^2 = 0.27$; $Chi^2 = 27.55$, df = 7 (P = 0.00027); $I^2 = 75\%$					
Test for overall effect: Z = 2.14 (P = 0.032)					



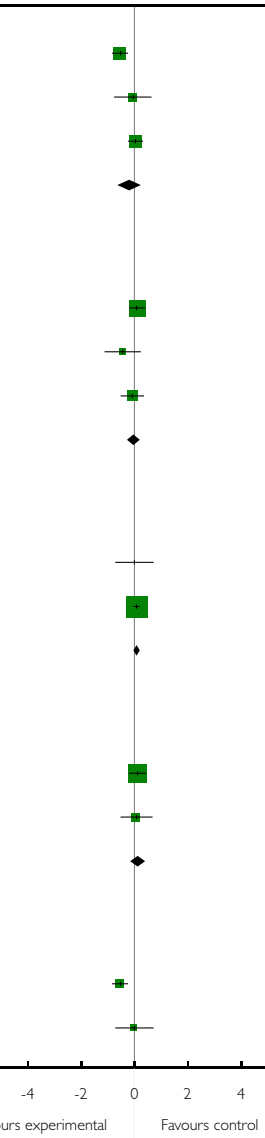
Analysis 3.2. Comparison 3 All psychological interventions versus usual care - variations in intervention type, Outcome 2 All psychological interventions - mean depression scores.

Review: Psychosocial and psychological interventions for preventing postpartum depression

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

Outcome: 2 All psychological interventions - mean depression scores

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 immediate outcome 0-8 weeks							
Gao 2010	87	6.57 (4.07)	85	8.85 (4.5)		39.0 %	-0.53 [-0.83, -0.23]
Gorman 1997	18	7.2 (5.3)	15	7.5 (4.2)		21.4 %	-0.06 [-0.75, 0.62]
Le 2011	89	9.92 (7.96)	91	9.61 (8.55)		39.6 %	0.04 [-0.25, 0.33]
Subtotal (95% CI)	**194**		**191**			**100.0 %**	**-0.20 [-0.63, 0.22]**
Heterogeneity: Tau^2 = 0.09; Chi^2 = 7.16, df = 2 (P = 0.03); I^2 =72%							
Test for overall effect: Z = 0.95 (P = 0.34)							
2 Short-term outcomes 9-16 weeks							
Le 2011	87	9.21 (8.13)	87	8.51 (7.8)		57.9 %	0.09 [-0.21, 0.38]
Zlotnick 2001	17	8.4 (7.8)	18	11.3 (4.8)		12.2 %	-0.44 [-1.11, 0.23]
Zlotnick 2006	46	9.39 (7.42)	40	10.1 (9.41)		29.9 %	-0.08 [-0.51, 0.34]
Subtotal (95% CI)	**150**		**145**			**100.0 %**	**-0.03 [-0.27, 0.21]**
Heterogeneity: Tau^2 = 0.00; Chi^2 = 2.09, df = 2 (P = 0.35); I^2 =4%							
Test for overall effect: Z = 0.23 (P = 0.82)							
3 Intermediate outcomes 17-24 weeks							
Gorman 1997	13	7.9 (5.2)	17	8 (5.6)		3.1 %	-0.02 [-0.74, 0.70]
Small 2000	467	7.16 (5.68)	449	6.72 (5.5)		96.9 %	0.08 [-0.05, 0.21]
Subtotal (95% CI)	**480**		**466**			**100.0 %**	**0.08 [-0.05, 0.20]**
Heterogeneity: Tau^2 = 0.0; Chi^2 = 0.07, df = 1 (P = 0.80); I^2 =0.0%							
Test for overall effect: Z = 1.16 (P = 0.25)							
4 Long-term outcomes > 24 weeks							
Le 2011	77	7.68 (6.13)	73	6.92 (5.92)		77.8 %	0.13 [-0.20, 0.45]
Weidner 2010	20	5.48 (4.64)	23	5.22 (3.93)		22.2 %	0.06 [-0.54, 0.66]
Subtotal (95% CI)	**97**		**96**			**100.0 %**	**0.11 [-0.17, 0.39]**
Heterogeneity: Tau^2 = 0.0; Chi^2 = 0.04, df = 1 (P = 0.85); I^2 =0.0%							
Test for overall effect: Z = 0.77 (P = 0.44)							
5 At final study assessment							
Gao 2010	87	6.57 (4.07)	85	8.85 (4.5)		18.4 %	-0.53 [-0.83, -0.23]
Gorman 1997	13	7.9 (5.2)	17	8 (5.6)		7.2 %	-0.02 [-0.74, 0.70]



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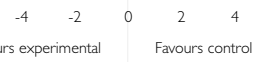
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Le 2011	77	7.68 (6.13)	73	6.92 (5.92)		17.7 %	0.13 [-0.20, 0.45]
Small 2000	467	7.16 (5.68)	449	6.72 (5.5)		25.4 %	0.08 [-0.05, 0.21]
Weidner 2010	20	5.48 (4.64)	23	5.22 (3.93)		9.3 %	0.06 [-0.54, 0.66]
Zlotnick 2001	17	8.4 (7.8)	18	11.3 (4.8)		8.0 %	-0.44 [-1.11, 0.23]
Zlotnick 2006	46	9.39 (7.42)	40	10.1 (9.41)		14.0 %	-0.08 [-0.51, 0.34]
Subtotal (95% CI)	**727**		**705**			**100.0 %**	**-0.10 [-0.32, 0.13]**

Heterogeneity: $Tau^2 = 0.05$; $Chi^2 = 15.42$, df = 6 (P = 0.02); $I^2 = 61\%$

Test for overall effect: Z = 0.85 (P = 0.39)

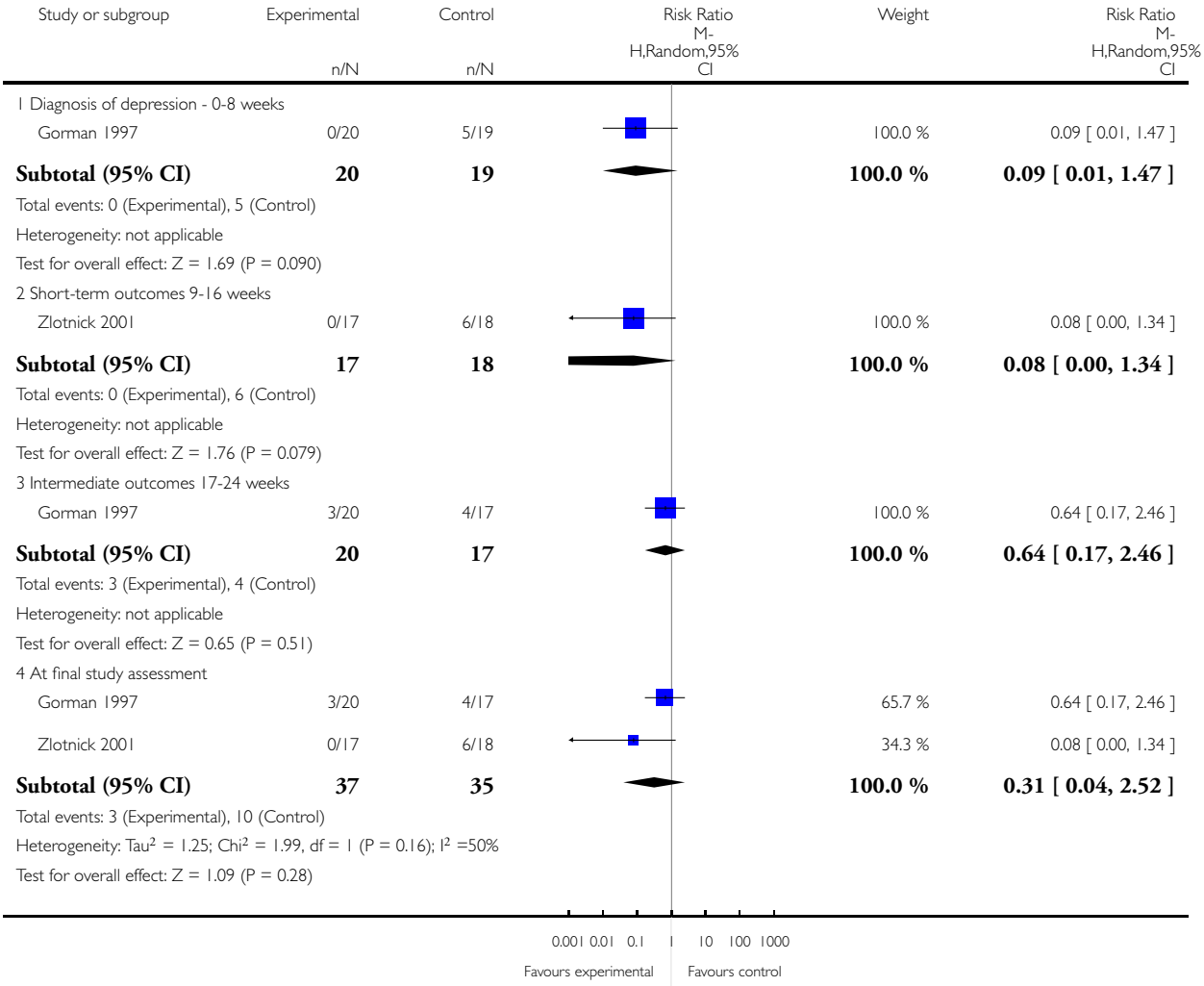


Analysis 3.3. Comparison 3 All psychological interventions versus usual care - variations in intervention type, Outcome 3 All psychological interventions - diagnosis of depression.

Review: Psychosocial and psychological interventions for preventing postpartum depression

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

Outcome: 3 All psychological interventions - diagnosis of depression



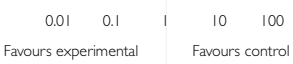
Analysis 4.1. Comparison 4 Subgroup analysis: variations in psychosocial interventions, Outcome 1 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 4 Subgroup analysis: variations in psychosocial interventions

Outcome: 1 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology at final study assessment

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
1 Antenatal and postnatal classes					
Brugha 2000	15/94	18/96		5.5 %	0.85 [0.46, 1.59]
Reid 2002	49/339	46/370		10.0 %	1.16 [0.80, 1.69]
Stamp 1995	9/60	6/61		2.8 %	1.53 [0.58, 4.02]
Tripathy 2010	20/243	25/225		6.4 %	0.74 [0.42, 1.30]
Subtotal (95% CI)	**736**	**752**		**24.7 %**	**1.01 [0.77, 1.32]**
Total events: 93 (Experimental), 95 (Control)					
Heterogeneity: $Tau^2 = 0.0$; $Chi^2 = 2.71$, df = 3 (P = 0.44); $I^2 = 0.0\%$					
Test for overall effect: Z = 0.08 (P = 0.94)					
2 Postpartum professional-based home visits					
Armstrong 1999	4/65	9/66		2.1 %	0.45 [0.15, 1.39]
MacArthur 2002	72/584	118/547		12.9 %	0.57 [0.44, 0.75]
Subtotal (95% CI)	**649**	**613**		**15.0 %**	**0.56 [0.43, 0.73]**
Total events: 76 (Experimental), 127 (Control)					
Heterogeneity: $Tau^2 = 0.0$; $Chi^2 = 0.16$, df = 1 (P = 0.69); $I^2 = 0.0\%$					
Test for overall effect: Z = 4.29 (P = 0.000018)					
3 Postpartum lay-based home visits					
Morrell 2000	49/260	50/233		10.6 %	0.88 [0.62, 1.25]
Subtotal (95% CI)	**260**	**233**		**10.6 %**	**0.88 [0.62, 1.25]**
Total events: 49 (Experimental), 50 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 0.72 (P = 0.47)					
4 Postpartum lay-based telephone support					
Dennis 2009	40/297	78/315		10.7 %	0.54 [0.38, 0.77]
Subtotal (95% CI)	**297**	**315**		**10.7 %**	**0.54 [0.38, 0.77]**
Total events: 40 (Experimental), 78 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 3.44 (P = 0.00057)					
5 Early postpartum follow-up					
Gunn 1998	25/218	29/228		7.3 %	0.90 [0.55, 1.49]



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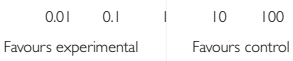
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Subtotal (95% CI)	**218**	**228**		**7.3 %**	**0.90 [0.55, 1.49]**
Total events: 25 (Experimental), 29 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 0.40 (P = 0.69)					
6 Continuity model of care					
Lumley 2006	540/3437	514/2777		17.4 %	0.85 [0.76, 0.95]
Sen 2006	11/63	12/60		4.3 %	0.87 [0.42, 1.83]
Waldenstrom 2000	58/361	39/323		10.0 %	1.33 [0.91, 1.94]
Subtotal (95% CI)	**3861**	**3160**		**31.6 %**	**0.99 [0.71, 1.36]**
Total events: 609 (Experimental), 565 (Control)					
Heterogeneity: Tau^2 = 0.05; Chi^2 = 5.03, df = 2 (P = 0.08); I^2 =60%					
Test for overall effect: Z = 0.09 (P = 0.93)					
Total (95% CI)	**6021**	**5301**		**100.0 %**	**0.83 [0.70, 0.99]**
Total events: 892 (Experimental), 944 (Control)					
Heterogeneity: Tau^2 = 0.04; Chi^2 = 25.42, df = 11 (P = 0.01); I^2 =57%					
Test for overall effect: Z = 2.06 (P = 0.040)					
Test for subgroup differences: Chi^2 = 16.37, df = 5 (P = 0.01), I^2 =69%					



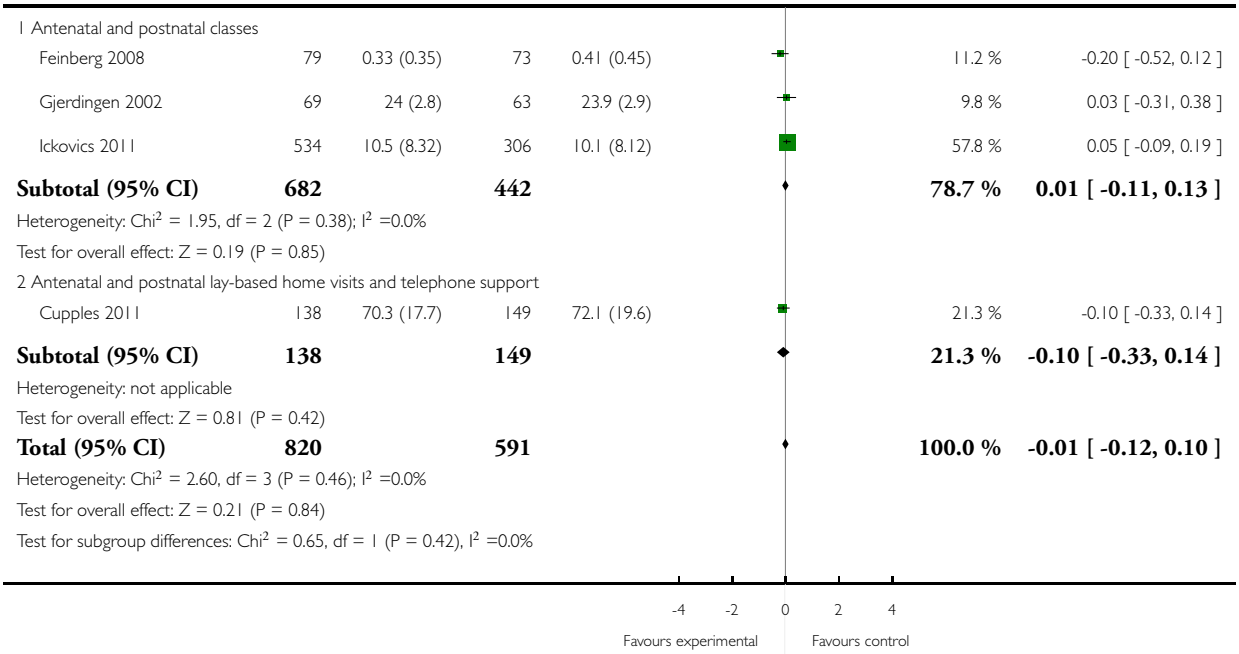
Analysis 4.2. Comparison 4 Subgroup analysis: variations in psychosocial interventions, Outcome 2 TEST FOR SUBGROUP DIFFERENCES: mean depression score at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 4 Subgroup analysis: variations in psychosocial interventions

Outcome: 2 TEST FOR SUBGROUP DIFFERENCES: mean depression score at final study assessment

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Fixed,95% CI	Weight	Std. Mean Difference IV,Fixed,95% CI
1 Antenatal and postnatal classes							
Feinberg 2008	79	0.33 (0.35)	73	0.41 (0.45)		11.2 %	-0.20 [-0.52, 0.12]
Gjerdingen 2002	69	24 (2.8)	63	23.9 (2.9)		9.8 %	0.03 [-0.31, 0.38]
Ickovics 2011	534	10.5 (8.32)	306	10.1 (8.12)		57.8 %	0.05 [-0.09, 0.19]
Subtotal (95% CI)	**682**		**442**			**78.7 %**	**0.01 [-0.11, 0.13]**
Heterogeneity: Chi^2 = 1.95, df = 2 (P = 0.38); I^2 =0.0%							
Test for overall effect: Z = 0.19 (P = 0.85)							
2 Antenatal and postnatal lay-based home visits and telephone support							
Cupples 2011	138	70.3 (17.7)	149	72.1 (19.6)		21.3 %	-0.10 [-0.33, 0.14]
Subtotal (95% CI)	**138**		**149**			**21.3 %**	**-0.10 [-0.33, 0.14]**
Heterogeneity: not applicable							
Test for overall effect: Z = 0.81 (P = 0.42)							
Total (95% CI)	**820**		**591**			**100.0 %**	**-0.01 [-0.12, 0.10]**
Heterogeneity: Chi^2 = 2.60, df = 3 (P = 0.46); I^2 =0.0%							
Test for overall effect: Z = 0.21 (P = 0.84)							
Test for subgroup differences: Chi^2 = 0.65, df = 1 (P = 0.42), I^2 =0.0%							



Analysis 5.1. Comparison 5 Subgroup analysis: variations in psychological interventions, Outcome 1 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 5 Subgroup analysis: variations in psychological interventions

Outcome: 1 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology at final study assessment

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
1 Psychological debriefing					
Gamble 2005	4/50	17/53		12.4 %	0.25 [0.09, 0.69]
Lavender 1998	5/58	31/56		14.1 %	0.16 [0.07, 0.37]
Priest 2003	37/696	42/705		19.8 %	0.89 [0.58, 1.37]
Small 2000	81/467	65/449		21.2 %	1.20 [0.89, 1.62]
Tam 2003	26/261	35/255		19.2 %	0.73 [0.45, 1.17]
Subtotal (95% CI)	**1532**	**1518**		**86.7 %**	**0.57 [0.31, 1.03]**
Total events: 153 (Experimental), 190 (Control)					
Heterogeneity: $Tau^2 = 0.37$; $Chi^2 = 26.14$, df = 4 (P = 0.00003); $I^2 = 85\%$					
Test for overall effect: Z = 1.85 (P = 0.064)					
2 Cognitive behavioural therapy					
Le 2011	7/77	9/73		13.3 %	0.74 [0.29, 1.88]
Subtotal (95% CI)	**77**	**73**		**13.3 %**	**0.74 [0.29, 1.88]**
Total events: 7 (Experimental), 9 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 0.64 (P = 0.52)					
Total (95% CI)	**1609**	**1591**		**100.0 %**	**0.59 [0.35, 1.01]**
Total events: 160 (Experimental), 199 (Control)					
Heterogeneity: $Tau^2 = 0.32$; $Chi^2 = 26.20$, df = 5 (P = 0.00008); $I^2 = 81\%$					
Test for overall effect: Z = 1.92 (P = 0.054)					
Test for subgroup differences: $Chi^2 = 0.21$, df = 1 (P = 0.64), $I^2 = 0.0\%$					

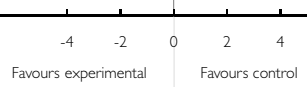
Analysis 5.2. Comparison 5 Subgroup analysis: variations in psychological interventions, Outcome 2 TEST FOR SUBGROUP DIFFERENCES: mean depression score at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 5 Subgroup analysis: variations in psychological interventions

Outcome: 2 TEST FOR SUBGROUP DIFFERENCES: mean depression score at final study assessment

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 Interpersonal psychotherapy							
Gao 2010	87	6.57 (4.07)	85	8.85 (4.5)		24.2 %	-0.53 [-0.83, -0.23]
Gorman 1997	13	7.9 (5.2)	17	8 (5.6)		9.9 %	-0.02 [-0.74, 0.70]
Weidner 2010	20	5.48 (4.64)	23	5.22 (3.93)		12.8 %	0.06 [-0.54, 0.66]
Zlotnick 2001	17	8.4 (7.8)	18	11.3 (4.8)		11.0 %	-0.44 [-1.11, 0.23]
Zlotnick 2006	46	9.39 (7.42)	40	10.1 (9.41)		18.7 %	-0.08 [-0.51, 0.34]
Subtotal (95% CI)	**183**		**183**			**76.6 %**	**-0.27 [-0.52, -0.01]**
Heterogeneity: $Tau^2 = 0.02$; $Chi^2 = 5.32$, df = 4 (P = 0.26); $I^2 = 25\%$							
Test for overall effect: Z = 2.04 (P = 0.041)							
2 Cognitive behavioural therapy							
Le 2011	77	7.68 (6.13)	73	6.92 (5.92)		23.4 %	0.13 [-0.20, 0.45]
Subtotal (95% CI)	**77**		**73**			**23.4 %**	**0.13 [-0.20, 0.45]**
Heterogeneity: not applicable							
Test for overall effect: Z = 0.77 (P = 0.44)							
Total (95% CI)	**260**		**256**			**100.0 %**	**-0.16 [-0.43, 0.11]**
Heterogeneity: $Tau^2 = 0.05$; $Chi^2 = 10.14$, df = 5 (P = 0.07); $I^2 = 51\%$							
Test for overall effect: Z = 1.15 (P = 0.25)							
Test for subgroup differences: $Chi^2 = 3.50$, df = 1 (P = 0.06), $I^2 = 71\%$							

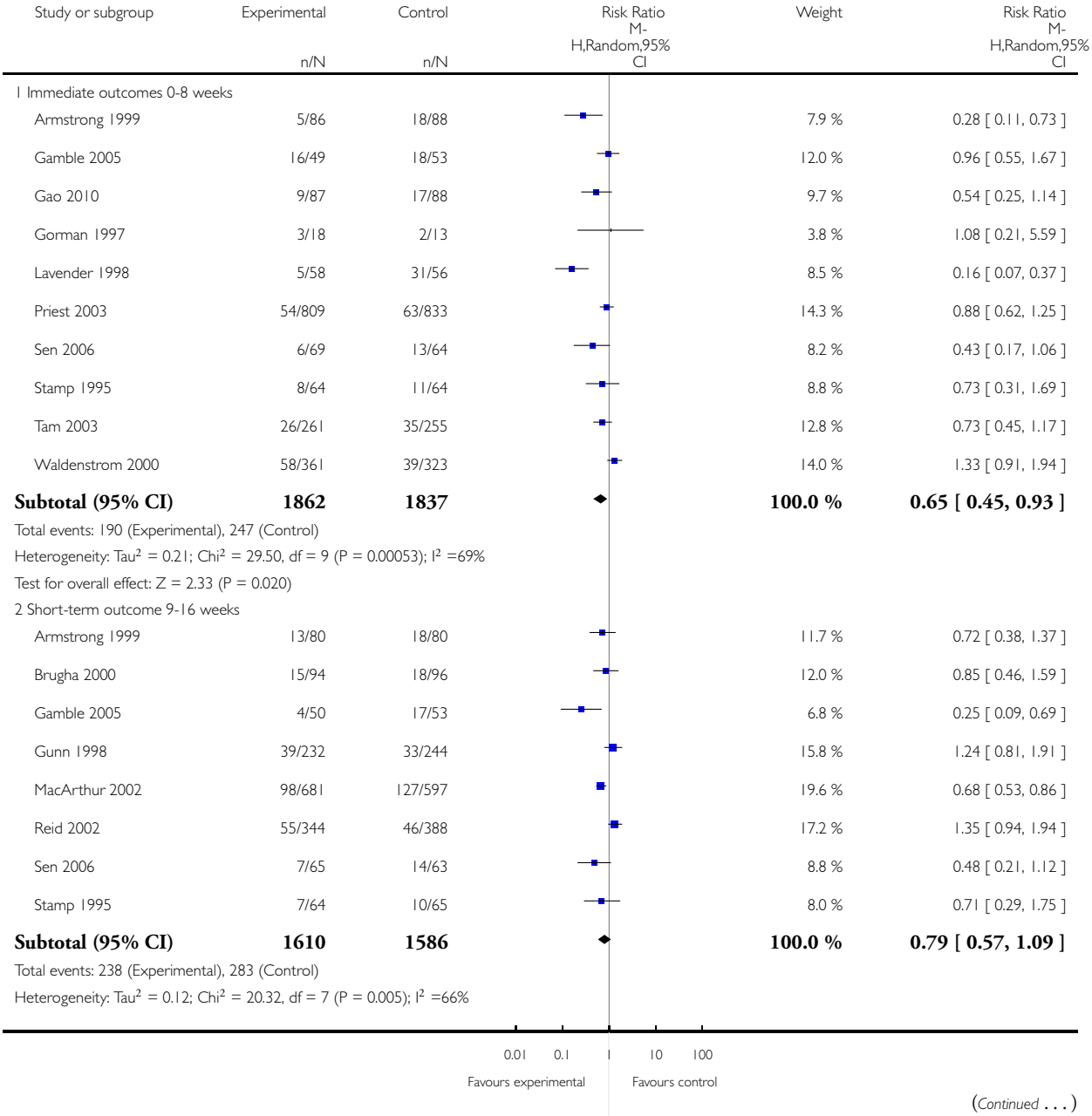


Analysis 6.1. Comparison 6 Subgroup analysis: variations in intervention provider, Outcome 1 Professionally-based interventions - depressive symptomatology.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 6 Subgroup analysis: variations in intervention provider

