Bilaga till rapport

SBU Utvärderar: Förlossningsrädsla, depression och ångest under graviditet, rapport nr 322 (2021)

Appendix 6 Table over included studies, interventions for anxiety and depression during pregnancy

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Bilaga 6: Included studies; interventions for depression and anxiety

Abbreviations

n= number of participants; Na= not available; RCT= randomized controlled trial; NRSI= Non-randomized study of interventions; I= intervention group; C= control group; CI= confidence interval; p= probability value; ITT= intention to treat; ns= not statistically significant;

EPDS=Edinburgh Postnatal Depression Scale (10 items from 0 to 3; total score from 0 to 30; higher scores indicating greater frequency of depression symptoms; cut-off ≥ 13 indicative of major depressive disorder)

EQ-5D = healthrelated quality of life on a EuroQol 5-dimensional scale (five dimensions: mobility, self-care, usual activities, pain/discomfort and anxiety/depression; 3 levels: no problems, some problems, and extreme problems; total score from 0 to 1)

CIS-R = Clinical Interview Schedule revised (13 domains rated from 0 to 4 and 1 domain rated from 0 to 5; total symptom score above a threshold of 12 indicates the individual has a diagnosable mental health disorder)

CES-D: Center for Epidemiological Studies Depression Scale (20-items rated from 0 to 3; higher scores indicating greater frequency of depression symptoms; total score from 0 to 60)

STAI: State-Trait Anxiety Inventory (STAI-S= state-version, STAI-T= trait-version;20 items rated from 1 to 4; higher scores indicating greater severity; total score from 20 to 80)

Brief STAI: Brief State Trait Anxiety Inventory (6-item questionnaire assessing acute feelings of distress or anxiety) produces scores similar to those obtained using the full 20-item STAI by multiplying the score by 20/6, i.e 20 to 80)

BDI-II: Beck Depression Inventory second version (21 items from 0 to 3; higher scores indicating greater severity; total score from 0 to 63)

BAI: Beck Anxiety Inventory (21 items from 0 to 3; higher scores indicating more symptoms; total score from 0 to 63)

PHQ-9: Patient Health Questionnaire (9 items from 0=”not at all” to 3=”nearly every day”; higher scores indicating higher frequency of symptoms; total score from 0 to 27);

GAD-7: Generalised Anxiety Disorder scale (7 items from 0=”not at all” to 3=”nearly every day”; higher scores indicating higher frequency of symptoms; total score from 0 to 21);

K-10: Kessler 10-item Psychological Distress scale (10 items from 1=”none of the time” to 5=”all of the time”; higher scores indicating higher frequency of symptoms; total score from 10 to 50)

WHOQOL: World Health Organisation Quality of Life scale (brief version) with four domains: physical health, psychological health, social relationships, and environment (26 items from 1 to 5 converted to 0-100; higher scores indicate higher quality of life; total score from 0 to 100)

MAAS: Maternal Antenatal Attachment Scale Inventory (19 items from 1 to 5; higher scores indicating higher attachment; total score from 19 to 95)

SF12: Short form questionnaire-12 items to assess quality of life (8 domains, 12 items with different gradings)

HDRS17: Hamilton Depression Rating Scale (17-items on a 3 or 5 point scale; higher scores indicating higher severity of depressive symptoms; total score from 0 to 52)

MFAS: Maternal Fetal Attachment Scale (24 items from 1 to 5; 5 subscales; higher scores indicating higher attachment; total score from 24 to 120)

CSQ: Client Satisfaction Questionnaire (CSQ; 8-items from 1 to 4, with higher scores indicating greater satisfaction; total score from 8 to 32)

SCL-20: Hopkins Symptom Checklist Depression Scale (20 items from the SCL-90 that relate specifically to depressive symptoms; total score from 0 to 4)

PSS-10: Perceived Stress Scale (10 items from 0 to 4 with higher scores indicating more perceived stress; total score from 0 to 40)

PSS-14: Perceived Stress Scale (14 items from 0 to 4 with higher scores indicating more perceived stress; total score from 0 to 56)

DASS-21: Perceived Stress Scale (contains 3 subscales depression/anxiety/stress; total of 21 items from 0 to 3 with 7 items each for each subscale; scores are multiplied by 2 with higher scores indicating more perceived depression/anxiety/stress; total score from 0 to 42 on each subscale)

Prenatal Attachment Inventory: used to assess the level, quality and intensity of the bond between a women and her foetus (scores range from 21 to 84 with higher scores indicating increased attachment quality/intensity).

