4. Effect of intervention duration (one time contact versus multiple-contact)
5. Effect of intervention training (for example, untrained versus trained)

Methods

Criteria for considering studies for this review

Types of studies

All referenced randomised and cluster-randomised control trials on psychosocial and psychological interventions aimed at preventing antenatal depression. We will also exclude quasi-randomised studies due to inherent selection bias. Mothers who have had an initial or previous multiple pregnancies will be included and sub-grouped where feasible.

Types of participants

All pregnant women who developed antenatal depression (as defined by study authors).

Types of interventions

This will include all comparisons of psychosocial and psychological interventions employed in the prevention of antepartum depression.
Psychosocial interventions such as postnatal classes, home visits (professional, trained and untrained community health workers and home based), continuity of care. We will focus on trials restricted to the antenatal period. All interventions extending from antenatal into the postpartum period will be evaluated for inclusion or exclusion where clearly demarcated on the basis of available data.
Comparisons will include,

1. All psychosocial and psychological interventions versus standard care
2. All psychosocial interventions versus standard care
3. All psychological interventions versus standard care

Subgroups such as the following:
1. Difference in psychosocial intervention
2. Difference in psychological intervention
3. Difference in service provider
4. Difference in professional provider
5. Difference in method
6. Difference in duration
7. Difference in onset of intervention
8. Difference in population

Outcomes

The following outcomes all as variously defined by study authors will be addressed.

Primary outcomes

(1) Antepartum depression
(2) Postpartum depression
(3) Neonatal/infant morbidity

Secondary outcomes

Maternal outcomes

(1) Maternal mortality
(2) Maternal morbidity including self-harm, suicide attempts
(3) Health services utilisation including outpatient and inpatient use of psychiatric unit, other health services
(4) Maternal-infant attachment
(5) Maternal attitudes towards motherhood
(6) Anxiety
(7) Stress

(8) Maternal competence
(9) Self-esteem
(10) General health
(11) Maternal dissatisfaction with intervention/satisfaction/preference
(12) Maternal perceived social support

(B) Infant outcomes

(13) Breastfeeding duration
(14) Breastfeeding level (exclusive, almost exclusive, high, partial, token, bottle-feeding)
(15) Infant health parameters including immunisation, accidental injury, non-accidental injury
(16) Infant developmental assessments
(17) Child abuse or neglect, or both
(18) Neonatal/infant mortality
(19) Gestational age at birth
(20) Preterm birth (less than 37 weeks' gestation)
(21) Birth weight
(22) Small-for-gestational age
(23) Quality of mothering

(C) Family outcomes

(24) Marital discord
(25) Marital separation/divorce
(26) Depression scale measurement.

Search methods for identification of reviews

We will search the Cochrane Central Register of Controlled Trials (CENTRAL), Medline, Embase, CINAHL, and all relevant databases using different combinations of the search terms: 'antepartum', depression', 'antenatal', depression', 'depressive disorder', depressive episode, 'psychological', 'psychosocial', 'psychotherapy', 'pregnancy' 'complications', 'therapy', 'psychology' with a focus on psychosocial and psychological interventions aimed at prevention. We will complement the search with references from the bibliographies of trials from search results and other systematic reviews. No language restrictions will be applied.

Data Collection and Analysis

Selection of Studies

For inclusion in this review, only randomised control trials on psychosocial and psychological interventions aimed at preventing antenatal depression in pregnancy will be considered. Titles and abstracts of selected studies will be evaluated for eligibility. Full texts of potentially relevant studies will be independently assessed for inclusion by two review authors. Disagreements if present will be resolved through consensus or, by reference to a third review author.

Data extraction and management

Data from published systematic reviews will be collected independently by two review authors using a modified data collection form.

Two review authors will independently conduct a two-pronged quality assessment to evaluate the methodology and quality of evidence of included studies.

For selected studies, we will evaluate risks of bias on the basis of the criteria in the *Cochrane Handbook for Systematic Reviews of Interventions*[18].

For assessing the quality of the evidence in the included studies, we will use the Grading of Recommendations Assessment, development and Evaluation (GRADE) approach. This approach evaluates studies based on four levels of quality, very low, low, moderate and high.

We will resolve disagreements if present, through discussion and consensus, or if necessary with a third review author.

Data synthesis

Based on the preventive strategy employed, studies will be analysed together if there were similarities and separately where clear differences are visible. The development or absence of antenatal depression will form the basis of the primary meta-analysis, also a fixed effect model will be used to compare trials with similar depression rating scales and cut off.

For binary outcomes, a relative risk ratio with 95% confidence intervals will be used. Where a continuous outcome is used, a standardised mean difference with 95% confidence interval will be used. Heterogeneity will be calculated using I^2 statistic (Higgins 2002), where I >50%, a random effects method will be used to create a summary. In this case, a sensitivity analysis will be explored using subgroups.

Sensitivity analysis

To explore the contribution of potential substantial differences to quality across studies, we will conduct a sensitivity analysis for primary outcomes based on allocation concealment and attrition domains. Inclusion and exclusion of studies with a low risk of bias and abstract-only formats will be analysed evaluated for potential differences.

An estimate of the intra-cluster correlation coefficient (ICC) method as described in the *Cochrane Handbook for Systematic Reviews of Interventions*[18] will be used to adjust for sample sizes from cluster-randomised trials, and abstract only studies further evaluated.