Outcome: 1 Professionally-based interventions - depressive symptomatology



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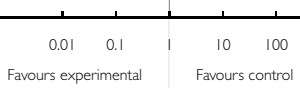
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Test for overall effect: Z = 1.43 (P = 0.15)					
3 Intermediate outcome 17-24 weeks					
Gorman 1997	3/15	3/15		1.5 %	1.00 [0.24, 4.18]
Gunn 1998	25/218	29/228		11.9 %	0.90 [0.55, 1.49]
Priest 2003	55/777	65/797		25.1 %	0.87 [0.61, 1.23]
Reid 2002	49/339	46/370		21.4 %	1.16 [0.80, 1.69]
Sen 2006	6/68	12/65		3.5 %	0.48 [0.19, 1.20]
Small 2000	81/467	65/449		33.4 %	1.20 [0.89, 1.62]
Stamp 1995	9/60	6/61		3.2 %	1.53 [0.58, 4.02]
Subtotal (95% CI)	**1944**	**1985**		**100.0 %**	**1.03 [0.87, 1.23]**
Total events: 228 (Experimental), 226 (Control)					
Heterogeneity: Tau^2 = 0.0; Chi^2 = 5.91, df = 6 (P = 0.43); I^2 =0.0%					
Test for overall effect: Z = 0.36 (P = 0.72)					
4 Long-term outcome > 24 weeks					
Armstrong 1999	4/65	9/66		5.9 %	0.45 [0.15, 1.39]
MacArthur 2002	72/584	118/547		51.3 %	0.57 [0.44, 0.75]
Priest 2003	37/696	42/705		29.9 %	0.89 [0.58, 1.37]
Sen 2006	11/63	12/60		12.8 %	0.87 [0.42, 1.83]
Subtotal (95% CI)	**1408**	**1378**		**100.0 %**	**0.68 [0.51, 0.90]**
Total events: 124 (Experimental), 181 (Control)					
Heterogeneity: Tau^2 = 0.02; Chi^2 = 3.98, df = 3 (P = 0.26); I^2 =25%					
Test for overall effect: Z = 2.66 (P = 0.0077)					



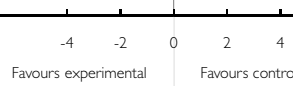
Analysis 6.2. Comparison 6 Subgroup analysis: variations in intervention provider, Outcome 2 Professionally-based interventions - mean depression scores.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 6 Subgroup analysis: variations in intervention provider

Outcome: 2 Professionally-based interventions - mean depression scores

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 Immediate outcomes: 0-8 weeks							
Armstrong 1999	86	5.67 (4.14)	88	7.9 (5.89)		32.0 %	-0.44 [-0.74, -0.13]
Gao 2010	87	6.57 (4.07)	85	8.85 (4.5)		31.6 %	-0.53 [-0.83, -0.23]
Gorman 1997	18	7.2 (5.3)	15	7.5 (4.2)		9.1 %	-0.06 [-0.75, 0.62]
Sen 2006	69	7 (4.3)	64	7.5 (5.4)		27.4 %	-0.10 [-0.44, 0.24]
Subtotal (95% CI)	**260**		**252**			**100.0 %**	**-0.34 [-0.56, -0.12]**
Heterogeneity: Tau^2 = 0.02; Chi^2 = 4.36, df = 3 (P = 0.22); I^2 =31%							
Test for overall effect: Z = 3.04 (P = 0.0024)							
2 Short-term outcome 9-16 weeks							
Armstrong 1999	80	5.75 (5.51)	80	6.64 (5.58)		16.5 %	-0.16 [-0.47, 0.15]
Gunn 1998	232	7.38 (5.31)	244	7.48 (5.35)		17.0 %	-0.02 [-0.20, 0.16]
MacArthur 2002 (1)	653	6.4 (1)	572	8.1 (1.4)		17.1 %	-1.41 [-1.54, -1.29]
Reid 2002	344	6.1 (5.17)	388	5.8 (4.49)		17.0 %	0.06 [-0.08, 0.21]
Sen 2006	65	6.1 (4.4)	63	7.2 (5.8)		16.4 %	-0.21 [-0.56, 0.13]
Zlotnick 2006	46	9.39 (7.42)	40	10.1 (9.41)		16.0 %	-0.08 [-0.51, 0.34]
Subtotal (95% CI)	**1420**		**1387**			**100.0 %**	**-0.31 [-0.95, 0.34]**
Heterogeneity: Tau^2 = 0.63; Chi^2 = 297.52, df = 5 (P<0.00001); I^2 =98%							
Test for overall effect: Z = 0.94 (P = 0.35)							
3 Intermediate outcome 17-24 weeks							
Gjerdingen 2002	69	24 (2.8)	63	23.9 (2.9)		4.2 %	0.03 [-0.31, 0.38]
Gorman 1997	13	7.9 (5.2)	17	8 (5.6)		0.9 %	-0.02 [-0.74, 0.70]
Gunn 1998	218	5.87 (5.37)	228	6.08 (5.14)		14.3 %	-0.04 [-0.23, 0.15]
Ickovics 2011	491	10.2 (8.07)	296	9.7 (7.86)		23.8 %	0.06 [-0.08, 0.21]
Reid 2002	346	5.3 (5.4)	371	5.3 (4.84)		23.0 %	0.0 [-0.15, 0.15]
Sen 2006	68	5.4 (4.5)	65	6.9 (5.5)		4.2 %	-0.30 [-0.64, 0.04]
Small 2000	467	7.16 (5.68)	449	6.72 (5.5)		29.4 %	0.08 [-0.05, 0.21]
Subtotal (95% CI)	**1672**		**1489**			**100.0 %**	**0.02 [-0.05, 0.09]**



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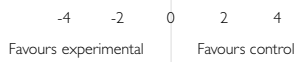
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Heterogeneity: Tau^2 = 0.0; Chi^2 = 4.92, df = 6 (P = 0.55); I^2 =0.0%							
Test for overall effect: Z = 0.59 (P = 0.56)							
4 Long-term outcome >24 weeks							
Armstrong 1999	65	5.25 (4.44)	66	6.02 (4.77)		20.0 %	-0.17 [-0.51, 0.18]
Ickovics 2011	534	10.5 (8.32)	306	10.1 (8.12)		21.4 %	0.05 [-0.09, 0.19]
MacArthur 2002 (2)	451	6.2 (1.6)	422	7.6 (1.2)		21.4 %	-0.98 [-1.13, -0.84]
Sen 2006	63	7.2 (5)	60	7.6 (4.4)		19.9 %	-0.08 [-0.44, 0.27]
Weidner 2010	20	5.48 (4.64)	23	5.22 (3.93)		17.3 %	0.06 [-0.54, 0.66]
Subtotal (95% CI)	**1133**		**877**			**100.0 %**	**-0.24 [-0.79, 0.31]**
Heterogeneity: Tau^2 = 0.37; Chi^2 = 112.59, df = 4 (P<0.00001); I^2 =96%							
Test for overall effect: Z = 0.85 (P = 0.40)							



(1) SDs provided by trial author

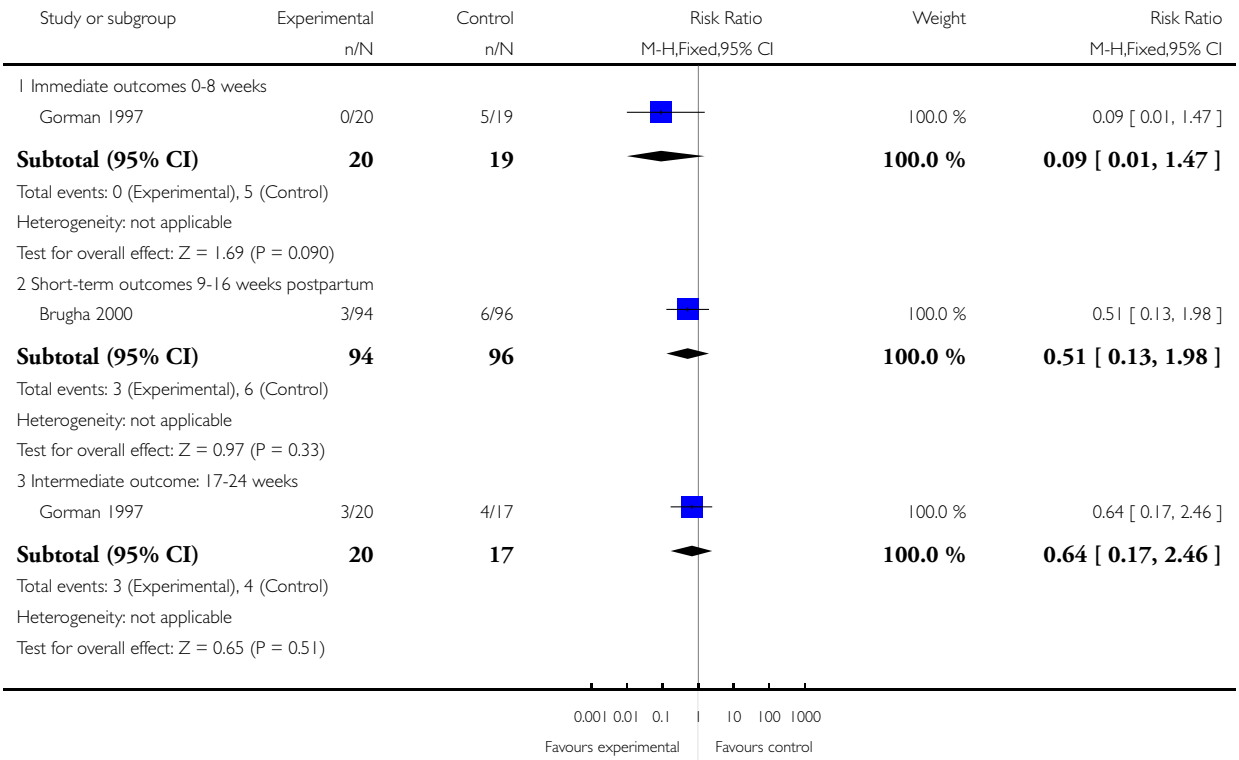
(2) SDs provided by trial author

Analysis 6.3. Comparison 6 Subgroup analysis: variations in intervention provider, Outcome 3 Professionally-based interventions - diagnosis of depression.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 6 Subgroup analysis: variations in intervention provider

Outcome: 3 Professionally-based interventions - diagnosis of depression



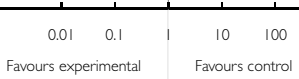
Analysis 6.4. Comparison 6 Subgroup analysis: variations in intervention provider, Outcome 4 Lay-based interventions - depressive symptomatology.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 6 Subgroup analysis: variations in intervention provider

Outcome: 4 Lay-based interventions - depressive symptomatology

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Fixed,95% CI	Weight	Risk Ratio M-H,Fixed,95% CI
1 Immediate outcomes 0-8 weeks					
Le 2011	22/98	22/91		23.3 %	0.93 [0.55, 1.56]
Morrell 2000	50/282	48/269		50.2 %	0.99 [0.69, 1.42]
Tripathy 2010	20/243	25/225		26.5 %	0.74 [0.42, 1.30]
Subtotal (95% CI)	**623**	**585**		**100.0 %**	**0.91 [0.70, 1.18]**
Total events: 92 (Experimental), 95 (Control)					
Heterogeneity: Chi^2 = 0.76, df = 2 (P = 0.69); I^2 =0.0%					
Test for overall effect: Z = 0.70 (P = 0.49)					
2 Short-term outcome 9-16 weeks					
Dennis 2009	40/297	78/315		82.6 %	0.54 [0.38, 0.77]
Le 2011	9/87	16/87		17.4 %	0.56 [0.26, 1.20]
Subtotal (95% CI)	**384**	**402**		**100.0 %**	**0.55 [0.40, 0.75]**
Total events: 49 (Experimental), 94 (Control)					
Heterogeneity: Chi^2 = 0.01, df = 1 (P = 0.94); I^2 =0.0%					
Test for overall effect: Z = 3.75 (P = 0.00018)					
3 Intermediate outcome 17-24 weeks					
Morrell 2000	49/260	50/233		100.0 %	0.88 [0.62, 1.25]
Subtotal (95% CI)	**260**	**233**		**100.0 %**	**0.88 [0.62, 1.25]**
Total events: 49 (Experimental), 50 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 0.72 (P = 0.47)					
4 Long-term outcome > 24 weeks					
Le 2011	7/77	9/73		100.0 %	0.74 [0.29, 1.88]
Subtotal (95% CI)	**77**	**73**		**100.0 %**	**0.74 [0.29, 1.88]**
Total events: 7 (Experimental), 9 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 0.64 (P = 0.52)					



Analysis 6.5. Comparison 6 Subgroup analysis: variations in intervention provider, Outcome 5 Lay-based interventions - mean depression scores.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 6 Subgroup analysis: variations in intervention provider

Outcome: 5 Lay-based interventions - mean depression scores

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 Immediate outcomes: 0-8 weeks							
Le 2011	89	9.92 (7.96)	91	9.61 (8.55)		25.0 %	0.04 [-0.25, 0.33]
Morrell 2000	276	7.4 (5.2)	266	6.7 (5.5)		75.0 %	0.13 [-0.04, 0.30]
Subtotal (95% CI)	**365**		**357**			**100.0 %**	**0.11 [-0.04, 0.25]**
Heterogeneity: $Tau^2 = 0.0$; $Chi^2 = 0.29$, df = 1 (P = 0.59); $I^2 = 0.0\%$							
Test for overall effect: Z = 1.44 (P = 0.15)							
2 Short-term outcome 9-16 weeks							
Dennis 2009	297	7.93 (4.68)	315	8.89 (5.24)		60.5 %	-0.19 [-0.35, -0.03]
Le 2011	87	9.21 (8.13)	87	8.51 (7.8)		39.5 %	0.09 [-0.21, 0.38]
Subtotal (95% CI)	**384**		**402**			**100.0 %**	**-0.08 [-0.35, 0.19]**
Heterogeneity: $Tau^2 = 0.02$; $Chi^2 = 2.65$, df = 1 (P = 0.10); $I^2 = 62\%$							
Test for overall effect: Z = 0.60 (P = 0.55)							
3 Intermediate outcome 17-24 weeks							
Feinberg 2008	79	0.33 (0.35)	73	0.41 (0.45)		23.9 %	-0.20 [-0.52, 0.12]
Morrell 2000	252	6.6 (5.1)	229	6.7 (5.6)		76.1 %	-0.02 [-0.20, 0.16]
Subtotal (95% CI)	**331**		**302**			**100.0 %**	**-0.06 [-0.22, 0.09]**
Heterogeneity: $Tau^2 = 0.0$; $Chi^2 = 0.93$, df = 1 (P = 0.34); $I^2 = 0.0\%$							
Test for overall effect: Z = 0.77 (P = 0.44)							
4 Long-term outcome > 24 weeks							
Cupples 2011	138	70.3 (17.7)	149	72.1 (19.6)		63.0 %	-0.10 [-0.33, 0.14]
Le 2011	77	7.68 (6.13)	73	6.92 (5.92)		37.0 %	0.13 [-0.20, 0.45]
Subtotal (95% CI)	**215**		**222**			**100.0 %**	**-0.01 [-0.22, 0.20]**
Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 1.20$, df = 1 (P = 0.27); $I^2 = 17\%$							
Test for overall effect: Z = 0.13 (P = 0.90)							

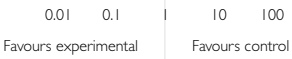
Analysis 6.6. Comparison 6 Subgroup analysis: variations in intervention provider, Outcome 6 Lay-based interventions - diagnosis of depression.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 6 Subgroup analysis: variations in intervention provider

Outcome: 6 Lay-based interventions - diagnosis of depression

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Fixed,95% CI	Weight	Risk Ratio M-H,Fixed,95% CI
1 Short-term outcomes 9-16 weeks postpartum					
Dennis 2009	14/297	23/315		56.0 %	0.65 [0.34, 1.23]
Harris 2006	6/30	19/35		44.0 %	0.37 [0.17, 0.80]
Subtotal (95% CI)	**327**	**350**		**100.0 %**	**0.52 [0.32, 0.86]**
Total events: 20 (Experimental), 42 (Control)					
Heterogeneity: Chi^2 = 1.19, df = 1 (P = 0.28); I^2 =16%					
Test for overall effect: Z = 2.57 (P = 0.010)					



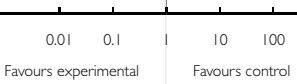
Analysis 6.7. Comparison 6 Subgroup analysis: variations in intervention provider, Outcome 7 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology: at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 6 Subgroup analysis: variations in intervention provider

Outcome: 7 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology: at final study assessment

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
1 Professionally-based interventions					
Armstrong 1999	4/65	9/66		3.5 %	0.45 [0.15, 1.39]
Brugha 2000	15/94	18/96		6.8 %	0.85 [0.46, 1.59]
Gamble 2005	4/50	17/53		4.0 %	0.25 [0.09, 0.69]
Gao 2010	9/87	17/88		5.7 %	0.54 [0.25, 1.14]
Gorman 1997	3/15	3/15		2.5 %	1.00 [0.24, 4.18]
Gunn 1998	25/218	29/228		7.9 %	0.90 [0.55, 1.49]
Lavender 1998	5/58	31/56		4.9 %	0.16 [0.07, 0.37]
MacArthur 2002	72/584	118/547		10.0 %	0.57 [0.44, 0.75]
Priest 2003	37/696	42/705		8.6 %	0.89 [0.58, 1.37]
Reid 2002	49/339	46/370		9.1 %	1.16 [0.80, 1.69]
Sen 2006	11/63	12/60		5.8 %	0.87 [0.42, 1.83]
Small 2000	81/467	65/449		9.8 %	1.20 [0.89, 1.62]
Stamp 1995	9/60	6/61		4.3 %	1.53 [0.58, 4.02]
Tam 2003	26/261	35/255		8.1 %	0.73 [0.45, 1.17]
Waldenstrom 2000	58/361	39/323		9.1 %	1.33 [0.91, 1.94]
Subtotal (95% CI)	**3418**	**3372**		**100.0 %**	**0.78 [0.60, 1.00]**
Total events: 408 (Experimental), 487 (Control)					
Heterogeneity: $Tau^2 = 0.15$; $Chi^2 = 46.52$, df = 14 (P = 0.00002); $I^2 = 70\%$					
Test for overall effect: Z = 1.95 (P = 0.051)					
2 Lay-based interventions					
Dennis 2009	40/297	78/315		38.0 %	0.54 [0.38, 0.77]
Le 2011	7/77	9/73		7.0 %	0.74 [0.29, 1.88]
Morrell 2000	49/260	50/233		37.2 %	0.88 [0.62, 1.25]
Tripathy 2010	20/243	25/225		17.8 %	0.74 [0.42, 1.30]
Subtotal (95% CI)	**877**	**846**		**100.0 %**	**0.70 [0.54, 0.90]**



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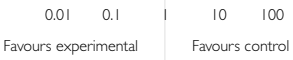
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Total events: 116 (Experimental), 162 (Control)					
Heterogeneity: Tau² = 0.01; Chi² = 3.69, df = 3 (P = 0.30); I² =19%					
Test for overall effect: Z = 2.73 (P = 0.0063)					
Test for subgroup differences: Chi² = 0.30, df = 1 (P = 0.59), I² =0.0%					



Analysis 6.8. Comparison 6 Subgroup analysis: variations in intervention provider, Outcome 8 TEST FOR SUBGROUP DIFFERENCES: mean depression scores: at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 6 Subgroup analysis: variations in intervention provider

Outcome: 8 TEST FOR SUBGROUP DIFFERENCES: mean depression scores: at final study assessment

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 Professionally-based interventions							
Armstrong 1999	65	5.25 (4.44)	66	6.02 (4.77)		8.3 %	-0.17 [-0.51, 0.18]
Gao 2010	87	6.57 (4.07)	85	8.85 (4.5)		8.6 %	-0.53 [-0.83, -0.23]
Gjerdingen 2002	69	24 (2.8)	63	23.9 (2.9)		8.3 %	0.03 [-0.31, 0.38]
Gorman 1997	13	7.9 (5.2)	17	8 (5.6)		5.4 %	-0.02 [-0.74, 0.70]
Gunn 1998	218	5.87 (5.37)	228	6.08 (5.14)		9.3 %	-0.04 [-0.23, 0.15]
Ickovics 2011	534	10.5 (8.32)	306	10.1 (8.12)		9.5 %	0.05 [-0.09, 0.19]
MacArthur 2002 (1)	451	6.2 (1.6)	422	7.6 (1.2)		9.5 %	-0.98 [-1.13, -0.84]
Reid 2002	346	5.3 (5.4)	371	5.3 (4.84)		9.5 %	0.0 [-0.15, 0.15]
Sen 2006	63	7.2 (5)	60	7.6 (4.4)		8.2 %	-0.08 [-0.44, 0.27]
Small 2000	467	7.16 (5.68)	449	6.72 (5.5)		9.5 %	0.08 [-0.05, 0.21]

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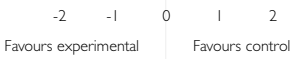
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Weidner 2010	20	5.48 (4.64)	23	5.22 (3.93)		6.3 %	0.06 [-0.54, 0.66]
Zlotnick 2006	46	9.39 (7.42)	40	10.1 (9.41)		7.7 %	-0.08 [-0.51, 0.34]
Subtotal (95% CI)	**2379**		**2130**			**100.0 %**	**-0.15 [-0.40, 0.10]**
Heterogeneity: $Tau^2 = 0.17$; $Chi^2 = 167.12$, df = 11 (P<0.00001); I^2 =93%							
Test for overall effect: Z = 1.18 (P = 0.24)							
2 Lay-based interventions							
Cupples 2011	138	70.3 (17.7)	149	72.1 (19.6)		17.7 %	-0.10 [-0.33, 0.14]
Dennis 2009	297	7.93 (4.68)	315	8.89 (5.24)		34.7 %	-0.19 [-0.35, -0.03]
Feinberg 2008	79	0.33 (0.35)	73	0.41 (0.45)		9.7 %	-0.20 [-0.52, 0.12]
Le 2011	77	7.68 (6.13)	73	6.92 (5.92)		9.6 %	0.13 [-0.20, 0.45]
Morrell 2000	252	6.6 (5.1)	229	6.7 (5.6)		28.2 %	-0.02 [-0.20, 0.16]
Subtotal (95% CI)	**843**		**839**			**100.0 %**	**-0.10 [-0.20, 0.01]**
Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 4.37$, df = 4 (P = 0.36); I^2 =8%							
Test for overall effect: Z = 1.86 (P = 0.063)							
Test for subgroup differences: $Chi^2 = 0.16$, df = 1 (P = 0.69), I^2 =0.0%							