Tables; Psykoeducation

Author **Year** **Country** **Ref #**	Trevillion 2020 UK (1)
Study design **Setting** **Recruitment** **Population** **Inclusion criteria**	RCT five large National Health Service (NHS) maternity units within South East London; these services serve ethnically and socially diverse populations. The NHS is a publicly-funded healthcare system in the UK, free at the point of use, to every legal resident in the UK. between 5th January 2015 and 30th June 2016; follow-up data collection ended on 10th April 2017. Women were recruited to the trial in one of three ways: (1) via their participation in a related study on well-being in pregnancy (Howard et al., 2018) (2) via midwives who considered a woman suitable for the trial; (3) through self-referral, via advertised study posters. n= 53 ; mean age (SD)= na; age 30 to 39, n/N(%)= 36/53(68%); nulliparous, n/N (%)= 27/53 (51%); gestational age at baseline, mean(SD)= 10.6 (2.06); Depression/anxiety: EPDS, median (min; max): I= 15 (5;25), C= 15 (4; 21) - women, aged ≥16 years, - pregnant (not exceeding 26 weeks gestation) -met criteria for DSM-IV depression on the Structured Clinical Interview (i.e. mild or moderate major depressive disorder, or mixed anxiety and depressive disorder) Exclusion criteria: receiving CBT or any other psychological therapy; taking antidepressants; suffering from psychosis, a current eating disorder, borderline personality disorder or a current

	post-traumatic stress disorder; reporting current suicidality; receiving care from secondary mental health services; unable to complete questionnaires or follow the trial workbook in English; unable to provide informed consent.
Follow up	- 14 weeks post-randomisation - 3 months post-delivery
Intervention	Guided Self-Help Workbook with homework (including psychoeducation) and 1 to 8 sessions with a Psychological Wellbeing Practitioner.
Participants (n)	Randomized n= 26, analyzed n= 24 (at 14 weeks post-randomization follow-up)
Drop-outs (n)	n=2
Comparison	Usual care
Participants (n)	Randomized n= 27, analyzed n= 26 (at 14 weeks post-randomization follow-up)
Drop-outs (n)	n=1
Outcomes	**Degree of symptoms** - Depression (EPDS; 0 to 30; higher=more), mean (SD): Pre-treatment: I= na; C= na Post-treatment: I= 9.50 (6.35); C= 12.27 (4.79) **Diagnosis based on cut-offs** - Depression (PHQ-9 score ≥10), n/N(%): Pre-treatment: I= 12/26 (46%); C= 15/26 (58%) Post-treatment: I= 7/23 (30%); C= 11/26 (42%) - Anxiety (GAD-7 score ≥8), n/N(%): Pre-treatment: I= 13/25 (52%); C= 16/27 (59%) Post-treatment: I= 6/24 (25%); C= 11/26 (58%) **Suicide** - na **Quality of life** - na **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - na
Comments	
Risk of bias	Low

Author	Loughnan
Year	2019
Country	Australia
Ref #	(2)
Study design	RCT
Setting	maternity hospitals in Sydney, Australia
Recruitment	Participants were recruited over approximately 12-months (05 October 2016 to 20 September 2017) by advertisements posted on social media websites, online forums and flyers. They were screened for inclusion criteria with a brief online screening questionnaire.
Population	n= 77 ; mean age (SD)= 31.61 (4.00) ; nulliparous, n (%) = 25 (32%) ; gestational age at intervention start= 21.66 (5.93); Probable diagnosis at baseline, n (%): depression= 10 (13%), anxiety= 14 (18%), comorbid= 41 (53%)
Inclusion criteria	(i) aged over 18 years