Acknowledgements

Grant provided by the Ministry of Health, Labor and Welfare of Japan, National Center for Child Health and Development 26A-5, Japan, Japan Agency for Medical Research and Development, Japan, AMED No.27300101.

References

1. Organization WH. The World Health Report 2001: Mental health: new understanding, new hope: World Health Organization; 2001.
2. Üstün T, Ayuso-Mateos JL, Chatterji S, Mathers C, Murray CJ. Global burden of depressive disorders in the year 2000. *The British journal of psychiatry* 2004; **184**(5): 386-392.
3. Kessler RC, Bromet EJ. The epidemiology of depression across cultures. *Annual review of public health* 2013; **34**: 119.
4. Gavin NI, Gaynes BN, Lohr KN, Meltzer-Brody S, Gartlehner G, Swinson T. Perinatal depression: a systematic review of prevalence and incidence. *Obstet Gynecol* 2005; **106**(5, Part 1): 1071-1083.
5. Bennett HA, Einarson A, Taddio A, Koren G, Einarson TR. Prevalence of depression during pregnancy: systematic review. *Obstet Gynecol* 2004; **103**(4): 698-709.
6. Oates M. Suicide: the leading cause of maternal death. *The British Journal of Psychiatry* 2003; **183**(4): 279-281.

7. Wachs TD, Black MM, Engle PL. Maternal depression: a global threat to children's health, development, and behavior and to human rights. *Child Development Perspectives* 2009; **3**(1): 51-59.
8. Sullivan PF, Neale MC, Kendler KS. Genetic epidemiology of major depression: review and meta-analysis. *American Journal of Psychiatry* 2014.
9. Diego MA, Field T, Hernandez-Reif M, Cullen C, Schanberg S, Kuhn C. Prepartum, postpartum, and chronic depression effects on newborns. *Psychiatry* 2004; **67**(1): 63-80.
10. Brugha TS, Wheatley S, Taub NA, et al. Pragmatic randomized trial of antenatal intervention to prevent post-natal depression by reducing psychosocial risk factors. *Psychological medicine* 2000; **30**(06): 1273-1281.
11. Raposa E, Hammen C, Brennan P, Najman J. The long-term effects of maternal depression: early childhood physical health as a pathway to offspring depression. *Journal of Adolescent Health* 2014; **54**(1): 88-93.
12. Pawlby S, Hay DF, Sharp D, Waters CS, O'Keane V. Antenatal depression predicts depression in adolescent offspring: prospective longitudinal community-based study. *Journal of affective disorders* 2009; **113**(3): 236-243.
13. Pearson RM, Evans J, Kounali D, et al. Maternal depression during pregnancy and the postnatal period: risks and possible mechanisms for offspring depression at age 18 years. *JAMA psychiatry* 2013; **70**(12): 1312-1319.
14. Riedel-Heller SG, Matschinger H, Angermeyer MC. Mental disorders—who and what might help? *Social psychiatry and psychiatric epidemiology* 2005; **40**(2): 167-174.
15. Dennis C, Creedy D. Psychosocial and psychological interventions for preventing postpartum depression.[review.]. *The Cochrane Database of Systematic Reviews* 2004; (4).
16. Dennis C-L. Psychosocial and psychological interventions for prevention of postnatal depression: systematic review. *Bmj* 2005; **331**(7507): 15.
17. Dennis CL, Hodnett E. Psychosocial and psychological interventions for treating postpartum depression. *Cochrane Database Syst Rev* 2007; **4**(4).
18. Higgins JP, Altman DG, Gøtzsche PC, et al. The Cochrane Collaboration's tool for assessing risk of bias in randomised trials. *Bmj* 2011; **343**: d5928.
19. Yonkers KA, Wisner KL, Stewart DE, Oberlander TF, Dell DL, Stotland N, et al. The management of depression during pregnancy: a report from the American Psychiatric Association and the American College of Obstetricians and Gynecologists. General hospital psychiatry. 2009; **31**(5): 403-13.
20. Organization WH. Thinking healthy: a manual for psychosocial management of perinatal depression, WHO generic field-trial version 1.0, 2015. 2015.

Ⅲ. 研究成果の刊行に関する一覧表

研究成果の刊行に関する一覧表

書籍

発表者氏名	書籍名	出版社名	出版地	ページ	出版年
立花良之	こころの問題を持つ母親のサポートハンドブック　気づいて・つないで・支える多職種地域連携	医歯薬出版	東京		印刷中

雑誌

発表者氏名	論文タイトル名	発表誌名	巻号	ページ	出版年
Tachibana Y Takehara K, Mori R, Kubo T., et al.	Antenatal Risk Factors of Postpartum Depression at 20 Weeks Gestation in a Japanese Sample: Psychosocial Perspectives from a Cohort Study in Tokyo	PLOS ONE	10.1371/journal.pone.0142410		2015
Konishi M, Tachibana Y, Takehara K, Kubo T., et al.	Self-Rated and Female Partner-Rated Scales in the Assessment of Paternal Prenatal Depression	Community Mental Health Journal	10.1007/s10597-015-9931-z		2015
立花良之	妊娠・出産・育児にかかわる各時期の保健福祉システムの現状とあり方	精神医学	58(2)	127-133	2016
立花良之	メンタルヘルス不調の母親の支援のゲートキーパーとしての小児科医の役割	日本小児科医会会報	50	142-145	2015
小泉典章, 伊藤真紀	精神保健と母子保健の協働	精神科治療学	30(2)	265-270	2015