(1) SDs provided by author

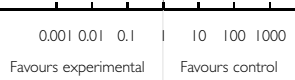
Analysis 6.9. Comparison 6 Subgroup analysis: variations in intervention provider, Outcome 9 TEST FOR SUBGROUP DIFFERENCES: diagnosis of depression: at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 6 Subgroup analysis: variations in intervention provider

Outcome: 9 TEST FOR SUBGROUP DIFFERENCES: diagnosis of depression: at final study assessment

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Fixed,95% CI	Weight	Risk Ratio M-H,Fixed,95% CI
1 Professionally-based interventions					
Brugha 2000	3/94	6/96		57.9 %	0.51 [0.13, 1.98]
Gorman 1997	3/20	4/17		42.1 %	0.64 [0.17, 2.46]
Subtotal (95% CI)	**114**	**113**		**100.0 %**	**0.56 [0.22, 1.47]**
Total events: 6 (Experimental), 10 (Control)					
Heterogeneity: Chi^2 = 0.05, df = 1 (P = 0.82); I^2 =0.0%					
Test for overall effect: Z = 1.17 (P = 0.24)					
2 Lay-based interventions					
Dennis 2009	14/297	23/315		56.0 %	0.65 [0.34, 1.23]
Harris 2006	6/30	19/35		44.0 %	0.37 [0.17, 0.80]
Subtotal (95% CI)	**327**	**350**		**100.0 %**	**0.52 [0.32, 0.86]**
Total events: 20 (Experimental), 42 (Control)					
Heterogeneity: Chi^2 = 1.19, df = 1 (P = 0.28); I^2 =16%					
Test for overall effect: Z = 2.57 (P = 0.010)					
Test for subgroup differences: Chi^2 = 0.02, df = 1 (P = 0.89), I^2 =0.0%					



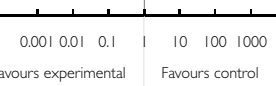
Analysis 7.1. Comparison 7 Subgroup analysis: variations in professionally-based intervention provider, Outcome 1 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 7 Subgroup analysis: variations in professionally-based intervention provider

Outcome: 1 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology at final study assessment

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
1 Intervention provided by nurses					
Armstrong 1999	4/65	9/66		10.2 %	0.45 [0.15, 1.39]
Brugha 2000	15/94	18/96		33.2 %	0.85 [0.46, 1.59]
Tam 2003	26/261	35/255		56.6 %	0.73 [0.45, 1.17]
Subtotal (95% CI)	**420**	**417**		**100.0 %**	**0.73 [0.51, 1.04]**
Total events: 45 (Experimental), 62 (Control)					
Heterogeneity: $Tau^2 = 0.0$; $Chi^2 = 0.94$, df = 2 (P = 0.63); $I^2 = 0.0\%$					
Test for overall effect: Z = 1.72 (P = 0.085)					
2 Intervention provided by physicians					
Gunn 1998	25/218	29/228		100.0 %	0.90 [0.55, 1.49]
Subtotal (95% CI)	**218**	**228**		**100.0 %**	**0.90 [0.55, 1.49]**
Total events: 25 (Experimental), 29 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 0.40 (P = 0.69)					
3 Intervention provided by midwives					
Gamble 2005	4/50	17/53		6.4 %	0.25 [0.09, 0.69]
Gao 2010	9/87	17/88		8.5 %	0.54 [0.25, 1.14]
Lavender 1998	5/58	31/56		7.5 %	0.16 [0.07, 0.37]
MacArthur 2002	72/584	118/547		13.1 %	0.57 [0.44, 0.75]
Priest 2003	37/696	42/705		11.7 %	0.89 [0.58, 1.37]
Reid 2002	49/339	46/370		12.2 %	1.16 [0.80, 1.69]
Sen 2006	11/63	12/60		8.7 %	0.87 [0.42, 1.83]
Small 2000	81/467	65/449		12.9 %	1.20 [0.89, 1.62]
Stamp 1995	9/60	6/61		6.7 %	1.53 [0.58, 4.02]
Waldenstrom 2000	58/361	39/323		12.2 %	1.33 [0.91, 1.94]
Subtotal (95% CI)	**2765**	**2712**		**100.0 %**	**0.76 [0.54, 1.07]**
Total events: 335 (Experimental), 393 (Control)					
Heterogeneity: $Tau^2 = 0.22$; $Chi^2 = 44.81$, df = 9 (P<0.00001); $I^2 = 80\%$					



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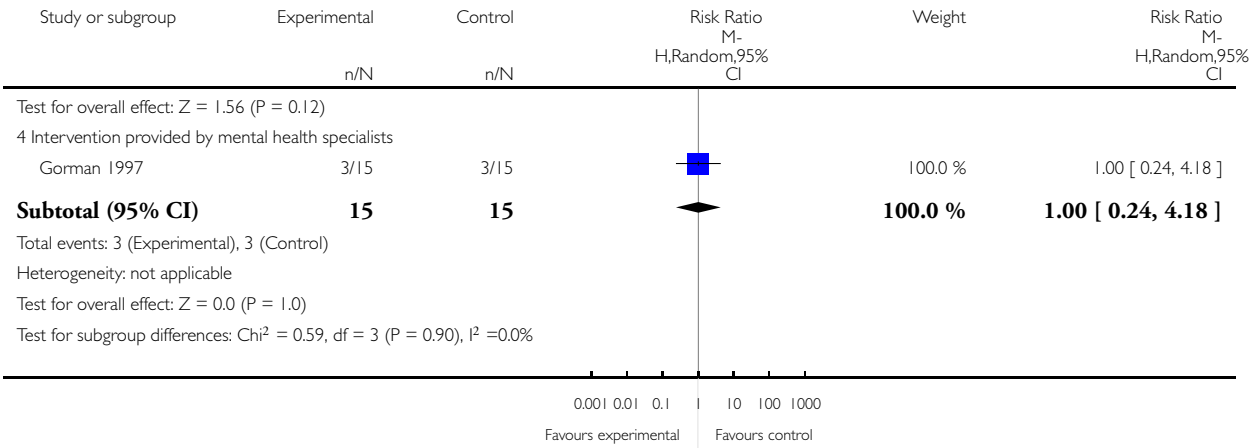
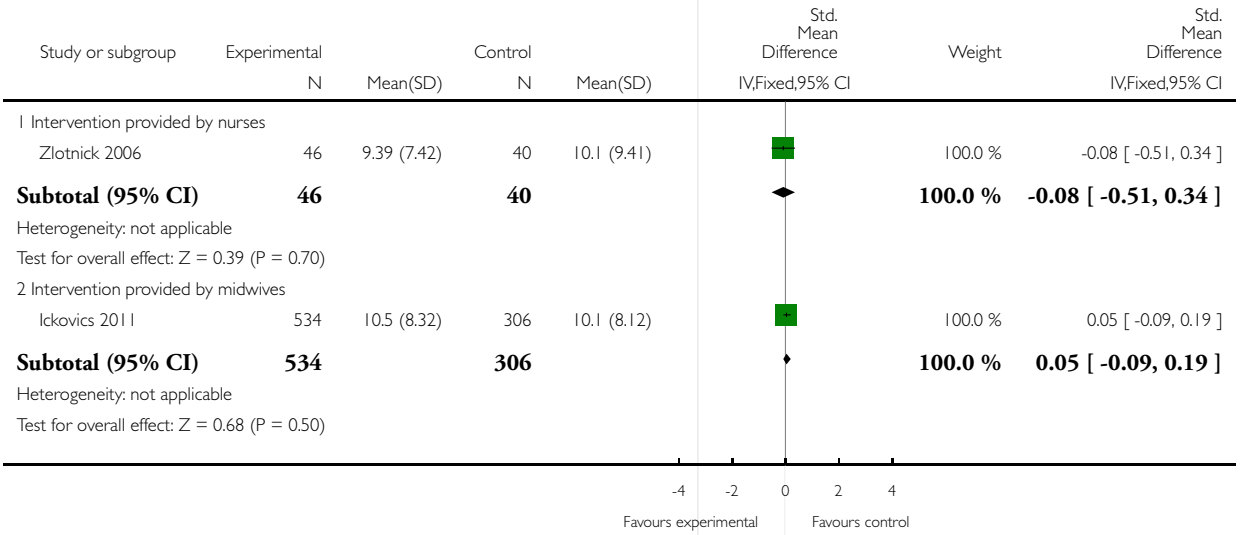


Analysis 7.2. Comparison 7 Subgroup analysis: variations in professionally-based intervention provider, Outcome 2 TEST FOR SUBGROUP DIFFERENCES: mean depression score at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 7 Subgroup analysis: variations in professionally-based intervention provider

Outcome: 2 TEST FOR SUBGROUP DIFFERENCES: mean depression score at final study assessment



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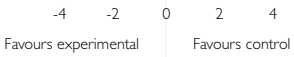
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Fixed,95% CI	Weight	Std. Mean Difference IV,Fixed,95% CI
3 Intervention provided by mental health specialists							
Gjerdingen 2002	69	24 (2.8)	63	23.9 (2.9)		75.5 %	0.03 [-0.31, 0.38]
Weidner 2010	20	5.48 (4.64)	23	5.22 (3.93)		24.5 %	0.06 [-0.54, 0.66]
Subtotal (95% CI)	**89**		**86**			**100.0 %**	**0.04 [-0.26, 0.34]**

Heterogeneity: Chi^2 = 0.00, df = 1 (P = 0.94); I^2 =0.0%

Test for overall effect: Z = 0.27 (P = 0.79)

Test for subgroup differences: Chi^2 = 0.34, df = 2 (P = 0.84), I^2 =0.0%



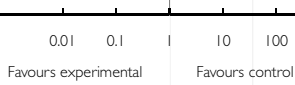
Analysis 8.1. Comparison 8 Subgroup analysis: variations in intervention mode, Outcome 1 Individually-based interventions - depressive symptomatology.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 8 Subgroup analysis: variations in intervention mode

Outcome: 1 Individually-based interventions - depressive symptomatology

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
1 Immediate outcomes 0-8 weeks					
Armstrong 1999	5/86	18/88		8.0 %	0.28 [0.11, 0.73]
Gamble 2005	16/49	18/53		12.5 %	0.96 [0.55, 1.67]
Gorman 1997	3/18	2/13		3.8 %	1.08 [0.21, 5.59]
Lavender 1998	5/58	31/56		8.7 %	0.16 [0.07, 0.37]
Morrell 2000	50/282	48/269		15.0 %	0.99 [0.69, 1.42]
Priest 2003	54/809	63/833		15.1 %	0.88 [0.62, 1.25]
Sen 2006	6/69	13/64		8.4 %	0.43 [0.17, 1.06]
Tam 2003	26/261	35/255		13.5 %	0.73 [0.45, 1.17]



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Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Waldenstrom 2000	58/361	39/323		14.8 %	1.33 [0.91, 1.94]
Subtotal (95% CI)	**1993**	**1954**		**100.0 %**	**0.70 [0.49, 1.00]**
Total events: 223 (Experimental), 267 (Control)					
Heterogeneity: Tau^2 = 0.19; Chi^2 = 29.23, df = 8 (P = 0.00029); I^2 =73%					
Test for overall effect: Z = 1.93 (P = 0.053)					
2 Short-term outcomes 9-16 weeks					
Armstrong 1999	13/80	18/80		13.9 %	0.72 [0.38, 1.37]
Dennis 2009	40/297	78/315		22.5 %	0.54 [0.38, 0.77]
Gamble 2005	4/50	17/53		7.6 %	0.25 [0.09, 0.69]
Gunn 1998	39/232	33/244		19.9 %	1.24 [0.81, 1.91]
MacArthur 2002	98/681	127/597		26.0 %	0.68 [0.53, 0.86]
Sen 2006	7/65	14/63		10.1 %	0.48 [0.21, 1.12]
Subtotal (95% CI)	**1405**	**1352**		**100.0 %**	**0.66 [0.47, 0.91]**
Total events: 201 (Experimental), 287 (Control)					
Heterogeneity: Tau^2 = 0.09; Chi^2 = 13.65, df = 5 (P = 0.02); I^2 =63%					
Test for overall effect: Z = 2.52 (P = 0.012)					
3 Intermediate outcomes 17-24 weeks					
Gorman 1997	3/15	3/15		0.5 %	1.00 [0.24, 4.18]
Gunn 1998	25/218	29/228		4.2 %	0.90 [0.55, 1.49]
Lumley 2006	540/3437	514/2777		65.7 %	0.85 [0.76, 0.95]
Morrell 2000	49/260	50/233		8.3 %	0.88 [0.62, 1.25]
Priest 2003	55/777	65/797		8.7 %	0.87 [0.61, 1.23]
Sen 2006	6/68	12/65		1.3 %	0.48 [0.19, 1.20]
Small 2000	81/467	65/449		11.4 %	1.20 [0.89, 1.62]
Subtotal (95% CI)	**5242**	**4564**		**100.0 %**	**0.88 [0.80, 0.98]**
Total events: 759 (Experimental), 738 (Control)					
Heterogeneity: Tau^2 = 0.00; Chi^2 = 6.23, df = 6 (P = 0.40); I^2 =4%					
Test for overall effect: Z = 2.35 (P = 0.019)					
4 Long-term outcomes > 24 weeks					
Armstrong 1999	4/65	9/66		5.9 %	0.45 [0.15, 1.39]
MacArthur 2002	72/584	118/547		51.3 %	0.57 [0.44, 0.75]
Priest 2003	37/696	42/705		29.9 %	0.89 [0.58, 1.37]
Sen 2006	11/63	12/60		12.8 %	0.87 [0.42, 1.83]
Subtotal (95% CI)	**1408**	**1378**		**100.0 %**	**0.68 [0.51, 0.90]**
Total events: 124 (Experimental), 181 (Control)					
Heterogeneity: Tau^2 = 0.02; Chi^2 = 3.98, df = 3 (P = 0.26); I^2 =25%					

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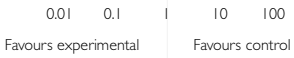
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Test for overall effect: Z = 2.66 (P = 0.0077)					



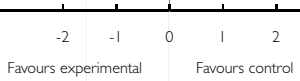
Analysis 8.2. Comparison 8 Subgroup analysis: variations in intervention mode, Outcome 2 Individually-based interventions - mean depression scores.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 8 Subgroup analysis: variations in intervention mode

Outcome: 2 Individually-based interventions - mean depression scores

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 Immediate outcomes 0-8 weeks							
Armstrong 1999	86	5.67 (4.14)	88	7.9 (5.89)		27.6 %	-0.44 [-0.74, -0.13]
Gorman 1997	18	7.2 (5.3)	15	7.5 (4.2)		12.8 %	-0.06 [-0.75, 0.62]
Morrell 2000	276	7.4 (5.2)	266	6.7 (5.5)		34.0 %	0.13 [-0.04, 0.30]
Sen 2006	69	7 (4.3)	64	7.5 (5.4)		25.6 %	-0.10 [-0.44, 0.24]
Subtotal (95% CI)	**449**		**433**			**100.0 %**	**-0.11 [-0.41, 0.19]**
Heterogeneity: Tau^2 = 0.06; Chi^2 = 10.63, df = 3 (P = 0.01); I^2 =72%							
Test for overall effect: Z = 0.71 (P = 0.48)							
2 Short-term outcomes 9-16 weeks							
Armstrong 1999	80	5.75 (5.51)	80	6.64 (5.58)		19.7 %	-0.16 [-0.47, 0.15]
Dennis 2009	297	7.93 (4.68)	315	8.89 (5.24)		20.3 %	-0.19 [-0.35, -0.03]
Gunn 1998	232	7.38 (5.31)	244	7.48 (5.35)		20.2 %	-0.02 [-0.20, 0.16]
MacArthur 2002 (1)	653	6.4 (1)	572	8.1 (1.4)		20.4 %	-1.41 [-1.54, -1.29]
Sen 2006	65	6.1 (4.4)	63	7.2 (5.8)		19.4 %	-0.21 [-0.56, 0.13]
Subtotal (95% CI)	**1327**		**1274**			**100.0 %**	**-0.40 [-1.07, 0.26]**



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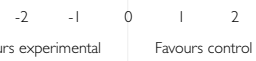
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Heterogeneity: Tau² = 0.56; Chi² = 236.45, df = 4 (P<0.00001); I² =98%							
Test for overall effect: Z = 1.19 (P = 0.23)							
3 Intermediate outcomes 17-24 weeks							
Gorman 1997	13	7.9 (5.2)	17	8 (5.6)		0.4 %	-0.02 [-0.74, 0.70]
Gunn 1998	218	5.87 (5.37)	228	6.08 (5.14)		5.5 %	-0.04 [-0.23, 0.15]
Lumley 2006	3405	6.91 (6.42)	2745	6.83 (5.77)		75.2 %	0.01 [-0.04, 0.06]
Morrell 2000	252	6.6 (5.1)	229	6.7 (5.6)		5.9 %	-0.02 [-0.20, 0.16]
Sen 2006	68	5.4 (4.5)	65	6.9 (5.5)		1.6 %	-0.30 [-0.64, 0.04]
Small 2000	467	7.16 (5.68)	449	6.72 (5.5)		11.3 %	0.08 [-0.05, 0.21]
Subtotal (95% CI)	**4423**		**3733**			**100.0 %**	**0.01 [-0.03, 0.05]**
Heterogeneity: Tau² = 0.0; Chi² = 4.58, df = 5 (P = 0.47); I² =0.0%							
Test for overall effect: Z = 0.47 (P = 0.64)							
4 Long-term outcomes > 24 weeks							
Armstrong 1999	65	5.25 (4.44)	66	6.02 (4.77)		20.1 %	-0.17 [-0.51, 0.18]
Cupples 2011	138	70.3 (17.7)	149	72.1 (19.6)		21.2 %	-0.10 [-0.33, 0.14]
MacArthur 2002 (2)	451	6.2 (1.6)	422	7.6 (1.2)		21.8 %	-0.98 [-1.13, -0.84]
Sen 2006	63	7.2 (5)	60	7.6 (4.4)		20.0 %	-0.08 [-0.44, 0.27]
Weidner 2010	20	5.48 (4.64)	23	5.22 (3.93)		16.9 %	0.06 [-0.54, 0.66]
Subtotal (95% CI)	**737**		**720**			**100.0 %**	**-0.28 [-0.78, 0.23]**
Heterogeneity: Tau² = 0.30; Chi² = 65.88, df = 4 (P<0.00001); I² =94%							
Test for overall effect: Z = 1.07 (P = 0.28)							



(1) SDs provided by author

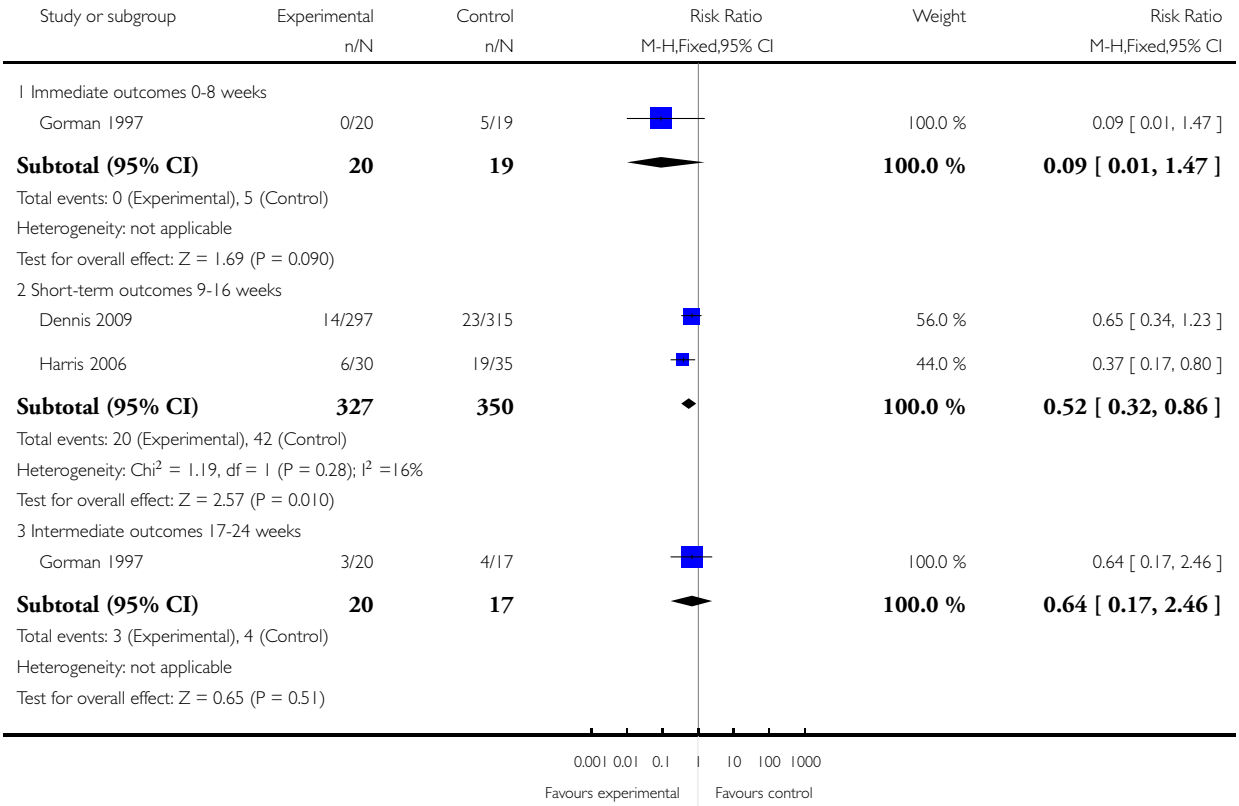
(2) SDs provided by trial author

Analysis 8.3. Comparison 8 Subgroup analysis: variations in intervention mode, Outcome 3 Individually-based interventions - diagnosis of depression.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 8 Subgroup analysis: variations in intervention mode

Outcome: 3 Individually-based interventions - diagnosis of depression

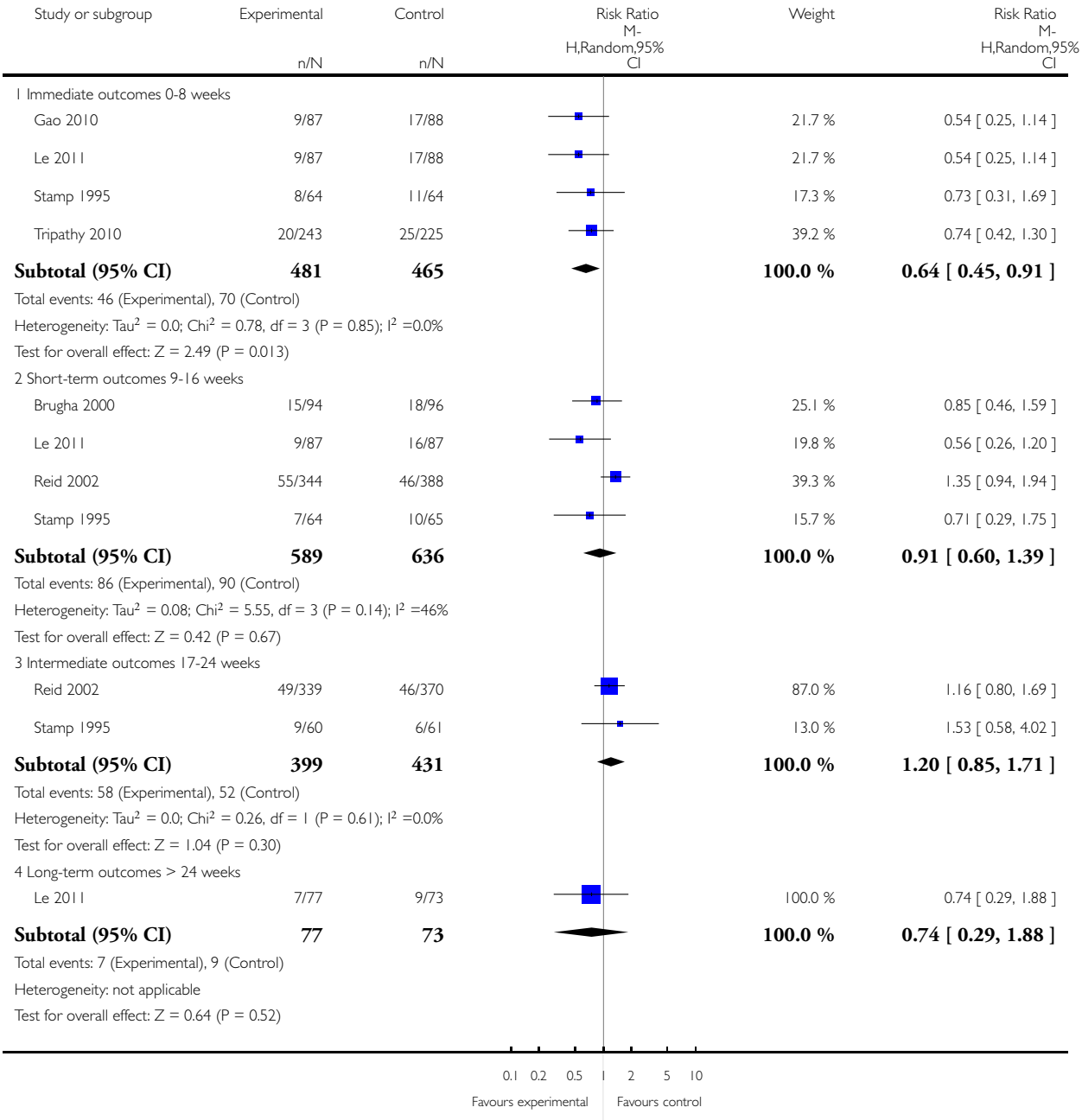


Analysis 8.4. Comparison 8 Subgroup analysis: variations in intervention mode, Outcome 4 Group-based interventions - depressive symptomatology.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 8 Subgroup analysis: variations in intervention mode