	(ii) fluent in written and spoken English (iii) Australian resident (iv) had computer and internet access (v) met criteria for a probable diagnosis of GAD and/or MDD (vi) willing to provide their name, telephone number, address, email address, and the name and contact details of their general practitioner (GP) (v) between 13 and 30 weeks pregnant Exclusion: (i) current substance abuse or dependence; (ii) current use of benzodiazepines; (iii) diagnosis of schizophrenia or bipolar disorder; (iv) they had commenced psychological therapy less than four weeks before intake assessment or had commenced medication for anxiety/depression less than eight weeks before intake assessment. Applicants reporting severe depression or current suicidality were excluded and referred to appropriate services
Follow up	baseline, post-treatment and four-week follow-up
Intervention	Unguided internet delivered CBT Brief, unguided; three lessons over a four-week period; introducing women to core CBT skills to help manage anxiety and depressive symptoms (MUMentum Pregnancy program).
Participants (n)	Randomized n= 43, analyzed n= 36
Drop-outs (n)	n=7
Comparison	treatment as usual usual care from their health services (i.e. continue with any course of treatment already specified at intake) but were withdrawn from the study if they commenced a new treatment during the course of the trial period.
Participants (n)	Randomized n= 44, analyzed n= 41
Drop-outs (n)	n=3
Outcomes	**Degree of symptoms** - Depression (PHQ-9; 0 to 27; higher=more), mean (SD): Pre-treatment: I= 11.69 (4.56); C= 11.05 (4.48) Post-treatment: I= 7.67 (4.51); C= 8.99 (4.56) 4-week follow-up: I= 6.75 (3.99); C= 8.25 (4.37)* - Depression (EPDS; 0 to 30; higher=more), mean (SD): Pre-treatment: I= 13.41 (4.31); C= 14.50 (4.23) Post-treatment: I= 10.01 (4.64); C= 10.97 (4.78) 4-week follow-up: I= 8.98 (4.43); C= 10.62 (4.67)* - Anxiety (GAD-7; 0 to 21; higher=more), mean (SD): Pre-treatment: I= 12.66 (4.69); C= 11.84 (4.58) Post-treatment: I= 7.49 (4.66); C= 9.43 (4.83) 4-week follow-up: I= 5.76 (4.22); C= 9.17 (4.51)* - Psychological distress (K-10; 10 to 50; higher=more), mean (SD): Pre-treatment: I= 27.00 (6.40); C= 26.37 (6.27) Post-treatment: I= 18.93 (5.03); C= 23.53 (5.21) 4-week follow-up: I= 20.02 (5.45); C= 22.98 (5.74) **Diagnosis** - na **Suicide** - na **Quality of life** - Physical health quality of life (WHOQOL; 0 to 100; higher=more), mean (SD): Pre-treatment: I= 57.81 (17.57); C= 56.58 (17.21) Post-treatment: I= 63.92 (14.04); C= 61.18 (14.61)

	4-week follow-up: I= 62.93 (14.34); C= 60.99 (15.29) - Psychological quality of life (WHOQOL; 0 to 100; higher=more), mean (SD): Pre-treatment: I= 50.39 (15.85); C= 50.44 (15.52) Post-treatment: I= 58.43 (13.55); C= 58.23 (14.47) 4-week follow-up: I= 62.44 (13.56); C= 60.49 (13.90) - Social quality of life (WHOQOL; 0 to 100; higher=more), mean (SD): Pre-treatment: I= 52.87 (22.48); C= 58.99 (22.02) Post-treatment: I= 59.17 (16.45); C= 63.95 (17.45) 4-week follow-up: I= 57.56 (16.95); C= 62.18 (17.89) - Environmental quality of life (WHOQOL; 0 to 100; higher=more), mean (SD): Pre-treatment: I= 69.53 (16.97); C= 71.30 (16.62) Post-treatment: I= 74.97 (11.59); C= 75.85 (12.57) 4-week follow-up: I= 74.84 (13.70); C= 74.86 (15.22) **Antenatal attachment** - Maternal Antenatal Attachment (MAAS; 19 to 95; higher=more), mean (SD): Pre-treatment: I= 70.44 (11.08); C= 69.92 (10.85) Post-treatment: I= 73.92 (9.37); C= 74.22 (10.10) 4-week follow-up: I= 77.14 (8.49); C= 75.62 (9.6) **Experience of treatment/Side effects/Sick leave** - na
Comments **Risk of bias**	 Low

Author **Year** **Country** **Ref #**	Lund 2019 South Africa (3)
Study design **Setting** **Recruitment** **Population** **Inclusion criteria** **Follow up**	RCT Participants were enrolled from October 2013 to October 2014, and followed up until May 2016 in the peri-urban settlement of Khayelitsha in Cape Town, South Africa, an area marked by high HIV prevalence, high levels of poverty, and unemployment. Pregnant women were recruited at two antenatal clinics in community health centres. Women were recruited during their first antenatal visit. n= 425; median age (Interquartile range): I= 27 (23–32), C= 27 (23–30) ; nulliparous= na; median gestational age at intervention start (Interquartile range): I= 18 (14–22), C= 18 (15–22) ; Depression (MINI diagnosis), n(%): I=91 (43.5), C= 85 (39.3) - aged 18 years or older - spoke isiXhosa - were resident in Khayelitsha - were no more than 28 weeks pregnant - did not require urgent medical or psychiatric attention - were able to give informed consent - scored 13 or more on the EPDS Exclusion criteria: Women with a diagnosis of schizophrenia or bipolar disorder were excluded. - 8 month gestation

	- 3 month postpartum (not reported here) - 12 month postpartum (not reported here)
Intervention **Participants (n)** **Drop-outs (n)**	Task-sharing psychological treatment six sessions; delivered by non-specialist community health workers who received five days of training by a clinical social worker Randomized n= 209, analyzed n= 133 n=76
Comparison **Participants (n)** **Drop-outs (n)**	Enhanced usual care monthly phone calls for three months, in addition to the routine antenatal health care provided by the clinic. Randomized n= 216, analyzed n= 155 n=61
Outcomes	**Degree of symptoms** - Depression (HDRS17; 0 to 52; higher=more), mean (SD): Pre-treatment (n: I=184, C= 200): I= 15.7 (4.82); C= 15.5 (4.69) Post-treatment (n: I=133, C=155): I= 12.6 (5.51); C= 12.8 (4.53) - Depression (EPDS; 0 to 30; higher=more), mean (SD): Pre-treatment: I= na, C= na [median (Interquartile range): I= 17 (15–20), C= 17 (14–19)] Post-treatment: I= 9.6 (5.79), C= 11.1 (6.25) **Diagnosis** - depressed (MINI diagnosis), n/N (%): Pre-treatment: I=91/209 (43.5), C= 85/216 (39.3) Post-treatment: I= 26/133 (19.5), C= 39/155 (25.2) **Suicide** - High risk for suicide, n/N(%): Pre-treatment: I= 41/209 (19.6), C= 33/216 (15.3) Post-treatment: I= 10/133 (7.5), C= 6/155 (3.9) **Quality of life** - na **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - na
Comments **Risk of bias**	 Moderate

Author **Year** **Country** **Ref #**	Khodakarami 2017 Iran (4)
Study design **Setting** **Recruitment** **Population**	RCT Fatemieh Teaching Hospital, Hamedan, Iran, during March 2015-July 2015. This study was conducted in two phases; in phase I of the study, all the healthy pregnant women who enrolled in physiological childbirth preparation classes in Fatemieh Hospital were selected through convenience sampling and were screened for depression, anxiety, and stress (n=182). In phase II of the study, 80 pregnant women were randomly selected from among pregnant women who were screened. Then, they were randomly assigned to groups. n= 80; mean age (SD): I= 26.94 (4.34), C= 25.89 (5.18); nulliparous= na; gestational age at intervention start= see inclusion criteria; Depression/anxiety: see outcomes