Outcome: 4 Group-based interventions - depressive symptomatology

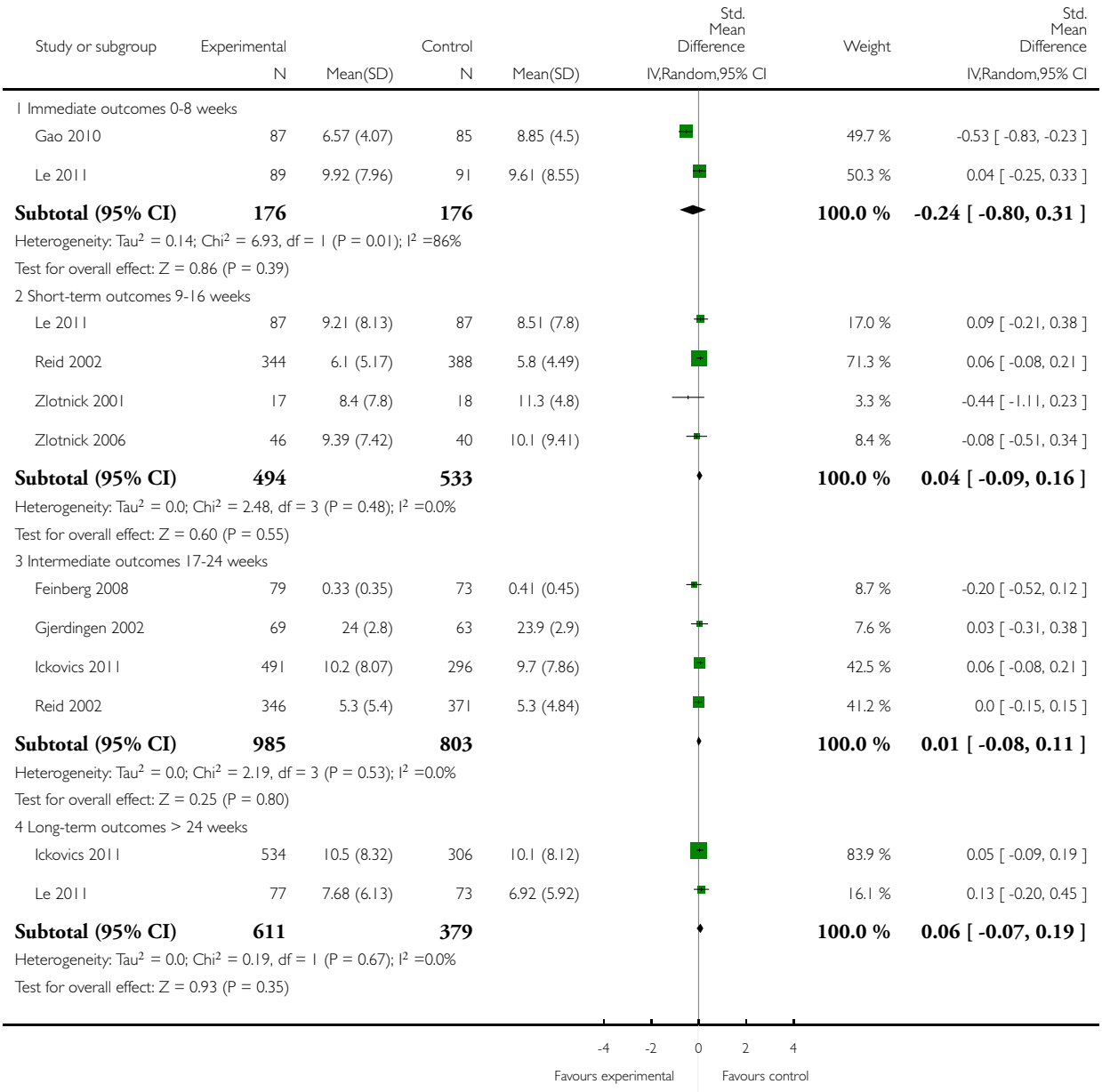


Analysis 8.5. Comparison 8 Subgroup analysis: variations in intervention mode, Outcome 5 Group-based interventions - mean depression scores.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 8 Subgroup analysis: variations in intervention mode

Outcome: 5 Group-based interventions - mean depression scores

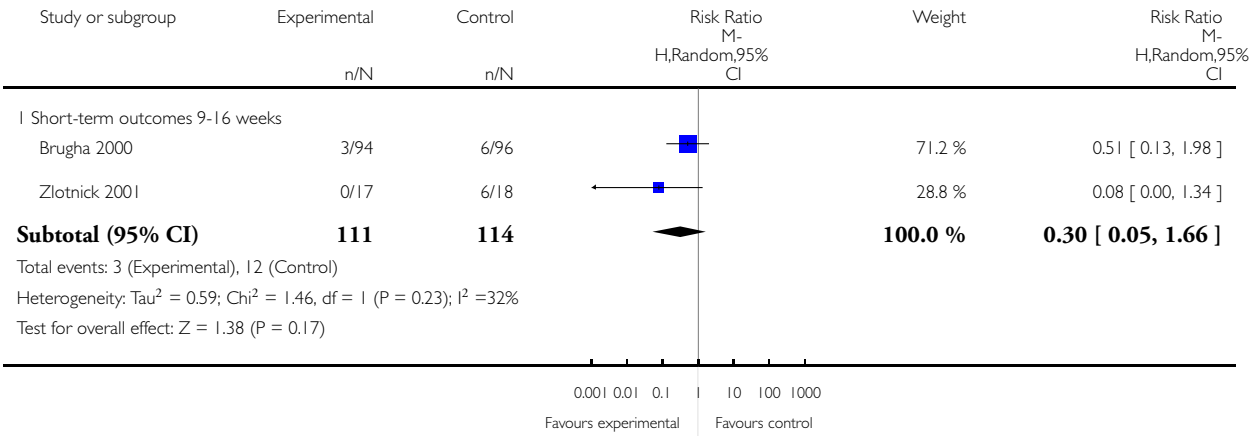


Analysis 8.6. Comparison 8 Subgroup analysis: variations in intervention mode, Outcome 6 Group-based interventions - diagnosis of depression.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 8 Subgroup analysis: variations in intervention mode

Outcome: 6 Group-based interventions - diagnosis of depression



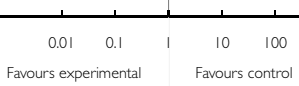
Analysis 8.7. Comparison 8 Subgroup analysis: variations in intervention mode, Outcome 7 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology: at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 8 Subgroup analysis: variations in intervention mode

Outcome: 7 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology: at final study assessment

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
1 Individually-based interventions					
Armstrong 1999	4/65	9/66		1.8 %	0.45 [0.15, 1.39]
Dennis 2009	40/297	78/315		7.2 %	0.54 [0.38, 0.77]
Gamble 2005	4/50	17/53		2.2 %	0.25 [0.09, 0.69]
Gorman 1997	3/15	3/15		1.2 %	1.00 [0.24, 4.18]
Gunn 1998	25/218	29/228		5.4 %	0.90 [0.55, 1.49]
Lavender 1998	5/58	31/56		2.8 %	0.16 [0.07, 0.37]
Lumley 2006	540/3437	514/2777		9.9 %	0.85 [0.76, 0.95]
MacArthur 2002	72/584	118/547		8.2 %	0.57 [0.44, 0.75]
Morrell 2000	49/260	50/233		7.1 %	0.88 [0.62, 1.25]
Priest 2003	37/696	42/705		6.2 %	0.89 [0.58, 1.37]
Sen 2006	11/63	12/60		3.5 %	0.87 [0.42, 1.83]
Small 2000	81/467	65/449		7.8 %	1.20 [0.89, 1.62]
Tam 2003	26/261	35/255		5.7 %	0.73 [0.45, 1.17]
Waldenstrom 2000	58/361	39/323		6.8 %	1.33 [0.91, 1.94]
Subtotal (95% CI)	**6832**	**6082**		**75.8 %**	**0.75 [0.61, 0.92]**
Total events: 955 (Experimental), 1042 (Control)					
Heterogeneity: $Tau^2 = 0.09$; $Chi^2 = 46.38$, df = 13 (P = 0.00001); $I^2 = 72\%$					
Test for overall effect: Z = 2.75 (P = 0.0059)					
2 Group-based interventions					
Brugha 2000	15/94	18/96		4.3 %	0.85 [0.46, 1.59]
Gao 2010	9/87	17/88		3.4 %	0.54 [0.25, 1.14]
Le 2011	7/77	9/73		2.5 %	0.74 [0.29, 1.88]
Reid 2002	49/339	46/370		6.9 %	1.16 [0.80, 1.69]
Stamp 1995	9/60	6/61		2.3 %	1.53 [0.58, 4.02]
Tripathy 2010	20/243	25/225		4.8 %	0.74 [0.42, 1.30]



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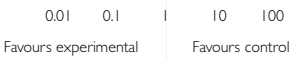
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Subtotal (95% CI)	**900**	**913**		**24.2 %**	**0.92 [0.71, 1.19]**
Total events: 109 (Experimental), 121 (Control)					
Heterogeneity: Tau^2 = 0.01; Chi^2 = 5.39, df = 5 (P = 0.37); I^2 =7%					
Test for overall effect: Z = 0.67 (P = 0.50)					
Total (95% CI)	**7732**	**6995**		**100.0 %**	**0.78 [0.66, 0.93]**
Total events: 1064 (Experimental), 1163 (Control)					
Heterogeneity: Tau^2 = 0.07; Chi^2 = 52.68, df = 19 (P = 0.00005); I^2 =64%					
Test for overall effect: Z = 2.82 (P = 0.0047)					
Test for subgroup differences: Chi^2 = 1.41, df = 1 (P = 0.24), I^2 =29%					



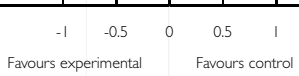
Analysis 8.8. Comparison 8 Subgroup analysis: variations in intervention mode, Outcome 8 TEST FOR SUBGROUP DIFFERENCES: mean depression scores: at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 8 Subgroup analysis: variations in intervention mode

Outcome: 8 TEST FOR SUBGROUP DIFFERENCES: mean depression scores: at final study assessment

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 Individually-based interventions							
Armstrong 1999	65	5.25 (4.44)	66	6.02 (4.77)		5.0 %	-0.17 [-0.51, 0.18]
Cupples 2011	138	70.3 (17.7)	149	72.1 (19.6)		5.8 %	-0.10 [-0.33, 0.14]
Dennis 2009	297	7.93 (4.68)	315	8.89 (5.24)		6.3 %	-0.19 [-0.35, -0.03]
Gorman 1997	13	7.9 (5.2)	17	8 (5.6)		2.6 %	-0.02 [-0.74, 0.70]
Gunn 1998	218	5.87 (5.37)	228	6.08 (5.14)		6.1 %	-0.04 [-0.23, 0.15]
Lumley 2006	3405	6.91 (6.42)	2745	6.83 (5.77)		6.8 %	0.01 [-0.04, 0.06]
MacArthur 2002 (1)	451	6.2 (1.6)	422	7.6 (1.2)		6.4 %	-0.98 [-1.13, -0.84]



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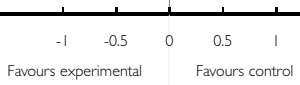
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Morrell 2000	252	6.6 (5.1)	229	6.7 (5.6)		6.2 %	-0.02 [-0.20, 0.16]
Sen 2006	63	7.2 (5)	60	7.6 (4.4)		4.9 %	-0.08 [-0.44, 0.27]
Small 2000	467	7.16 (5.68)	449	6.72 (5.5)		6.5 %	0.08 [-0.05, 0.21]
Weidner 2010	20	5.48 (4.64)	23	5.22 (3.93)		3.2 %	0.06 [-0.54, 0.66]
Subtotal (95% CI)	**5389**		**4703**			**59.6 %**	**-0.15 [-0.37, 0.07]**
Heterogeneity: Tau^2 = 0.11; Chi^2 = 180.99, df = 10 (P<0.00001); I^2 =94%							
Test for overall effect: Z = 1.31 (P = 0.19)							
2 Group-based interventions							
Feinberg 2008	79	0.33 (0.35)	73	0.41 (0.45)		5.1 %	-0.20 [-0.52, 0.12]
Gao 2010	87	6.57 (4.07)	85	8.85 (4.5)		5.3 %	-0.53 [-0.83, -0.23]
Gjerdingen 2002	69	24 (2.8)	63	23.9 (2.9)		5.0 %	0.03 [-0.31, 0.38]
Ickovics 2011	534	10.5 (8.32)	306	10.1 (8.12)		6.4 %	0.05 [-0.09, 0.19]
Le 2011	77	7.68 (6.13)	73	6.92 (5.92)		5.1 %	0.13 [-0.20, 0.45]
Reid 2002	346	5.3 (5.4)	371	5.3 (4.84)		6.4 %	0.0 [-0.15, 0.15]
Zlotnick 2001	17	8.4 (7.8)	18	11.3 (4.8)		2.8 %	-0.44 [-1.11, 0.23]
Zlotnick 2006	46	9.39 (7.42)	40	10.1 (9.41)		4.3 %	-0.08 [-0.51, 0.34]
Subtotal (95% CI)	**1255**		**1029**			**40.4 %**	**-0.08 [-0.23, 0.06]**
Heterogeneity: Tau^2 = 0.02; Chi^2 = 15.30, df = 7 (P = 0.03); I^2 =54%							
Test for overall effect: Z = 1.13 (P = 0.26)							
Total (95% CI)	**6644**		**5732**			**100.0 %**	**-0.13 [-0.28, 0.01]**
Heterogeneity: Tau^2 = 0.08; Chi^2 = 197.27, df = 18 (P<0.00001); I^2 =91%							
Test for overall effect: Z = 1.77 (P = 0.077)							
Test for subgroup differences: Chi^2 = 0.23, df = 1 (P = 0.63), I^2 =0.0%							



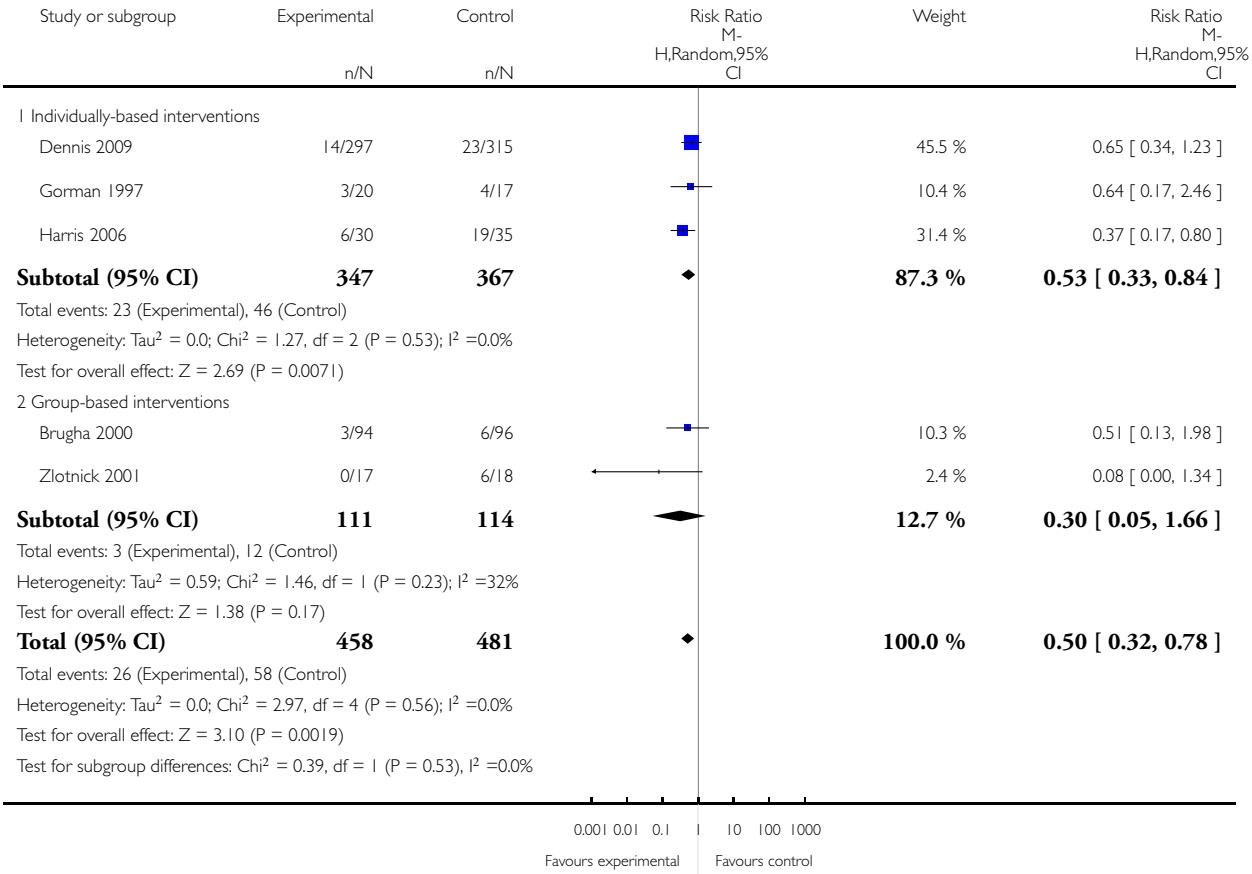
(1) SDs provided by trial author

Analysis 8.9. Comparison 8 Subgroup analysis: variations in intervention mode, Outcome 9 TEST FOR SUBGROUP DIFFERENCES: diagnosis of depression: at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 8 Subgroup analysis: variations in intervention mode

Outcome: 9 TEST FOR SUBGROUP DIFFERENCES: diagnosis of depression: at final study assessment

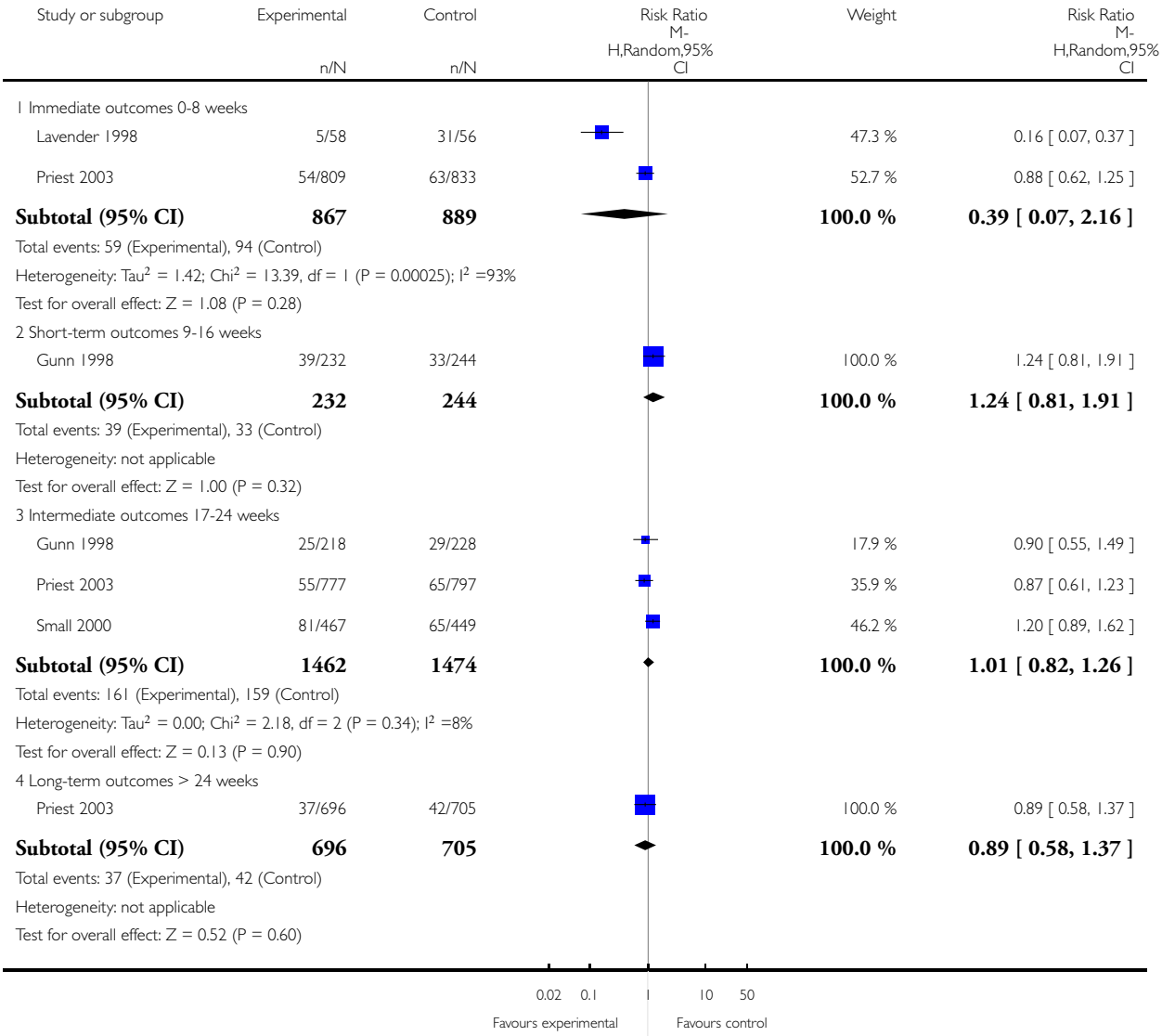


Analysis 9.1. Comparison 9 Subgroup analysis: variations in intervention duration, Outcome 1 Single-contact interventions - depressive symptomatology.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 9 Subgroup analysis: variations in intervention duration

Outcome: 1 Single-contact interventions - depressive symptomatology

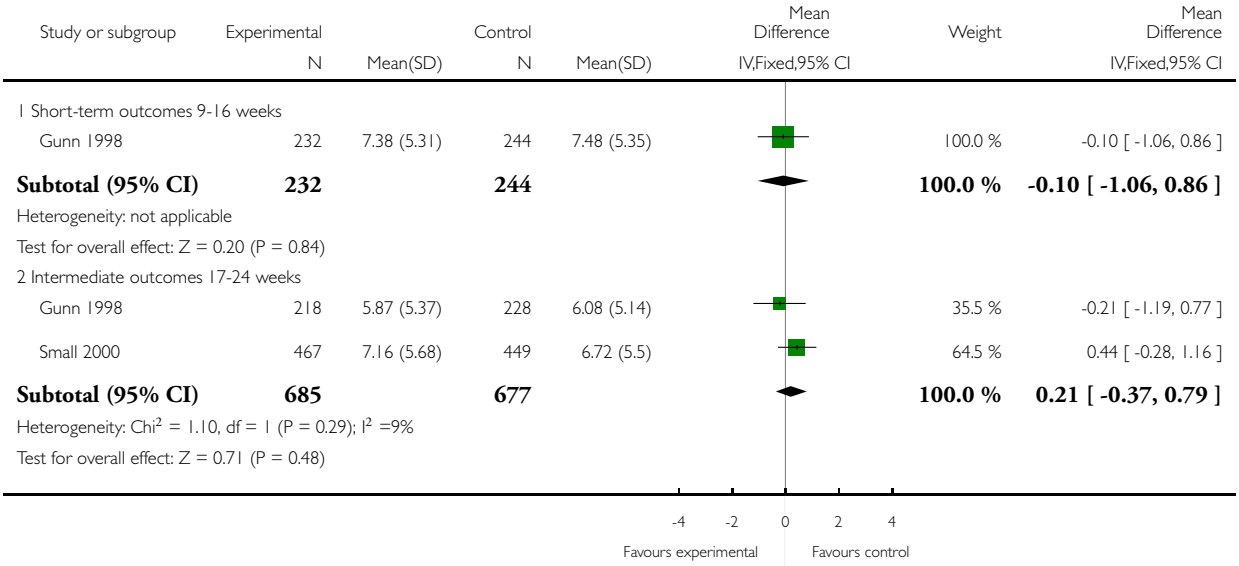


Analysis 9.2. Comparison 9 Subgroup analysis: variations in intervention duration, Outcome 2 Single-contact interventions - mean depression scores.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 9 Subgroup analysis: variations in intervention duration

Outcome: 2 Single-contact interventions - mean depression scores



Analysis 9.3. Comparison 9 Subgroup analysis: variations in intervention duration, Outcome 3 Multiple-contact interventions - depressive symptomatology.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 9 Subgroup analysis: variations in intervention duration

Outcome: 3 Multiple-contact interventions - depressive symptomatology

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
1 Immediate outcomes 0-8 weeks					
Armstrong 1999	5/86	18/88		5.4 %	0.28 [0.11, 0.73]
Gamble 2005	16/49	18/53		11.0 %	0.96 [0.55, 1.67]
Gao 2010	9/87	17/88		7.5 %	0.54 [0.25, 1.14]
Gorman 1997	3/18	2/13		2.1 %	1.08 [0.21, 5.59]
Le 2011	9/87	17/88		7.5 %	0.54 [0.25, 1.14]
Morrell 2000	50/282	48/269		15.8 %	0.99 [0.69, 1.42]
Sen 2006	6/69	13/64		5.7 %	0.43 [0.17, 1.06]
Stamp 1995	8/64	11/64		6.4 %	0.73 [0.31, 1.69]
Tam 2003	26/261	35/255		12.6 %	0.73 [0.45, 1.17]
Tripathy 2010	20/243	25/225		10.8 %	0.74 [0.42, 1.30]
Waldenstrom 2000	58/361	39/323		15.3 %	1.33 [0.91, 1.94]
Subtotal (95% CI)	**1607**	**1530**		**100.0 %**	**0.77 [0.60, 0.99]**
Total events: 210 (Experimental), 243 (Control)					
Heterogeneity: $Tau^2 = 0.07$; $Chi^2 = 17.54$, df = 10 (P = 0.06); $I^2 = 43\%$					
Test for overall effect: Z = 2.07 (P = 0.039)					
2 Short-term outcomes 9-16 weeks					
Armstrong 1999	13/80	18/80		10.2 %	0.72 [0.38, 1.37]
Brugha 2000	15/94	18/96		10.5 %	0.85 [0.46, 1.59]
Dennis 2009	40/297	78/315		16.4 %	0.54 [0.38, 0.77]
Gamble 2005	4/50	17/53		5.6 %	0.25 [0.09, 0.69]
Le 2011	9/87	16/87		8.4 %	0.56 [0.26, 1.20]
MacArthur 2002	98/681	127/597		18.9 %	0.68 [0.53, 0.86]
Reid 2002	55/344	46/388		16.0 %	1.35 [0.94, 1.94]
Sen 2006	7/65	14/63		7.4 %	0.48 [0.21, 1.12]
Stamp 1995	7/64	10/65		6.7 %	0.71 [0.29, 1.75]

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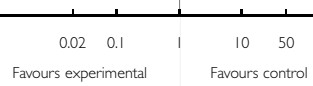
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Subtotal (95% CI)	**1762**	**1744**		**100.0 %**	**0.69 [0.52, 0.91]**
Total events: 248 (Experimental), 344 (Control)					
Heterogeneity: $Tau^2 = 0.09$; $Chi^2 = 19.92$, df = 8 (P = 0.01); $I^2 = 60\%$					
Test for overall effect: Z = 2.65 (P = 0.0081)					
3 Intermediate outcomes 17-24 weeks					
Gorman 1997	3/15	3/15		0.9 %	1.00 [0.24, 4.18]
Lumley 2006	540/3437	514/2777		69.7 %	0.85 [0.76, 0.95]
Morrell 2000	49/260	50/233		13.4 %	0.88 [0.62, 1.25]
Reid 2002	49/339	46/370		12.0 %	1.16 [0.80, 1.69]
Sen 2006	6/68	12/65		2.2 %	0.48 [0.19, 1.20]
Stamp 1995	9/60	6/61		1.9 %	1.53 [0.58, 4.02]
Subtotal (95% CI)	**4179**	**3521**		**100.0 %**	**0.89 [0.77, 1.01]**
Total events: 656 (Experimental), 631 (Control)					
Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 5.45$, df = 5 (P = 0.36); $I^2 = 8\%$					
Test for overall effect: Z = 1.75 (P = 0.080)					
4 Long-term outcomes > 24 weeks					
Armstrong 1999	4/65	9/66		4.5 %	0.45 [0.15, 1.39]
Le 2011	7/77	9/73		6.5 %	0.74 [0.29, 1.88]
MacArthur 2002	72/584	118/547		78.6 %	0.57 [0.44, 0.75]
Sen 2006	11/63	12/60		10.4 %	0.87 [0.42, 1.83]
Subtotal (95% CI)	**789**	**746**		**100.0 %**	**0.60 [0.47, 0.76]**
Total events: 94 (Experimental), 148 (Control)					
Heterogeneity: $Tau^2 = 0.0$; $Chi^2 = 1.55$, df = 3 (P = 0.67); $I^2 = 0.0\%$					
Test for overall effect: Z = 4.19 (P = 0.000028)					

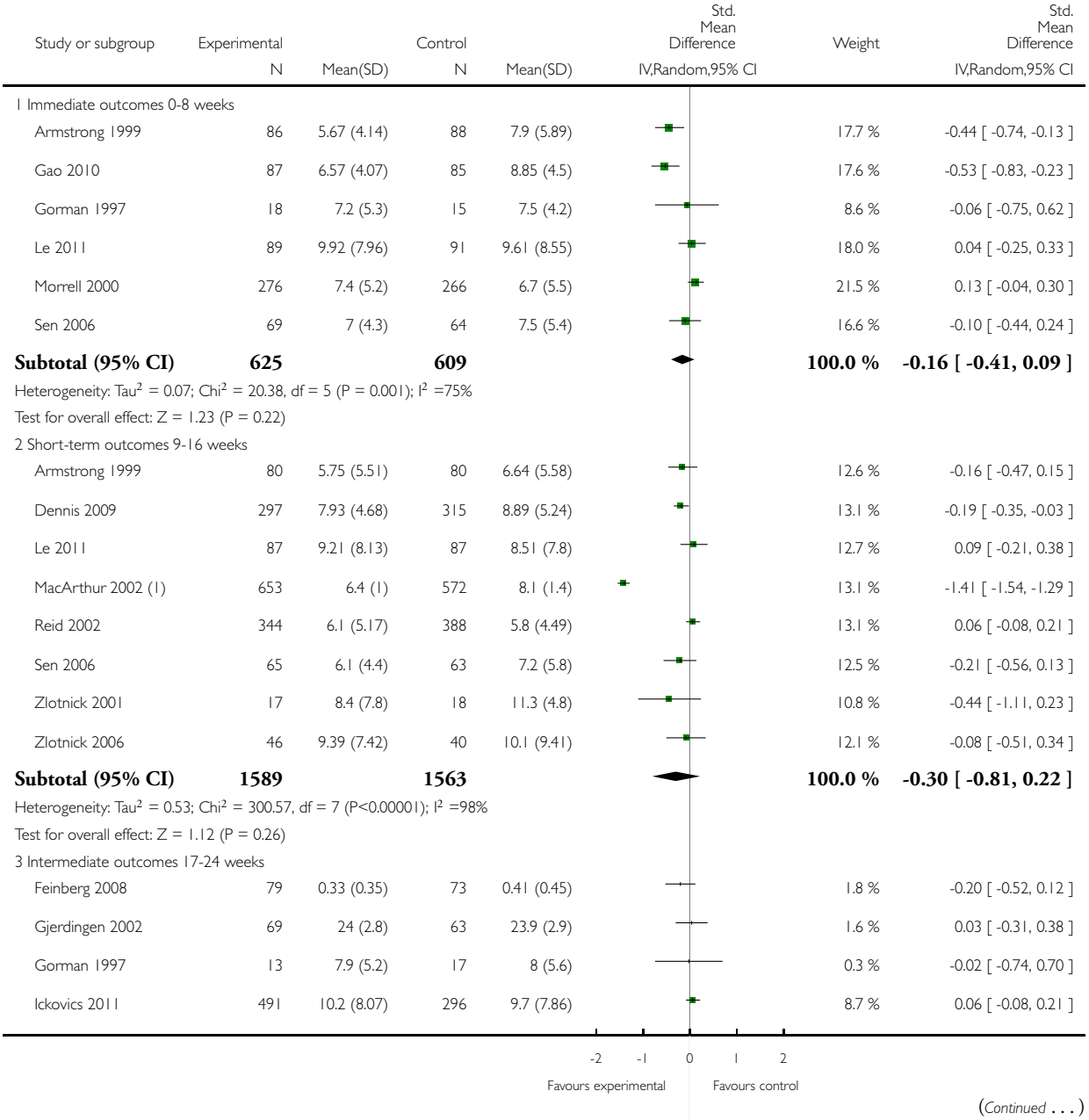


Analysis 9.4. Comparison 9 Subgroup analysis: variations in intervention duration, Outcome 4 Multiple-contact interventions - mean depression scores.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 9 Subgroup analysis: variations in intervention duration

Outcome: 4 Multiple-contact interventions - mean depression scores



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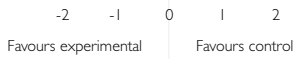
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Lumley 2006	3405	6.91 (6.42)	2745	6.83 (5.77)		71.9 %	0.01 [-0.04, 0.06]
Morrell 2000	252	6.6 (5.1)	229	6.7 (5.6)		5.7 %	-0.02 [-0.20, 0.16]
Reid 2002	346	5.3 (5.4)	371	5.3 (4.84)		8.5 %	0.0 [-0.15, 0.15]
Sen 2006	68	5.4 (4.5)	65	6.9 (5.5)		1.6 %	-0.30 [-0.64, 0.04]
Subtotal (95% CI)	**4723**		**3859**			**100.0 %**	**0.01 [-0.04, 0.05]**
Heterogeneity: $Tau^2 = 0.0$; $Chi^2 = 5.38$, df = 7 (P = 0.61); $I^2 = 0.0\%$							
Test for overall effect: Z = 0.28 (P = 0.78)							
4 Long-term outcomes > 24 weeks							
Armstrong 1999	65	5.25 (4.44)	66	6.02 (4.77)		14.1 %	-0.17 [-0.51, 0.18]
Cupples 2011	138	70.3 (17.7)	149	72.1 (19.6)		14.9 %	-0.10 [-0.33, 0.14]
Ickovics 2011	534	10.5 (8.32)	306	10.1 (8.12)		15.4 %	0.05 [-0.09, 0.19]
Le 2011	77	7.68 (6.13)	73	6.92 (5.92)		14.3 %	0.13 [-0.20, 0.45]
MacArthur 2002 (2)	451	6.2 (1.6)	422	7.6 (1.2)		15.4 %	-0.98 [-1.13, -0.84]
Sen 2006	63	7.2 (5)	60	7.6 (4.4)		14.1 %	-0.08 [-0.44, 0.27]
Weidner 2010	20	5.48 (4.64)	23	5.22 (3.93)		11.8 %	0.06 [-0.54, 0.66]
Subtotal (95% CI)	**1348**		**1099**			**100.0 %**	**-0.17 [-0.58, 0.25]**
Heterogeneity: $Tau^2 = 0.29$; $Chi^2 = 127.14$, df = 6 (P<0.00001); $I^2 = 95\%$							
Test for overall effect: Z = 0.80 (P = 0.43)							



(1) SDs provided by trial author

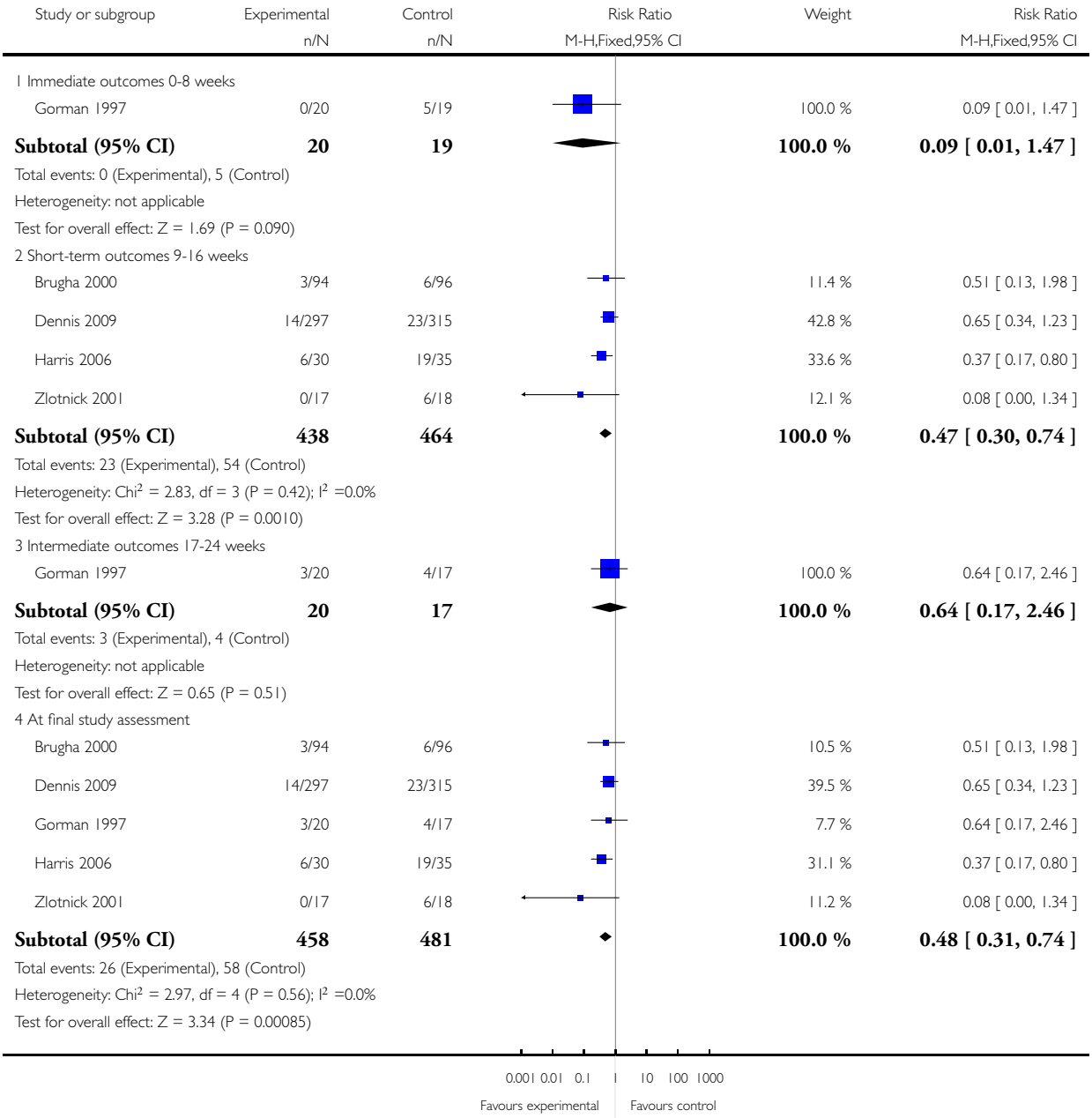
(2) SDs provided by trial author

Analysis 9.5. Comparison 9 Subgroup analysis: variations in intervention duration, Outcome 5 Multiple-contact interventions - diagnosis of depression.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 9 Subgroup analysis: variations in intervention duration

Outcome: 5 Multiple-contact interventions - diagnosis of depression



Analysis 9.6. Comparison 9 Subgroup analysis: variations in intervention duration, Outcome 6 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology: at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 9 Subgroup analysis: variations in intervention duration

Outcome: 6 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology: at final study assessment

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
1 Single contact intervention					
Gunn 1998	25/218	29/228		5.4 %	0.90 [0.55, 1.49]
Lavender 1998	5/58	31/56		2.8 %	0.16 [0.07, 0.37]
Priest 2003	37/696	42/705		6.2 %	0.89 [0.58, 1.37]
Small 2000	81/467	65/449		7.8 %	1.20 [0.89, 1.62]
Subtotal (95% CI)	**1439**	**1438**		**22.2 %**	**0.70 [0.38, 1.28]**
Total events: 148 (Experimental), 167 (Control)					
Heterogeneity: $Tau^2 = 0.30$; $Chi^2 = 19.35$, df = 3 (P = 0.00023); $I^2 = 84\%$					
Test for overall effect: Z = 1.16 (P = 0.25)					
2 Multiple contact intervention					
Armstrong 1999	4/65	9/66		1.8 %	0.45 [0.15, 1.39]
Brugha 2000	15/94	18/96		4.3 %	0.85 [0.46, 1.59]
Dennis 2009	40/297	78/315		7.2 %	0.54 [0.38, 0.77]
Gamble 2005	4/50	17/53		2.2 %	0.25 [0.09, 0.69]
Gao 2010	9/87	17/88		3.4 %	0.54 [0.25, 1.14]
Gorman 1997	3/15	3/15		1.2 %	1.00 [0.24, 4.18]
Le 2011	7/77	9/73		2.5 %	0.74 [0.29, 1.88]
Lumley 2006	540/3437	514/2777		9.9 %	0.85 [0.76, 0.95]
MacArthur 2002	72/584	118/547		8.2 %	0.57 [0.44, 0.75]
Morrell 2000	49/260	50/233		7.1 %	0.88 [0.62, 1.25]
Reid 2002	49/339	46/370		6.9 %	1.16 [0.80, 1.69]
Sen 2006	11/63	12/60		3.5 %	0.87 [0.42, 1.83]
Stamp 1995	9/60	6/61		2.3 %	1.53 [0.58, 4.02]

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Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Tam 2003	26/261	35/255		5.7 %	0.73 [0.45, 1.17]
Tripathy 2010	20/243	25/225		4.8 %	0.74 [0.42, 1.30]
Waldenstrom 2000	58/361	39/323		6.8 %	1.33 [0.91, 1.94]
Subtotal (95% CI)	**6293**	**5557**		**77.8 %**	**0.78 [0.66, 0.93]**
Total events: 916 (Experimental), 996 (Control)					
Heterogeneity: Tau^2 = 0.05; Chi^2 = 32.14, df = 15 (P = 0.01); I^2 =53%					
Test for overall effect: Z = 2.82 (P = 0.0049)					
Total (95% CI)	**7732**	**6995**		**100.0 %**	**0.78 [0.66, 0.93]**
Total events: 1064 (Experimental), 1163 (Control)					
Heterogeneity: Tau^2 = 0.07; Chi^2 = 52.68, df = 19 (P = 0.00005); I^2 =64%					
Test for overall effect: Z = 2.82 (P = 0.0047)					
Test for subgroup differences: Chi^2 = 0.12, df = 1 (P = 0.73), I^2 =0.0%					

Analysis 9.7. Comparison 9 Subgroup analysis: variations in intervention duration, Outcome 7 TEST FOR SUBGROUP DIFFERENCES: mean depression scores: at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 9 Subgroup analysis: variations in intervention duration

Outcome: 7 TEST FOR SUBGROUP DIFFERENCES: mean depression scores: at final study assessment

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 Single contact intervention							
Gunn 1998	218	5.87 (5.37)	228	6.08 (5.14)		6.1 %	-0.04 [-0.23, 0.15]
Small 2000	467	7.16 (5.68)	449	6.72 (5.5)		6.5 %	0.08 [-0.05, 0.21]
Subtotal (95% CI)	**685**		**677**			**12.6 %**	**0.04 [-0.07, 0.15]**
Heterogeneity: Tau^2 = 0.00; Chi^2 = 1.05, df = 1 (P = 0.30); I^2 =5%							
Test for overall effect: Z = 0.69 (P = 0.49)							
2 Multiple contact intervention							
Armstrong 1999	65	5.25 (4.44)	66	6.02 (4.77)		5.0 %	-0.17 [-0.51, 0.18]
Cupples 2011	138	70.3 (17.7)	149	72.1 (19.6)		5.8 %	-0.10 [-0.33, 0.14]
Dennis 2009	297	7.93 (4.68)	315	8.89 (5.24)		6.3 %	-0.19 [-0.35, -0.03]
Feinberg 2008	79	0.33 (0.35)	73	0.41 (0.45)		5.1 %	-0.20 [-0.52, 0.12]
Gao 2010	87	6.57 (4.07)	85	8.85 (4.5)		5.3 %	-0.53 [-0.83, -0.23]
Gjerdingen 2002	69	24 (2.8)	63	23.9 (2.9)		5.0 %	0.03 [-0.31, 0.38]
Gorman 1997	13	7.9 (5.2)	17	8 (5.6)		2.6 %	-0.02 [-0.74, 0.70]
Ickovics 2011	534	10.5 (8.32)	306	10.1 (8.12)		6.4 %	0.05 [-0.09, 0.19]
Le 2011	77	7.68 (6.13)	73	6.92 (5.92)		5.1 %	0.13 [-0.20, 0.45]
Lumley 2006	3405	6.91 (6.42)	2745	6.83 (5.77)		6.8 %	0.01 [-0.04, 0.06]
MacArthur 2002 (1)	451	6.2 (1.6)	422	7.6 (1.2)		6.4 %	-0.98 [-1.13, -0.84]
Morrell 2000	252	6.6 (5.1)	229	6.7 (5.6)		6.2 %	-0.02 [-0.20, 0.16]
Reid 2002	346	5.3 (5.4)	371	5.3 (4.84)		6.4 %	0.0 [-0.15, 0.15]
Sen 2006	63	7.2 (5)	60	7.6 (4.4)		4.9 %	-0.08 [-0.44, 0.27]
Weidner 2010	20	5.48 (4.64)	23	5.22 (3.93)		3.2 %	0.06 [-0.54, 0.66]
Zlotnick 2001	17	8.4 (7.8)	18	11.3 (4.8)		2.8 %	-0.44 [-1.11, 0.23]
Zlotnick 2006	46	9.39 (7.42)	40	10.1 (9.41)		4.3 %	-0.08 [-0.51, 0.34]
Subtotal (95% CI)	**5959**		**5055**			**87.4 %**	**-0.15 [-0.32, 0.02]**
Heterogeneity: Tau^2 = 0.10; Chi^2 = 191.27, df = 16 (P<0.00001); I^2 =92%							

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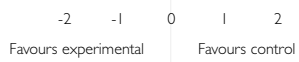
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Test for overall effect: Z = 1.78 (P = 0.075)							
Total (95% CI)	**6644**		**5732**			**100.0 %**	**-0.13 [-0.28, 0.01]**
Heterogeneity: Tau^2 = 0.08; Chi^2 = 197.27, df = 18 (P<0.00001); I^2 =91%							
Test for overall effect: Z = 1.77 (P = 0.077)							
Test for subgroup differences: Chi^2 = 3.50, df = 1 (P = 0.06), I^2 =71%							