Inclusion criteria	- singleton pregnancies - gestation age between 20 to 24 weeks - Pregnant women with depression score between 10 and 20 (DASS-21) - anxiety score between 8 and 14 (DASS-21) - stress score between 15 and 25 (DASS-21) Exclusion criteria: history of gestational complications (physical and mental), medication use during pregnancy, and psychiatric drug use, unable to attend the program due to complications related to pregnancy and unwillingness to continue participation in the study. Pregnant women who had depression, anxiety, and stress scores within the range of severe and very severe were referred to a psychiatrist for evaluation.
Follow up	- after intervention (in 24-26 weeks of gestation) - follow-up two months later (in 32-36 weeks of gestation)
Intervention	Group counseling with spiritual approach: 8 sessions for 60 minutes each; including psychoeducation, muscle relaxation and breathing, mental imagination, coping mechanisms, with emphasis on Islamic teachings.
Participants (n)	Randomized n= 40, analyzed n= 38
Drop-outs (n)	n=2
Comparison	Routine prenatal training
Participants (n)	Randomized n=40, analyzed n= 38
Drop-outs (n)	n= 2
Outcomes	**Degree of symptoms** - Depression (DASS-21; 0 to 42; higher=more), mean (SD): Pre-treatment: I= 13.25 (4.93); C= 15.17 (3.81) Post-treatment: I= 18.15 (3.2); C= 13.94 (3.06) 2-month follow-up: I= 13.95 (2.32); C= 18.38 (3.10) - Anxiety (DASS-21; 0 to 42; higher=more), mean (SD): Pre-treatment: I= 13.43 (3.98); C= 14.17 (4.03) Post-treatment: I= 18.41 (3.73); C= 14.17 (2.92) 2-month follow-up: I= 14.2 (2.72); C= 18.69 (3.55) - Stress DASS-21; 0 to 42; higher=more), mean (SD): Pre-treatment: I=16.35 (4.75); C= 17.89 (4.11) Post-treatment: I= 19.89 (3.46); C= 16.98 (2.22) 2-month follow-up: I= 17 (2.25); C= 20.15 (3.3) **Diagnosis** - na **Suicide** - na **Quality of life** - na **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - na
Comments	
Risk of bias	Moderate

Author	McGregor
Year	2014

Country **Ref #**	Canada (5)
Study design **Setting** **Recruitment** **Population** **Inclusion criteria** **Follow up**	NRSI Family practice health centre in Toronto, Canada, between December 2006 and October 2007 Women were recruited from a family practice health centre in Toronto, Canada, between December 2006 and October 2007. n=42 ; mean age (SD)= na; 25–34 years of age, n(%): I=13 (61.9%), C= 14 (66.7%) ; nulliparous, n(%): I= 7 (33.3), C= 6 (28.6) ; gestational age at intervention start= na ; Depression/anxiety: see outcome section - pregnant women between 16 and 28 weeks gestation - at least 16 years of age - able to speak English - scored >9 on the Edinburgh Postnatal Depression Scale (EPDS) Exclusion criteria included current use of antidepressant or antipsychotic medication, multiple pregnancy and high-risk pregnancy. - post-treatment: 38 weeks gestation - follow-up: 6 weeks post-partum (not reported here)
Intervention **Participants (n)** **Drop-outs (n)**	CBT six sessions of CBT lasting 10 min delivered by the physician providing obstetrical care. The physician underwent a 2-h training session provided by a licensed psychologist who specialized in CBT. Lessons contained: education on antenatal depression and the cognitive behavioural model, cognitive restructuring. Randomized n=21, analyzed n= 21 n=0
Comparison **Participants (n)** **Drop-outs (n)**	Care as usual Randomized n=21 , analyzed n= 21 n=0
Outcomes	**Degree of symptoms** - Depression (EPDS; 0 to 30; higher=more), mean (SD): Pre-treatment: I= 12.48 (2.84) ; C= 12.38 (3.26) Post-treatment: I= 7.86 (5.15); C= 9.62 (4.95) Time x Group (including the 6v follow-up) p= ns - State Anxiety (STAI; 20 to 80; higher=more), mean (SD): Pre-treatment: I= 45.38 (9.31); C= 45.29 (11.52) Post-treatment: I= 37.62 (11.08); C= 42.0 (12.62) Time x Group (including the 6v follow-up) p= ns **Diagnosis based on cut-offs** - Depression (EPDS >12), n (%) Pre-treatment: I= na; C= na Post-treatment: I= 3 (14.3); C= 3 (14.3) OR (95%CI)=1.0 (0.18 to 5.63); p= 0.10 Depression (EPDS >9), n (%) Pre-treatment: I= na; C= na Post-treatment: I= 5 (23.8); C= 9 (42.3) OR (95%CI)= 0.42 (0.11 to 1.57); p= 0.19 **Suicide** - na **Quality of life**