(1) SDs provided by trial author

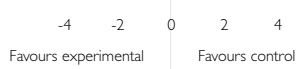
Analysis 10.1. Comparison 10 Subgroup analysis: variations in intervention onset, Outcome 1 Interventions with antenatal only component - mean depression scores.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 10 Subgroup analysis: variations in intervention onset

Outcome: 1 Interventions with antenatal only component - mean depression scores

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Fixed,95% CI	Weight	Std. Mean Difference IV,Fixed,95% CI
1 Short-term outcomes 9-16 weeks							
Zlotnick 2001	17	8.4 (7.8)	18	11.3 (4.8)		100.0 %	-0.44 [-1.11, 0.23]
Subtotal (95% CI)	**17**		**18**			**100.0 %**	**-0.44 [-1.11, 0.23]**
Heterogeneity: not applicable							
Test for overall effect: Z = 1.29 (P = 0.20)							
2 Intermediate outcomes 17-24 weeks							
Gjerdingen 2002	69	24 (2.8)	63	23.9 (2.9)		15.1 %	0.03 [-0.31, 0.38]
Ickovics 2011	491	10.2 (8.07)	296	9.7 (7.86)		84.9 %	0.06 [-0.08, 0.21]
Subtotal (95% CI)	**560**		**359**			**100.0 %**	**0.06 [-0.07, 0.19]**
Heterogeneity: Chi^2 = 0.02, df = 1 (P = 0.88); I^2 =0.0%							
Test for overall effect: Z = 0.86 (P = 0.39)							
3 Long-term outcomes > 24 weeks							



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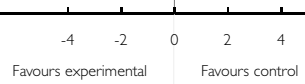
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Fixed,95% CI	Weight	Std. Mean Difference IV,Fixed,95% CI
Ickovics 2011	534	10.5 (8.32)	306	10.1 (8.12)		94.8 %	0.05 [-0.09, 0.19]
Weidner 2010	20	5.48 (4.64)	23	5.22 (3.93)		5.2 %	0.06 [-0.54, 0.66]
Subtotal (95% CI)	**554**		**329**			**100.0 %**	**0.05 [-0.09, 0.19]**

Heterogeneity: Chi^2 = 0.00, df = 1 (P = 0.97); I^2 =0.0%

Test for overall effect: Z = 0.70 (P = 0.48)

Test for subgroup differences: Chi^2 = 2.05, df = 2 (P = 0.36), I^2 =2%



Analysis 10.2. Comparison 10 Subgroup analysis: variations in intervention onset, Outcome 2 Interventions with antenatal only component - diagnosis of depression.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 10 Subgroup analysis: variations in intervention onset

Outcome: 2 Interventions with antenatal only component - diagnosis of depression

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Fixed,95% CI	Weight	Risk Ratio M-H,Fixed,95% CI
1 Short-term outcomes 9-16 weeks					
Zlotnick 2001	0/17	6/18		100.0 %	0.08 [0.00, 1.34]
Subtotal (95% CI)	**17**	**18**		**100.0 %**	**0.08 [0.00, 1.34]**

Total events: 0 (Experimental), 6 (Control)

Heterogeneity: not applicable

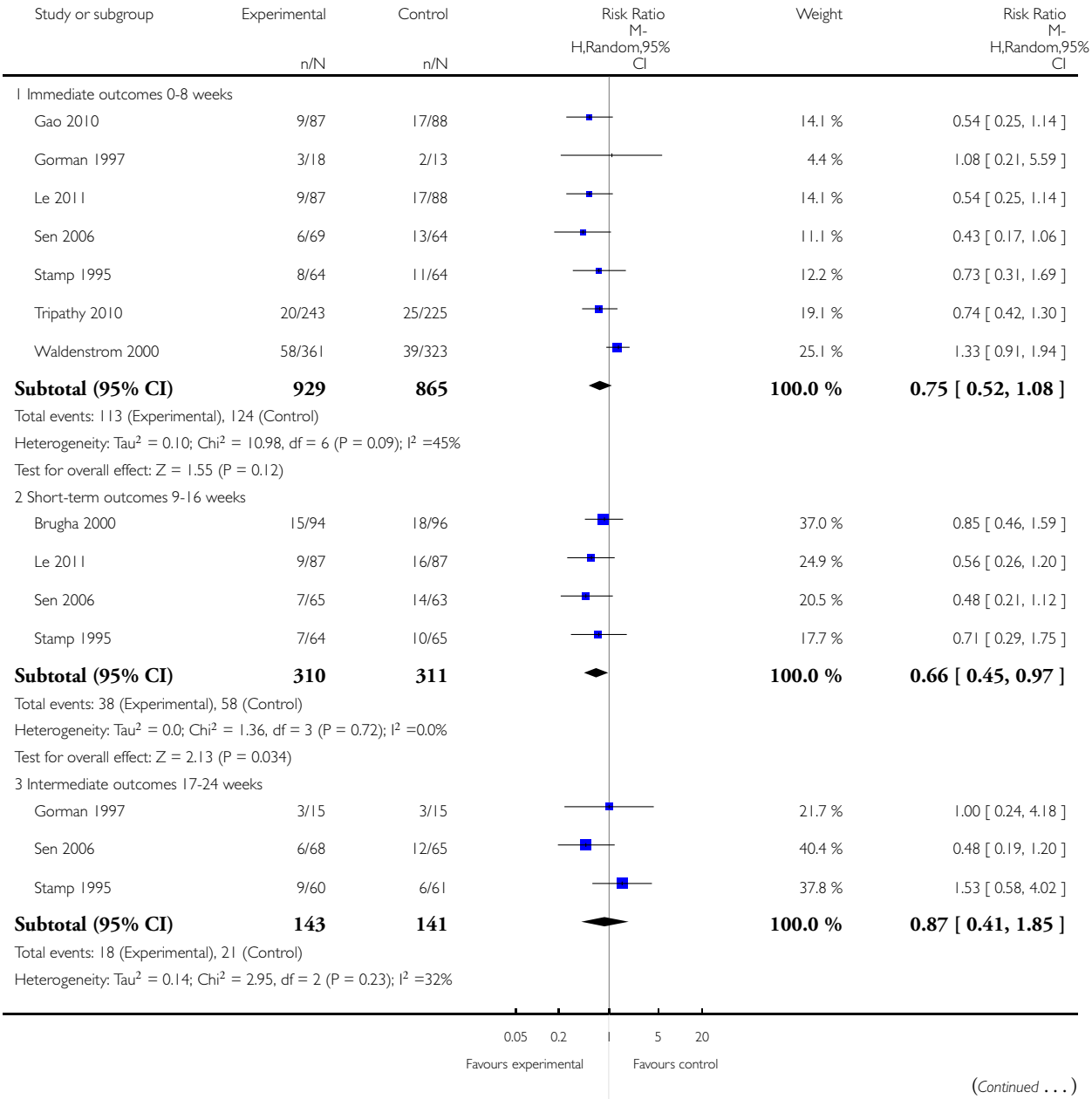
Test for overall effect: Z = 1.76 (P = 0.079)

Analysis 10.3. Comparison 10 Subgroup analysis: variations in intervention onset, Outcome 3 Interventions with antenatal and postnatal components - depressive symptomatology.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 10 Subgroup analysis: variations in intervention onset

Outcome: 3 Interventions with antenatal and postnatal components - depressive symptomatology



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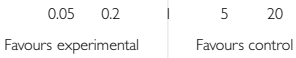
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Test for overall effect: Z = 0.36 (P = 0.72)					
4 Long-term outcomes > 24 weeks					
Le 2011	7/77	9/73		38.4 %	0.74 [0.29, 1.88]
Sen 2006	11/63	12/60		61.6 %	0.87 [0.42, 1.83]
Subtotal (95% CI)	**140**	**133**		**100.0 %**	**0.82 [0.46, 1.46]**
Total events: 18 (Experimental), 21 (Control)					
Heterogeneity: Tau² = 0.0; Chi² = 0.08, df = 1 (P = 0.78); I² =0.0%					
Test for overall effect: Z = 0.68 (P = 0.50)					



Analysis 10.4. Comparison 10 Subgroup analysis: variations in intervention onset, Outcome 4 Interventions with antenatal and postnatal components - mean depression scores.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 10 Subgroup analysis: variations in intervention onset

Outcome: 4 Interventions with antenatal and postnatal components - mean depression scores

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 Immediate outcomes 0-8 weeks							
Gao 2010	87	6.57 (4.07)	85	8.85 (4.5)		29.6 %	-0.53 [-0.83, -0.23]
Gorman 1997	18	7.2 (5.3)	15	7.5 (4.2)		12.7 %	-0.06 [-0.75, 0.62]
Le 2011	89	9.92 (7.96)	91	9.61 (8.55)		30.3 %	0.04 [-0.25, 0.33]
Sen 2006	69	7 (4.3)	64	7.5 (5.4)		27.3 %	-0.10 [-0.44, 0.24]
Subtotal (95% CI)	**263**		**255**			**100.0 %**	**-0.18 [-0.47, 0.11]**
Heterogeneity: Tau² = 0.05; Chi² = 7.50, df = 3 (P = 0.06); I² =60%							
Test for overall effect: Z = 1.22 (P = 0.22)							
2 Short-term outcomes 9-16 weeks							

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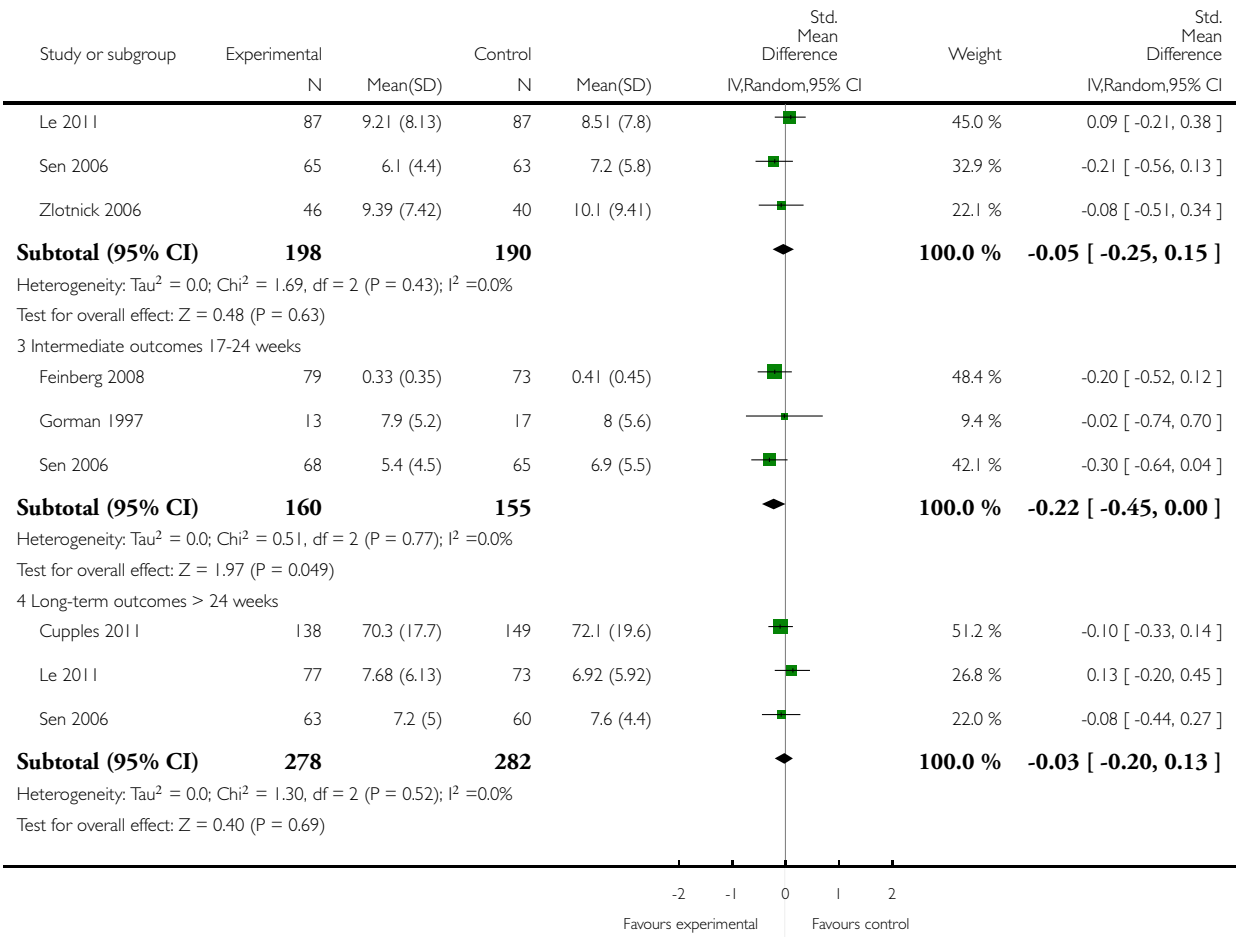
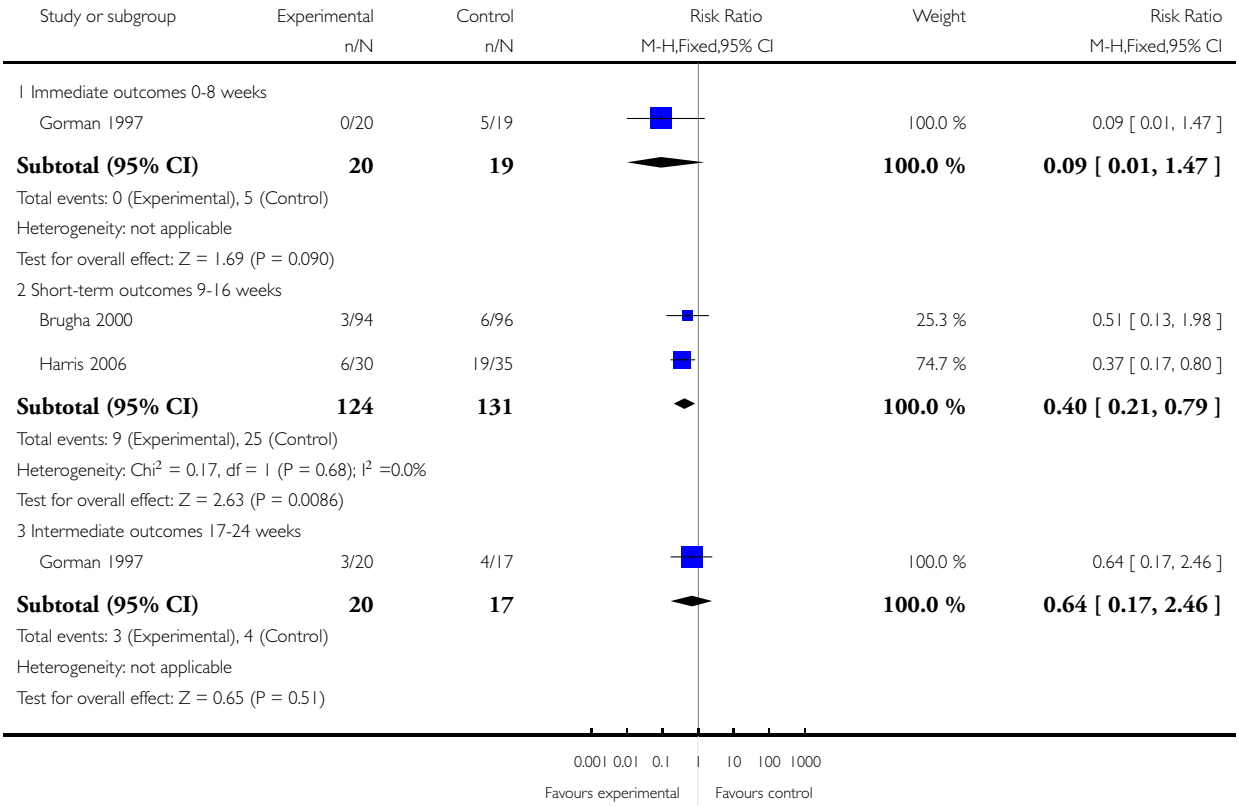


Analysis 10.5. Comparison 10 Subgroup analysis: variations in intervention onset, Outcome 5 Interventions with antenatal and postnatal components - diagnosis of depression.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 10 Subgroup analysis: variations in intervention onset

Outcome: 5 Interventions with antenatal and postnatal components - diagnosis of depression

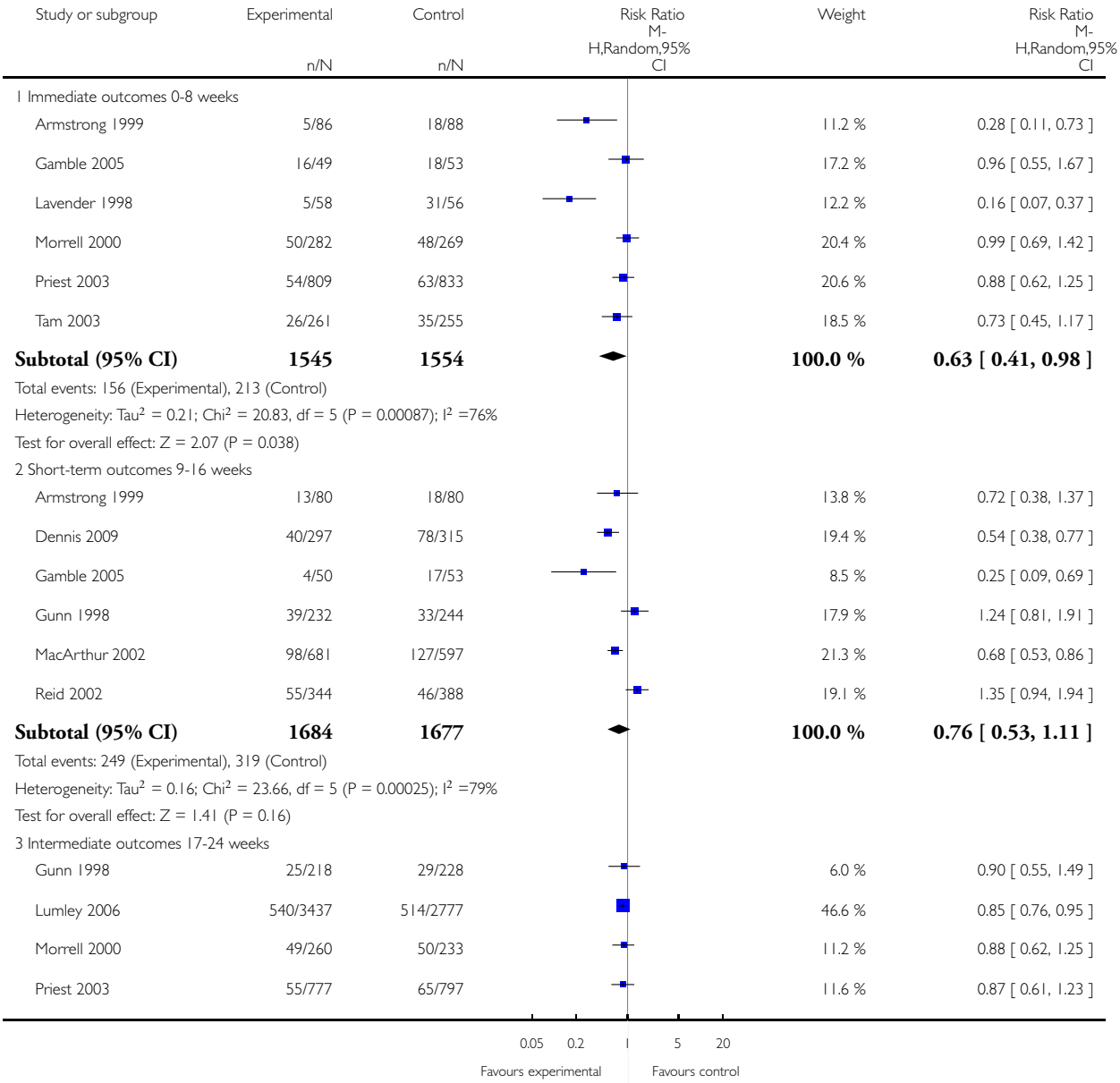


Analysis 10.6. Comparison 10 Subgroup analysis: variations in intervention onset, Outcome 6 Interventions with postnatal only component - depressive symptomatology.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 10 Subgroup analysis: variations in intervention onset

Outcome: 6 Interventions with postnatal only component - depressive symptomatology



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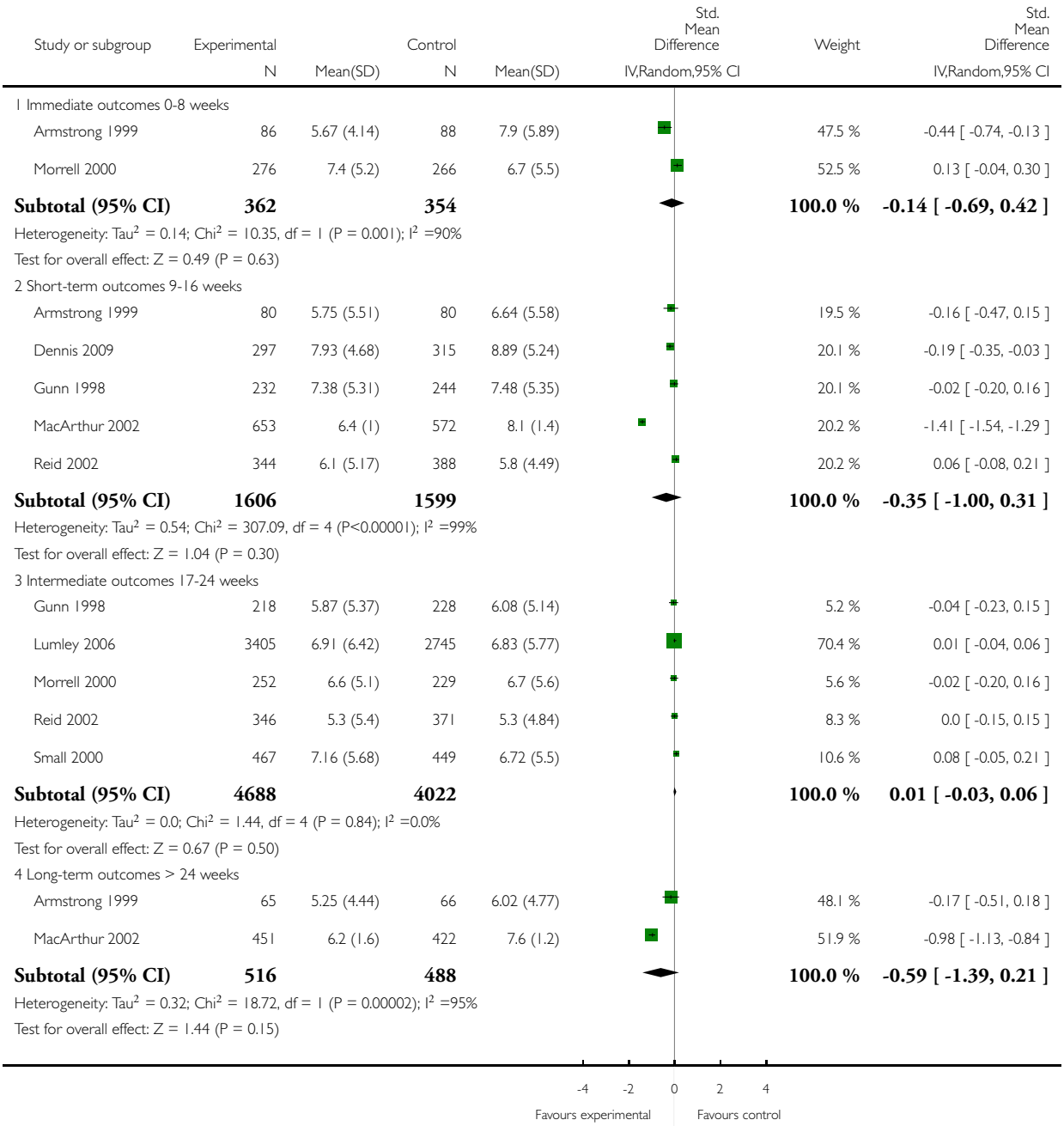
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Reid 2002	49/339	46/370		10.1 %	1.16 [0.80, 1.69]
Small 2000	81/467	65/449		14.6 %	1.20 [0.89, 1.62]
Subtotal (95% CI)	**5498**	**4854**		**100.0 %**	**0.93 [0.82, 1.06]**
Total events: 799 (Experimental), 769 (Control)					
Heterogeneity: $Tau^2 = 0.01$; $Chi^2 = 6.45$, df = 5 (P = 0.27); I^2 =22%					
Test for overall effect: Z = 1.10 (P = 0.27)					
4 Long-term outcomes >24 weeks					
Armstrong 1999	4/65	9/66		8.6 %	0.45 [0.15, 1.39]
MacArthur 2002	72/584	118/547		54.9 %	0.57 [0.44, 0.75]
Priest 2003	37/696	42/705		36.5 %	0.89 [0.58, 1.37]
Subtotal (95% CI)	**1345**	**1318**		**100.0 %**	**0.66 [0.46, 0.93]**
Total events: 113 (Experimental), 169 (Control)					
Heterogeneity: $Tau^2 = 0.04$; $Chi^2 = 3.36$, df = 2 (P = 0.19); I^2 =40%					
Test for overall effect: Z = 2.34 (P = 0.019)					