	- na **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - Treatment satisfaction in the intervention group, n(%) Intervention beneficial: - Yes 18 (94.7) - No 1 (5.3) Intervention needs met: - Almost all needs met 5 (26.3) - Most needs met 12 (63.2) - Few needs met 1 (5.3) - No needs met 1 (5.3) Would recommend intervention: - Yes, definitely 10 (52.6) - Yes, generally 8 (42.1) - No, not really 1 (5.3) - No, definitely not 0 (0.0) General satisfaction: - Very satisfied 11 (57.9) - Mostly satisfied 8 (42.1) - Somewhat dissatisfied 0 (0.0) - Very dissatisfied 0 (0.0)
Comments **Risk of bias**	 Moderate

1.1 **Cognitive behavioral therapy (CBT)**

Author **Year** **Country** **Ref #**	Burger 2019 Netherlands (6)
Study design **Setting** **Recruitment** **Population** **Inclusion criteria** **Follow up**	RCT 109 midwifery practices and 9 obstetrics and gynaecology departments of hospitals in The Netherlands, between 1 May 2011 and 1 September 2014. All women during their booking visit at the collaborating practices between 10 and 12 weeks of pregnancy, which is part of standard care, were screened. n= 282 ; mean age (SD): I= 33.4 (4.6), C= 32.1 (4.5) ; nulliparous, n (%): I=140-70= 70 (50%), C= 142-73=69 (49%) ; gestational age at baseline= 12 weeks; Depression (EPDS score ≥12), n/N (%): I= 45/135 (33.3%), C= 43/137 (31.4%); Anxiety (STAI score ≥42), n/N (%): I= 120/138 (87.0%), C= 119/137 (86.9%) - at least moderate anxiety (score ≥42 on the STAI) - at least moderate depression (score ≥12 on the EPDS) Exclusion croteria: substantial physical disease, multiple pregnancy, high suicide risk on the MINIInternational Neuropsychiatric Interview, a history of bipolar disorder, psychoses or manic disorder, had misused substances, were receiving psychotherapy or did not speak Dutch. - Baseline (at 12 weeks' gestation) - 24 weeks' gestation - 36 weeks' gestation - postnatally (6 weeks to 18 month)
Intervention	Cognitive-behavioural therapy

	10–14 individual sessions, of which 6–10 were intended to be delivered during pregnancy. Sessions were scheduled from 20 weeks' gestation up to 3 months postpartum; delivered by licensed psychologists with at least 2 years' postdoctoral training including CBT and CBT supervision.
Participants (n)	Randomized n= 140, analyzed n= 98
Drop-outs (n)	n=42
Comparison	care as usual
Participants (n)	Randomized n=142, analyzed n= 108
Drop-outs (n)	n=34
Outcomes	**Degree of symptoms** - Anxiety (STAI; 20 to 80; higher=more), mean (SD): Pre-treatment: I= 48.6(8.7), C= 48.5 (8.4) 36 weeks' gestation: I=43.2 (10.6), C= 41.5 (12.6) - Depression (EPDS; 0 to 30; higher=more), mean (SD): Pre-treatment: I= 9.8 (4.1), C= 9.7 (4.1) 36 weeks' gestation: I= 9.4 (4.6), C= 8.3 (4.6) **Diagnosis** -na **Suicide** - **na** **Quality of life** -na **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - na
Comments	Post hoc subgroup analyses revealed an indication for adverse effects of CBT on the infant's gestational age at delivery when mothers had anxiety disorder or PTSD.
Risk of bias	Low

Author	Forsell
Year	2017
Country	Sweden
Ref #	(7)
Study design	RCT
Setting	Sweden
Recruitment	Participants were recruited by advertisements on social media websites, in blogs, online forums and newspapers. Information, posters and flyers were also distributed to maternity clinics all over Sweden. The study also featured in an article in the midwives' association's newsletter as well as a popular commercial pregnancy magazine. The study was also promoted on the website of the Internet Psychiatry Clinic in Stockholm.
Population	n=42 ; mean age (SD): I=31.2 (3.7), C= 30.8 (5.3); nulliparous: I= 46%, C= 25% ; gestational age in weeks at screening, mean (SD): I=15.9 (6.5), C=18.6 (6.5) ; Depression/anxiety: see outcomes
Inclusion criteria	- 18 years or older - adequate access and ability to use the internet and a mobile phone - adequate ability to speak, read and write Swedish - meet DSM diagnostic criteria for major depression - a screening score on the MADRS-S between 15 and 35. - at least 10 and no more than 28 weeks pregnant