Analysis 10.7. Comparison 10 Subgroup analysis: variations in intervention onset, Outcome 7 Interventions with postnatal only component - mean depression scores.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 10 Subgroup analysis: variations in intervention onset

Outcome: 7 Interventions with postnatal only component - mean depression scores



Analysis 10.8. Comparison 10 Subgroup analysis: variations in intervention onset, Outcome 8 Interventions with postnatal only component - diagnosis of depression.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 10 Subgroup analysis: variations in intervention onset

Outcome: 8 Interventions with postnatal only component - diagnosis of depression

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Fixed,95% CI	Weight	Risk Ratio M-H,Fixed,95% CI
1 Short-term outcomes 9-16 weeks					
Dennis 2009	14/297	23/315		100.0 %	0.65 [0.34, 1.23]
Subtotal (95% CI)	**297**	**315**		**100.0 %**	**0.65 [0.34, 1.23]**
Total events: 14 (Experimental), 23 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 1.33 (P = 0.18)					

Analysis 10.9. Comparison 10 Subgroup analysis: variations in intervention onset, Outcome 9 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology: at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 10 Subgroup analysis: variations in intervention onset

Outcome: 9 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology: at final study assessment

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
1 Antenatal and postnatal intervention					
Brugha 2000	15/94	18/96		4.3 %	0.85 [0.46, 1.59]
Gao 2010	9/87	17/88		3.4 %	0.54 [0.25, 1.14]
Gorman 1997	3/15	3/15		1.2 %	1.00 [0.24, 4.18]
Le 2011	7/77	9/73		2.5 %	0.74 [0.29, 1.88]
Sen 2006	11/63	12/60		3.5 %	0.87 [0.42, 1.83]
Stamp 1995	9/60	6/61		2.3 %	1.53 [0.58, 4.02]
Tripathy 2010	20/243	25/225		4.8 %	0.74 [0.42, 1.30]
Waldenstrom 2000	58/361	39/323		6.8 %	1.33 [0.91, 1.94]
Subtotal (95% CI)	**1000**	**941**		**28.9 %**	**0.96 [0.75, 1.22]**
Total events: 132 (Experimental), 129 (Control)					
Heterogeneity: $Tau^2 = 0.01$; $Chi^2 = 7.41$, df = 7 (P = 0.39); $I^2 = 6\%$					
Test for overall effect: Z = 0.37 (P = 0.71)					
2 Postnatal intervention only					
Armstrong 1999	4/65	9/66		1.8 %	0.45 [0.15, 1.39]
Dennis 2009	40/297	78/315		7.2 %	0.54 [0.38, 0.77]
Gamble 2005	4/50	17/53		2.2 %	0.25 [0.09, 0.69]
Gunn 1998	25/218	29/228		5.4 %	0.90 [0.55, 1.49]
Lavender 1998	5/58	31/56		2.8 %	0.16 [0.07, 0.37]
Lumley 2006	540/3437	514/2777		9.9 %	0.85 [0.76, 0.95]
MacArthur 2002	72/584	118/547		8.2 %	0.57 [0.44, 0.75]
Morrell 2000	49/260	50/233		7.1 %	0.88 [0.62, 1.25]
Priest 2003	37/696	42/705		6.2 %	0.89 [0.58, 1.37]
Reid 2002	49/339	46/370		6.9 %	1.16 [0.80, 1.69]
Small 2000	81/467	65/449		7.8 %	1.20 [0.89, 1.62]
Tam 2003	26/261	35/255		5.7 %	0.73 [0.45, 1.17]

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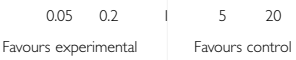
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Subtotal (95% CI)	**6732**	**6054**	◆	**71.1 %**	**0.73 [0.59, 0.90]**
Total events: 932 (Experimental), 1034 (Control)					
Heterogeneity: $Tau^2 = 0.09$; $Chi^2 = 43.23$, df = 11 (P<0.00001); I^2 =75%					
Test for overall effect: Z = 2.90 (P = 0.0037)					
Total (95% CI)	**7732**	**6995**	◆	**100.0 %**	**0.78 [0.66, 0.93]**
Total events: 1064 (Experimental), 1163 (Control)					
Heterogeneity: $Tau^2 = 0.07$; $Chi^2 = 52.68$, df = 19 (P = 0.00005); I^2 =64%					
Test for overall effect: Z = 2.82 (P = 0.0047)					
Test for subgroup differences: $Chi^2 = 2.72$, df = 1 (P = 0.10), I^2 =63%					



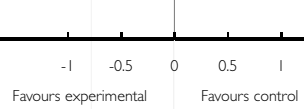
Analysis 10.10. Comparison 10 Subgroup analysis: variations in intervention onset, Outcome 10 TEST FOR SUBGROUP DIFFERENCES: mean depression scores: at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 10 Subgroup analysis: variations in intervention onset

Outcome: 10 TEST FOR SUBGROUP DIFFERENCES: mean depression scores: at final study assessment

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 Antenatal intervention only							
Gjerdingen 2002	69	24 (2.8)	63	23.9 (2.9)		5.0 %	0.03 [-0.31, 0.38]
Ickovics 2011	534	10.5 (8.32)	306	10.1 (8.12)		6.4 %	0.05 [-0.09, 0.19]
Weidner 2010	20	5.48 (4.64)	23	5.22 (3.93)		3.2 %	0.06 [-0.54, 0.66]
Zlotnick 2001	17	8.4 (7.8)	18	11.3 (4.8)		2.8 %	-0.44 [-1.11, 0.23]
Subtotal (95% CI)	**640**		**410**		◆	**17.3 %**	**0.03 [-0.09, 0.16]**
Heterogeneity: $Tau^2 = 0.0$; $Chi^2 = 1.96$, df = 3 (P = 0.58); I^2 =0.0%							
Test for overall effect: Z = 0.48 (P = 0.63)							
2 Antenatal and postnatal intervention							



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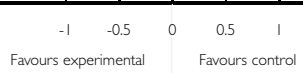
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Cupples 2011	138	70.3 (17.7)	149	72.1 (19.6)		5.8 %	-0.10 [-0.33, 0.14]
Feinberg 2008	79	0.33 (0.35)	73	0.41 (0.45)		5.1 %	-0.20 [-0.52, 0.12]
Gao 2010	87	6.57 (4.07)	85	8.85 (4.5)		5.3 %	-0.53 [-0.83, -0.23]
Gorman 1997	13	7.9 (5.2)	17	8 (5.6)		2.6 %	-0.02 [-0.74, 0.70]
Le 2011	77	7.68 (6.13)	73	6.92 (5.92)		5.1 %	0.13 [-0.20, 0.45]
Sen 2006	63	7.2 (5)	60	7.6 (4.4)		4.9 %	-0.08 [-0.44, 0.27]
Zlotnick 2006	46	9.39 (7.42)	40	10.1 (9.41)		4.3 %	-0.08 [-0.51, 0.34]
Subtotal (95% CI)	**503**		**497**			**33.1 %**	**-0.14 [-0.31, 0.02]**
Heterogeneity: Tau^2 = 0.02; Chi^2 = 9.46, df = 6 (P = 0.15); I^2 =37%							
Test for overall effect: Z = 1.73 (P = 0.084)							
3 Postnatal intervention only							
Armstrong 1999	65	5.25 (4.44)	66	6.02 (4.77)		5.0 %	-0.17 [-0.51, 0.18]
Dennis 2009	297	7.93 (4.68)	315	8.89 (5.24)		6.3 %	-0.19 [-0.35, -0.03]
Gunn 1998	218	5.87 (5.37)	228	6.08 (5.14)		6.1 %	-0.04 [-0.23, 0.15]
Lumley 2006	3405	6.91 (6.42)	2745	6.83 (5.77)		6.8 %	0.01 [-0.04, 0.06]
MacArthur 2002 (1)	451	6.2 (1.6)	422	7.6 (1.2)		6.4 %	-0.98 [-1.13, -0.84]
Morrell 2000	252	6.6 (5.1)	229	6.7 (5.6)		6.2 %	-0.02 [-0.20, 0.16]
Reid 2002	346	5.3 (5.4)	371	5.3 (4.84)		6.4 %	0.0 [-0.15, 0.15]
Small 2000	467	7.16 (5.68)	449	6.72 (5.5)		6.5 %	0.08 [-0.05, 0.21]
Subtotal (95% CI)	**5501**		**4825**			**49.6 %**	**-0.16 [-0.40, 0.08]**
Heterogeneity: Tau^2 = 0.11; Chi^2 = 181.86, df = 7 (P<0.00001); I^2 =96%							
Test for overall effect: Z = 1.33 (P = 0.18)							
Total (95% CI)	**6644**		**5732**			**100.0 %**	**-0.13 [-0.28, 0.01]**
Heterogeneity: Tau^2 = 0.08; Chi^2 = 197.27, df = 18 (P<0.00001); I^2 =91%							
Test for overall effect: Z = 1.77 (P = 0.077)							
Test for subgroup differences: Chi^2 = 3.71, df = 2 (P = 0.16), I^2 =46%							



(1) SDs provided by trial author

Analysis 10.11. Comparison 10 Subgroup analysis: variations in intervention onset, Outcome 11 TEST FOR SUBGROUP DIFFERENCES: diagnosis of depression: at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 10 Subgroup analysis: variations in intervention onset

Outcome: 11 TEST FOR SUBGROUP DIFFERENCES: diagnosis of depression: at final study assessment

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Fixed,95% CI	Weight	Risk Ratio M-H,Fixed,95% CI
1 Antenatal intervention only					
Zlotnick 2001	0/17	6/18		11.2 %	0.08 [0.00, 1.34]
Subtotal (95% CI)	**17**	**18**		**11.2 %**	**0.08 [0.00, 1.34]**
Total events: 0 (Experimental), 6 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 1.76 (P = 0.079)					
2 Antenatal and postnatal intervention					
Brugha 2000	3/94	6/96		10.5 %	0.51 [0.13, 1.98]
Gorman 1997	3/20	4/17		7.7 %	0.64 [0.17, 2.46]
Harris 2006	6/30	19/35		31.1 %	0.37 [0.17, 0.80]
Subtotal (95% CI)	**144**	**148**		**49.2 %**	**0.44 [0.24, 0.80]**
Total events: 12 (Experimental), 29 (Control)					
Heterogeneity: Chi^2 = 0.54, df = 2 (P = 0.76); I^2 =0.0%					
Test for overall effect: Z = 2.67 (P = 0.0076)					
3 Postnatal intervention only					
Dennis 2009	14/297	23/315		39.5 %	0.65 [0.34, 1.23]
Subtotal (95% CI)	**297**	**315**		**39.5 %**	**0.65 [0.34, 1.23]**
Total events: 14 (Experimental), 23 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 1.33 (P = 0.18)					
Total (95% CI)	**458**	**481**		**100.0 %**	**0.48 [0.31, 0.74]**
Total events: 26 (Experimental), 58 (Control)					
Heterogeneity: Chi^2 = 2.97, df = 4 (P = 0.56); I^2 =0.0%					
Test for overall effect: Z = 3.34 (P = 0.00085)					
Test for subgroup differences: Chi^2 = 2.39, df = 2 (P = 0.30), I^2 =16%					

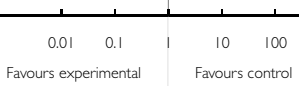
Analysis 11.1. Comparison 11 Subgroup analysis: variations in sample selection criteria, Outcome 1 Interventions for at-risk women - depressive symptomatology.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 11 Subgroup analysis: variations in sample selection criteria

Outcome: 1 Interventions for at-risk women - depressive symptomatology

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
1 Immediate outcomes 0-8 weeks					
Armstrong 1999	5/86	18/88		8.0 %	0.28 [0.11, 0.73]
Gamble 2005	16/49	18/53		23.3 %	0.96 [0.55, 1.67]
Gao 2010	9/87	17/88		12.6 %	0.54 [0.25, 1.14]
Gorman 1997	3/18	2/13		2.7 %	1.08 [0.21, 5.59]
Le 2011	9/87	17/88		12.6 %	0.54 [0.25, 1.14]
Stamp 1995	8/64	11/64		10.1 %	0.73 [0.31, 1.69]
Tam 2003	26/261	35/255		30.8 %	0.73 [0.45, 1.17]
Subtotal (95% CI)	**652**	**649**		**100.0 %**	**0.67 [0.51, 0.88]**
Total events: 76 (Experimental), 118 (Control)					
Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 6.07$, df = 6 (P = 0.42); $I^2 = 1\%$					
Test for overall effect: Z = 2.89 (P = 0.0038)					
2 Short-term outcomes 9-16 weeks					
Armstrong 1999	13/80	18/80		14.0 %	0.72 [0.38, 1.37]
Brugha 2000	15/94	18/96		14.9 %	0.85 [0.46, 1.59]
Dennis 2009	40/297	78/315		48.3 %	0.54 [0.38, 0.77]
Gamble 2005	4/50	17/53		5.6 %	0.25 [0.09, 0.69]
Le 2011	9/87	16/87		10.0 %	0.56 [0.26, 1.20]
Stamp 1995	7/64	10/65		7.1 %	0.71 [0.29, 1.75]
Subtotal (95% CI)	**672**	**696**		**100.0 %**	**0.59 [0.47, 0.75]**
Total events: 88 (Experimental), 157 (Control)					
Heterogeneity: $Tau^2 = 0.0$; $Chi^2 = 4.87$, df = 5 (P = 0.43); $I^2 = 0.0\%$					
Test for overall effect: Z = 4.26 (P = 0.000020)					
3 Intermediate outcomes 17-24 weeks					
Gorman 1997	3/15	3/15		31.5 %	1.00 [0.24, 4.18]
Stamp 1995	9/60	6/61		68.5 %	1.53 [0.58, 4.02]
Subtotal (95% CI)	**75**	**76**		**100.0 %**	**1.34 [0.60, 2.98]**
Total events: 12 (Experimental), 9 (Control)					



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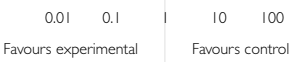
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Heterogeneity: Tau^2 = 0.0; Chi^2 = 0.23, df = 1 (P = 0.63); I^2 =0.0%					
Test for overall effect: Z = 0.71 (P = 0.48)					
4 Long-term outcomes > 24 weeks					
Armstrong 1999	4/65	9/66		40.7 %	0.45 [0.15, 1.39]
Le 2011	7/77	9/73		59.3 %	0.74 [0.29, 1.88]
Subtotal (95% CI)	**142**	**139**		**100.0 %**	**0.60 [0.29, 1.24]**
Total events: 11 (Experimental), 18 (Control)					
Heterogeneity: Tau^2 = 0.0; Chi^2 = 0.43, df = 1 (P = 0.51); I^2 =0.0%					
Test for overall effect: Z = 1.38 (P = 0.17)					

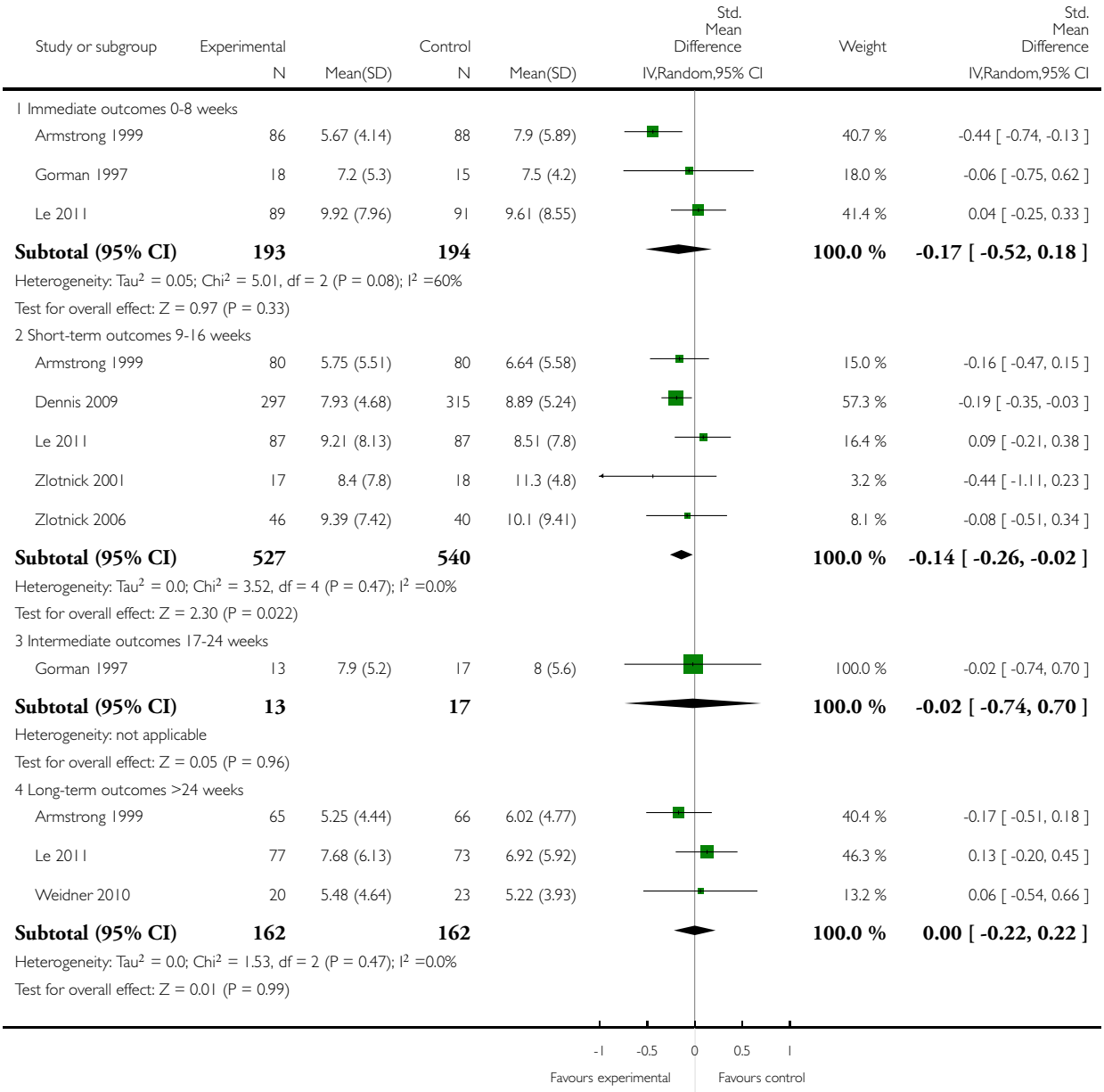


Analysis 11.2. Comparison 11 Subgroup analysis: variations in sample selection criteria, Outcome 2 Interventions for at-risk women - mean depression scores.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 11 Subgroup analysis: variations in sample selection criteria

Outcome: 2 Interventions for at-risk women - mean depression scores

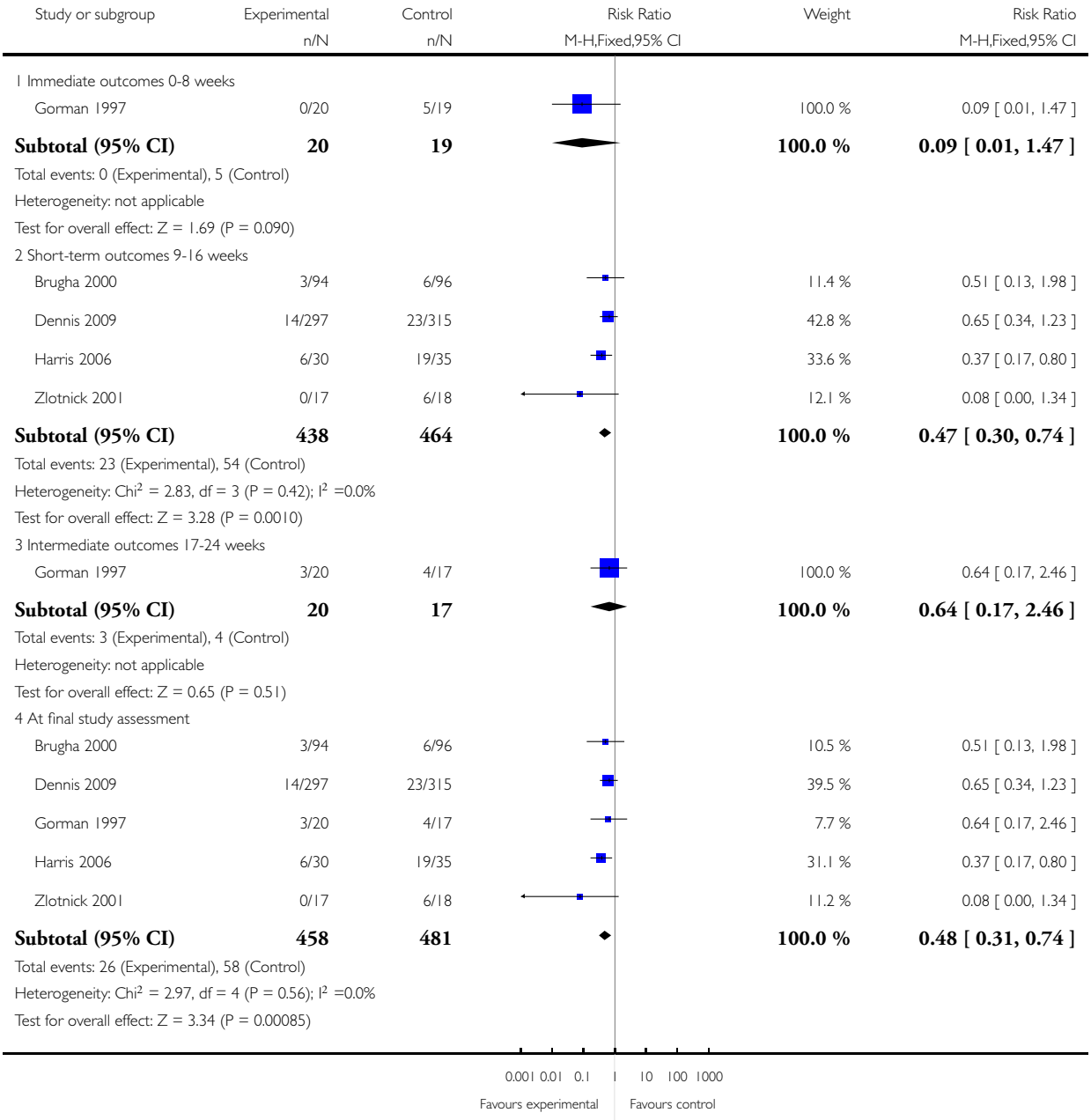


Analysis 11.3. Comparison 11 Subgroup analysis: variations in sample selection criteria, Outcome 3 Interventions for at-risk women - diagnosis of depression.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 11 Subgroup analysis: variations in sample selection criteria

Outcome: 3 Interventions for at-risk women - diagnosis of depression

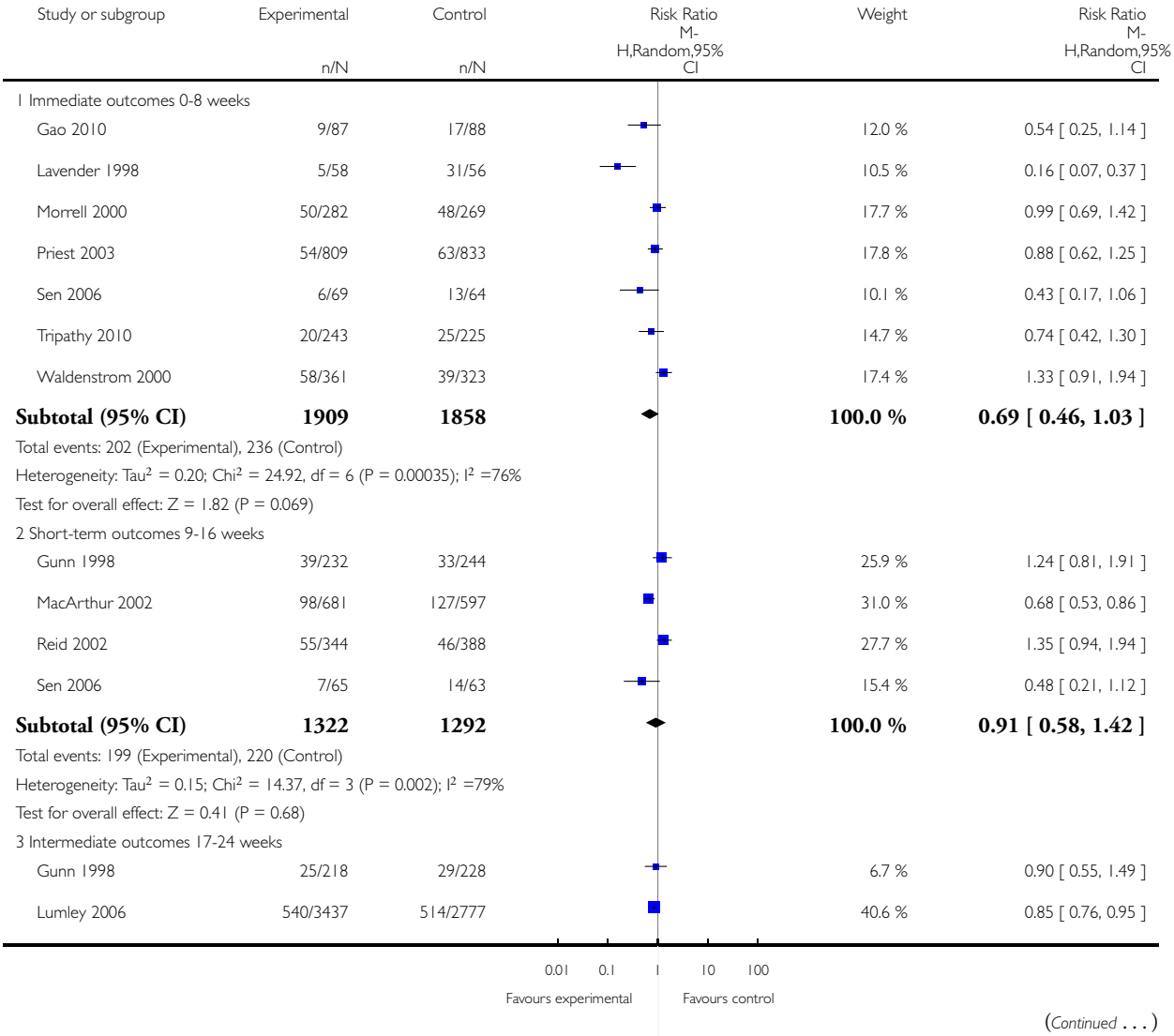


Analysis 11.4. Comparison 11 Subgroup analysis: variations in sample selection criteria, Outcome 4 Interventions for general population - depressive symptomatology.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 11 Subgroup analysis: variations in sample selection criteria

Outcome: 4 Interventions for general population - depressive symptomatology



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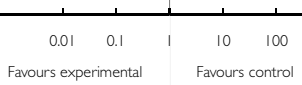
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Morrell 2000	49/260	50/233		12.0 %	0.88 [0.62, 1.25]
Priest 2003	55/777	65/797		12.4 %	0.87 [0.61, 1.23]
Reid 2002	49/339	46/370		10.9 %	1.16 [0.80, 1.69]
Sen 2006	6/68	12/65		2.2 %	0.48 [0.19, 1.20]
Small 2000	81/467	65/449		15.3 %	1.20 [0.89, 1.62]
Subtotal (95% CI)	**5566**	**4919**		**100.0 %**	**0.92 [0.81, 1.06]**
Total events: 805 (Experimental), 781 (Control)					
Heterogeneity: Tau^2 = 0.01; Chi^2 = 8.24, df = 6 (P = 0.22); I^2 =27%					
Test for overall effect: Z = 1.11 (P = 0.27)					
4 Long-term outcomes > 24 weeks					
MacArthur 2002	72/584	118/547		50.5 %	0.57 [0.44, 0.75]
Priest 2003	37/696	42/705		33.5 %	0.89 [0.58, 1.37]
Sen 2006	11/63	12/60		16.1 %	0.87 [0.42, 1.83]
Subtotal (95% CI)	**1343**	**1312**		**100.0 %**	**0.71 [0.51, 0.99]**
Total events: 120 (Experimental), 172 (Control)					
Heterogeneity: Tau^2 = 0.04; Chi^2 = 3.55, df = 2 (P = 0.17); I^2 =44%					
Test for overall effect: Z = 2.01 (P = 0.044)					

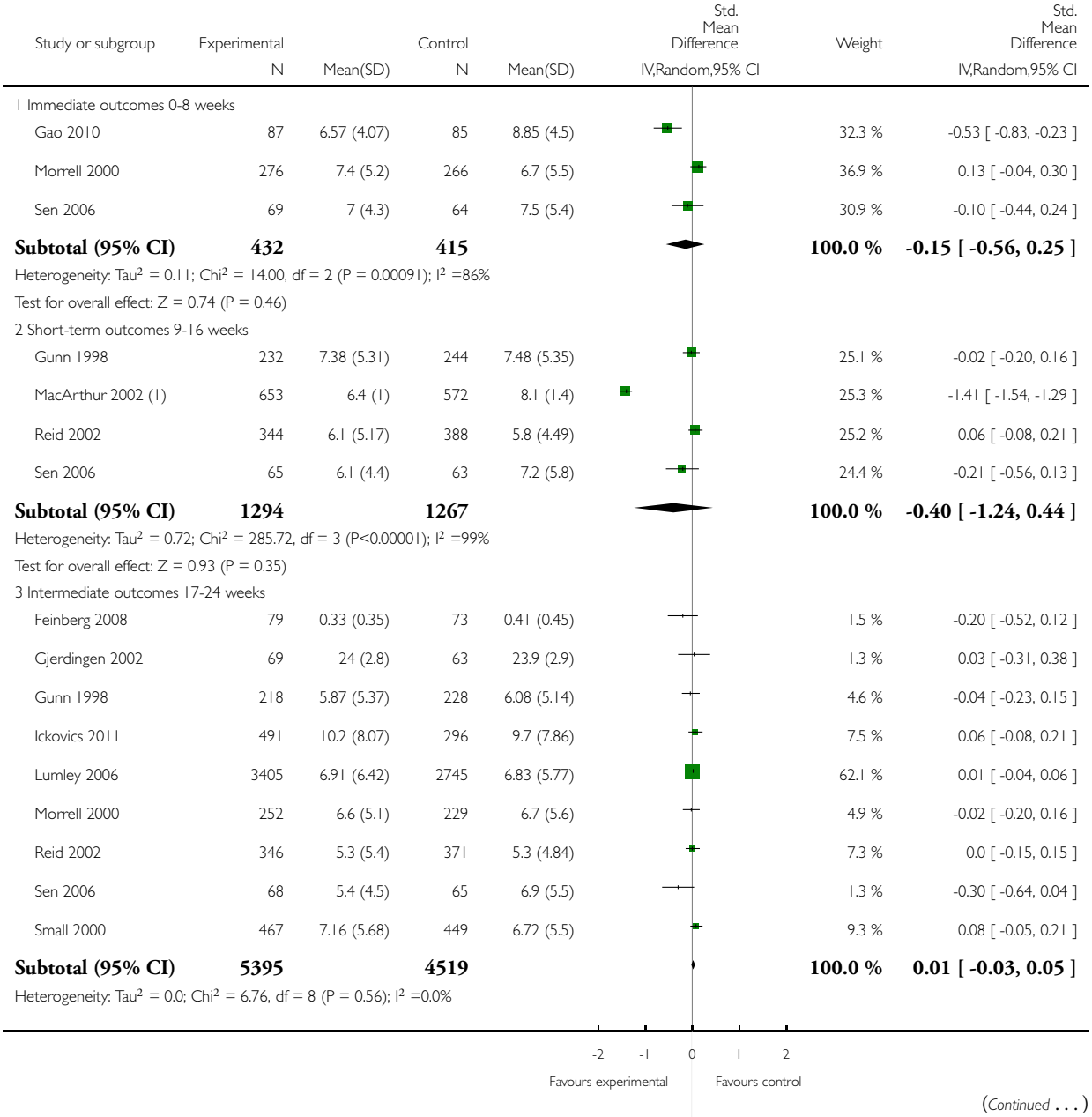


Analysis 11.5. Comparison 11 Subgroup analysis: variations in sample selection criteria, Outcome 5 Interventions for general population - mean depression scores.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 11 Subgroup analysis: variations in sample selection criteria

Outcome: 5 Interventions for general population - mean depression scores



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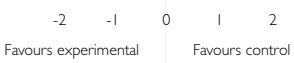
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Test for overall effect: Z = 0.54 (P = 0.59)							
4 Long-term outcomes > 24 weeks							
Cupples 2011	138	70.3 (17.7)	149	72.1 (19.6)		25.0 %	-0.10 [-0.33, 0.14]
Ickovics 2011	534	10.5 (8.32)	306	10.1 (8.12)		25.6 %	0.05 [-0.09, 0.19]
MacArthur 2002 (2)	451	6.2 (1.6)	422	7.6 (1.2)		25.6 %	-0.98 [-1.13, -0.84]
Sen 2006	63	7.2 (5)	60	7.6 (4.4)		23.8 %	-0.08 [-0.44, 0.27]
Subtotal (95% CI)	**1186**		**937**			**100.0 %**	**-0.28 [-0.87, 0.30]**
Heterogeneity: Tau^2 = 0.35; Chi^2 = 115.15, df = 3 (P<0.00001); I^2 =97%							
Test for overall effect: Z = 0.95 (P = 0.34)							



(1) SDs provided by trial author

(2) Sds provided by trial author

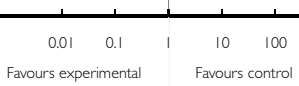
Analysis 11.6. Comparison 11 Subgroup analysis: variations in sample selection criteria, Outcome 6 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology: at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 11 Subgroup analysis: variations in sample selection criteria

Outcome: 6 TEST FOR SUBGROUP DIFFERENCES: depressive symptomatology: at final study assessment

Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
1 Interventions for at-risk women					
Armstrong 1999	4/65	9/66		1.8 %	0.45 [0.15, 1.39]
Brugha 2000	15/94	18/96		4.3 %	0.85 [0.46, 1.59]
Dennis 2009	40/297	78/315		7.2 %	0.54 [0.38, 0.77]
Gamble 2005	4/50	17/53		2.2 %	0.25 [0.09, 0.69]
Gorman 1997	3/15	3/15		1.2 %	1.00 [0.24, 4.18]
Le 2011	7/77	9/73		2.5 %	0.74 [0.29, 1.88]
Stamp 1995	9/60	6/61		2.3 %	1.53 [0.58, 4.02]
Tam 2003	26/261	35/255		5.7 %	0.73 [0.45, 1.17]
Subtotal (95% CI)	**919**	**934**		**27.2 %**	**0.66 [0.50, 0.88]**
Total events: 108 (Experimental), 175 (Control)					
Heterogeneity: $Tau^2 = 0.04$; $Chi^2 = 9.13$, df = 7 (P = 0.24); $I^2 = 23\%$					
Test for overall effect: Z = 2.86 (P = 0.0042)					
2 General population					
Gao 2010	9/87	17/88		3.4 %	0.54 [0.25, 1.14]
Gunn 1998	25/218	29/228		5.4 %	0.90 [0.55, 1.49]
Lavender 1998	5/58	31/56		2.8 %	0.16 [0.07, 0.37]
Lumley 2006	540/3437	514/2777		9.9 %	0.85 [0.76, 0.95]
MacArthur 2002	72/584	118/547		8.2 %	0.57 [0.44, 0.75]
Morrell 2000	49/260	50/233		7.1 %	0.88 [0.62, 1.25]
Priest 2003	37/696	42/705		6.2 %	0.89 [0.58, 1.37]
Reid 2002	49/339	46/370		6.9 %	1.16 [0.80, 1.69]
Sen 2006	11/63	12/60		3.5 %	0.87 [0.42, 1.83]
Small 2000	81/467	65/449		7.8 %	1.20 [0.89, 1.62]
Tripathy 2010	20/243	25/225		4.8 %	0.74 [0.42, 1.30]
Waldenstrom 2000	58/361	39/323		6.8 %	1.33 [0.91, 1.94]



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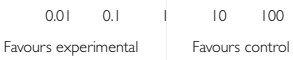
Study or subgroup	Experimental n/N	Control n/N	Risk Ratio M-H,Random,95% CI	Weight	Risk Ratio M-H,Random,95% CI
Subtotal (95% CI)	**6813**	**6061**	♦	**72.8 %**	**0.83 [0.68, 1.02]**
Total events: 956 (Experimental), 988 (Control)					
Heterogeneity: Tau^2 = 0.07; Chi^2 = 37.99, df = 11 (P = 0.00008); I^2 =71%					
Test for overall effect: Z = 1.79 (P = 0.073)					
Total (95% CI)	**7732**	**6995**	♦	**100.0 %**	**0.78 [0.66, 0.93]**
Total events: 1064 (Experimental), 1163 (Control)					
Heterogeneity: Tau^2 = 0.07; Chi^2 = 52.68, df = 19 (P = 0.00005); I^2 =64%					
Test for overall effect: Z = 2.82 (P = 0.0047)					
Test for subgroup differences: Chi^2 = 1.77, df = 1 (P = 0.18), I^2 =43%					



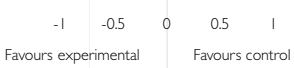
Analysis 11.7. Comparison 11 Subgroup analysis: variations in sample selection criteria, Outcome 7 TEST FOR SUBGROUP DIFFERENCES: mean depression scores: at final study assessment.

Review: Psychosocial and psychological interventions for preventing postpartum depression

Comparison: 11 Subgroup analysis: variations in sample selection criteria

Outcome: 7 TEST FOR SUBGROUP DIFFERENCES: mean depression scores: at final study assessment

Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
1 Interventions for at risk women							
Armstrong 1999	65	5.25 (4.44)	66	6.02 (4.77)		5.0 %	-0.17 [-0.51, 0.18]
Dennis 2009	297	7.93 (4.68)	315	8.89 (5.24)		6.3 %	-0.19 [-0.35, -0.03]
Gorman 1997	13	7.9 (5.2)	17	8 (5.6)		2.6 %	-0.02 [-0.74, 0.70]
Le 2011	77	7.68 (6.13)	73	6.92 (5.92)		5.1 %	0.13 [-0.20, 0.45]
Weidner 2010	20	5.48 (4.64)	23	5.22 (3.93)		3.2 %	0.06 [-0.54, 0.66]
Zlotnick 2001	17	8.4 (7.8)	18	11.3 (4.8)		2.8 %	-0.44 [-1.11, 0.23]
Zlotnick 2006	46	9.39 (7.42)	40	10.1 (9.41)		4.3 %	-0.08 [-0.51, 0.34]



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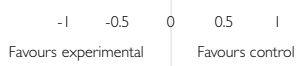
Study or subgroup	Experimental N	Mean(SD)	Control N	Mean(SD)	Std. Mean Difference IV,Random,95% CI	Weight	Std. Mean Difference IV,Random,95% CI
Subtotal (95% CI)	**535**		**552**			**29.2 %**	**-0.13 [-0.25, -0.01]**
Heterogeneity: Tau^2 = 0.0; Chi^2 = 4.42, df = 6 (P = 0.62); I^2 =0.0%							
Test for overall effect: Z = 2.13 (P = 0.033)							
2 General population							
Cupples 2011	138	70.3 (17.7)	149	72.1 (19.6)		5.8 %	-0.10 [-0.33, 0.14]
Feinberg 2008	79	0.33 (0.35)	73	0.41 (0.45)		5.1 %	-0.20 [-0.52, 0.12]
Gao 2010	87	6.57 (4.07)	85	8.85 (4.5)		5.3 %	-0.53 [-0.83, -0.23]
Gjerdingen 2002	69	24 (2.8)	63	23.9 (2.9)		5.0 %	0.03 [-0.31, 0.38]
Gunn 1998	218	5.87 (5.37)	228	6.08 (5.14)		6.1 %	-0.04 [-0.23, 0.15]
Ickovics 2011	534	10.5 (8.32)	306	10.1 (8.12)		6.4 %	0.05 [-0.09, 0.19]
Lumley 2006	3405	6.91 (6.42)	2745	6.83 (5.77)		6.8 %	0.01 [-0.04, 0.06]
MacArthur 2002 (1)	451	6.2 (1.6)	422	7.6 (1.2)		6.4 %	-0.98 [-1.13, -0.84]
Morrell 2000	252	6.6 (5.1)	229	6.7 (5.6)		6.2 %	-0.02 [-0.20, 0.16]
Reid 2002	346	5.3 (5.4)	371	5.3 (4.84)		6.4 %	0.0 [-0.15, 0.15]
Sen 2006	63	7.2 (5)	60	7.6 (4.4)		4.9 %	-0.08 [-0.44, 0.27]
Small 2000	467	7.16 (5.68)	449	6.72 (5.5)		6.5 %	0.08 [-0.05, 0.21]
Subtotal (95% CI)	**6109**		**5180**			**70.8 %**	**-0.15 [-0.33, 0.04]**
Heterogeneity: Tau^2 = 0.10; Chi^2 = 191.91, df = 11 (P<0.00001); I^2 =94%							
Test for overall effect: Z = 1.53 (P = 0.13)							
Total (95% CI)	**6644**		**5732**			**100.0 %**	**-0.13 [-0.28, 0.01]**
Heterogeneity: Tau^2 = 0.08; Chi^2 = 197.27, df = 18 (P<0.00001); I^2 =91%							
Test for overall effect: Z = 1.77 (P = 0.077)							
Test for subgroup differences: Chi^2 = 0.02, df = 1 (P = 0.88), I^2 =0.0%							



(1) SDs provided by trial author

APPENDICES

Appendix 1. Methods used to assess trials included in previous versions of this review

Selection of trials

Titles and abstracts of the electronic searches were reviewed by the primary reviewer. We independently evaluated trials under consideration for methodological quality and appropriateness for inclusion, without consideration of their results. We resolved uncertainties regarding the appropriateness for inclusion through discussion and consensus.

Methodological quality assessment

We assessed the quality of the trials that met the eligibility criteria using the following criteria:

1. generation of random allocation sequence: adequate, inadequate, unclear;
2. allocation concealment: A = adequate, B = unclear, C = inadequate;
3. blinding of participants: yes, no, inadequate, no information;
4. blinding of caregivers: yes, no, inadequate, no information;
5. blinding of outcome assessment: yes, no, inadequate or no information;
6. completeness of follow-up data (including any differential loss of participants from each group): A = less than 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;
7. analysis of participants in randomised groups.

We assigned a rating to each trial, compared results and discussed differences until we reached agreement. We have clearly described reasons for exclusion of any apparently eligible trial (*see* 'Characteristics of excluded studies' table).

Data extraction

We independently extracted data from trial reports using a pilot-tested data extraction form developed by the primary reviewer. Wherever necessary, we requested unpublished or missing data from the trial contact author. In addition, we sought data to allow an 'intention-to-treat' analysis. Data were entered into RevMan 2000 by one reviewer and double data entry was completed by the other reviewer or a research assistant.

Data synthesis

Trials using different preventive 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), we incorporated several depression rating scales or cut-off points. To address the potential measurement differences, we used a fixed-effect model to make direct comparisons between trials using the same rating scale and cut-off. If trials used different ways of measuring the same continuous outcome, we used standardised mean differences. We performed meta-analyses using relative risks as the measure of effect size for binary outcomes, and weighted mean differences for continuous outcome measures, both with 95% confidence intervals. We assessed the extent to which there were between-study differences including variations in the population or intervention.

We used fixed-effect meta-analysis to combine study data. We investigated heterogeneity by calculating I^2 statistics (Higgins 2002), and if this indicated a high level of heterogeneity among the trials included in an analysis ($I^2 > 50\%$), we used random-effects meta-analysis for an overall summary. Where we found high levels of heterogeneity, we explored these by sensitivity analyses excluding the trials most susceptible to bias based on the following quality assessment: (1) those with unclear allocation concealment (B); (2) high levels of postrandomisation losses or exclusions (D); or (3) unblinded outcome assessment or blinding of outcome assessment uncertain.

Subgroup analyses

We planned and completed the following six a priori subgroup analyses:

1. the effectiveness of specific types of psychosocial interventions;
2. the effectiveness of specific types of psychological interventions;

3. the effects of intervention mode (e.g. individual versus group-based interventions);
4. the effects of intervention onset (e.g. antenatal and postnatal interventions versus postnatal only interventions);
5. the effects of intervention duration (e.g. single-contact interventions versus multiple-contact interventions);
6. the effects of sample selection criteria (e.g. women with specific risk factors versus the general population).

WHAT'S NEW

Last assessed as up-to-date: 30 May 2012.

Date	Event	Description
31 May 2012	New search has been performed	Search updated: 30 November 2011. Since the last published version of the review we have included 11 new trials and excluded a further 45 trials; 13 reports are awaiting further assessment and there are two studies ongoing. The review now includes 30 trials (with data from 28) and excludes 79. We have obtained additional information from trial authors. Other revisions included numerous changes to bring the entire Review up-to-date in terms of current methodological guidelines. We altered the set up of the outcomes to clearly distinguish the time frames for the outcome measurements Changes to references in last review: Dennis 2004a, an ongoing trial in the last review is now Dennis 2009; Gamble 2003 (abstract) in last review is now Gamble 2005 (full publication); Gorman 2002 in last review is now Gorman 1997 and the title was changed to reflect the actual title listed in Dissertations and Theses; Henderson 1998 listed as excluded trial in last review is part of Priest 2003; Stamp 1996 listed as excluded trial in last review is part of Stamp 1995. An updated search was run on 31 December 2012 and 22 new reports have been added to Studies awaiting classification for consideration at the next update
10 April 2012	New citation required and conclusions have changed	The conclusions of the review have changed: Overall, women who received a psychosocial or psychological intervention were significantly less likely to develop postpartum depression compared with those receiving standard care

HISTORY

Protocol first published: Issue 1, 2001

Review first published: Issue 4, 2004

Date	Event	Description
8 May 2008	Amended	Converted to new review format.

CONTRIBUTIONS OF AUTHORS

Dr Dennis independently evaluated the trials for quality, extracted and entered data, completed the meta-analysis, and wrote the text of the review and the conclusion. T Dowswell contributed to data extraction in this update, and commented on data analysis and drafts of the text.

DECLARATIONS OF INTEREST

Dr Dennis is a principal investigator for a multi-site trial included in this review that evaluated the effect of telephone-based peer (mother-to-mother) support in the prevention of postpartum depression among mothers identified as high-risk (Dennis 2009).

SOURCES OF SUPPORT

Internal sources

- University of Toronto, Canada.

External sources

- NIHR, UK.

TD is supported by the NIHR NHS Cochrane Collaboration Programme grant scheme award for NHS-prioritised centrally-managed, pregnancy and childbirth systematic reviews: CPGS 10/4001/02

DIFFERENCES BETWEEN PROTOCOL AND REVIEW

The title of the previously published protocol was 'Psychosocial interventions for preventing postpartum depression'.

INDEX TERMS

Medical Subject Headings (MeSH)

Depression, Postpartum [*prevention & control]; Family Health; House Calls; Peer Group; Psychotherapy [methods]; Randomized Controlled Trials as Topic; Social Support

MeSH check words

Female; Humans