	Exclusion criteria: Women scoring 5 or 6 on MADRS-S item 9 ("I am actually convinced that my only way out is to die, and I think a lot about how to best go about killing myself"), ongoing psychological treatments that could potentially interfere with the current treatment, any current psychiatric or medical condition that was deemed as a significant contraindication for participation (for example psychosis or advanced cancer), a markedly high risk of terminated pregnancy or severe pregnancy related complications (for example preeclampsia). Current antidepressant medication was allowed if the treatment and dose had been stable for at least three weeks.
Follow up	
Intervention	ICBT guided self-help treatment with reading material, assessments, homework and work-sheets. Patients also had a CBT-trained, and regularly supervised, therapist providing regular feedback, encouragements and support in written messages mirroring the interventions
Participants (n)	Randomized n=22, analyzed n= 19
Drop-outs (n)	n=3
Comparison	Treatment as usual continuation of their current maternity care for 10 weeks, followed by optional ICBT, or to be given ICBT immediately as an add-on to maternity care)
Participants (n)	Randomized n=20, analyzed n= 17
Drop-outs (n)	n=3
Outcomes	**Degree of symptoms** - Depression (MADRS-S; 0 to 54; higher=more), mean (SD): Pre-treatment: I= 24.2 (5.2); C= 24.4 (5.9) Post-treatment: I= 14.3 (4.6); C= 21.1 (6.4) - Depression (EPDS; 0 to 30; higher=more), mean (SD): Pre-treatment: I= 16.3 (3.9); C= 18.5 (4.5) Post-treatment: I= 12.4 (4.9); C= 15.0 (4.9) - Anxiety (GAD-7; 0 to 21; higher=more), mean (SD): Pre-treatment: I= 11.6 (4.5); C= 13.1 (5.7) Post-treatment: I= 7.2 (4.1); C= 10.1 (5.3) **Diagnosis based on cut-offs** - Depression remission (i.e. MADRS-S score<13), n/N: I= 7/22, C= 2/20 - Depression (calculated from depression remission) I= 22-7/22=15/22, C=20-2/20=18/20 **Suicide** - na **Quality of life** - EQ-5D (0 to 1; higher=more) Pre-treatment: I= 0.4 (0.3); C= 0.4 (0.4) Post-treatment: I= 0.4 (0.4); C= 0.4 (0.3) **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - satisfaction with treatment (Client Satisfaction Questionnaire-8 item version; CSQ-8; 8 to 32; higher=more), mean (SD): - Negative effects (feeling stressed about not keeping up with the treatment program), n/N: I=2/22, C= na

	- Deterioration (i.e. 4 points or more increase on the MADRS-S), n/N: I=1/22, C= 3/20
Comments **Risk of bias**	 Moderate

Author **Year** **Country** **Ref #**	Milgrom 2015 Australia (8)
Study design **Setting** **Recruitment**	RCT Northern Hospital antenatal clinic, Melbourne, and other local health services between March 2008 and February 2010. Women were recruited via screening programmes at the Northern Hospital and Mercy Hospital for Women, Melbourne, Australia. In addition, the study was advertised widely, and appropriate health professionals/services in both the public sector (e.g., obstetricians, GPs,PaNDA, etc.) and private sector (e.g., NorthPark Private Hospital) were encouraged to refer women with suspected depression.
Population	n= 54 ; mean age in years (SD): I= 32.79 (5.97), C= 30.78 (5.86) ; nulliparous, % : I= 51.9, C= 74; gestational age in weeks at intervention start, mean (SD): I= 19.94 (7.67), C= 20.96 (5.69); Major depression (n/N): I=21/27, C=18/27
Inclusion criteria	- ≥13 on the EPDS - less than 30 weeks pregnant - meeting DSM-IV criteria for diagnosis of a depressive disorder - aged 18 years or older Exclusion criteria: comorbid axis I disorders or medical conditions likely to interfere with participation in the study, concurrent major psychiatric disorder for which the treatment was not designed (particularly psychotic and bipolar disorders; we did not exclude anxiety disorders), risk requiring crisis management, participation in other psychological programmes, and significant difficulty with English.
Follow up	- post-treatment (9 weeks after randomization) - 9 month postpartum
Intervention **Participants (n)** **Drop-outs (n)**	CBT (Beating the Blues Before Birth) 8 sessions with each one-to-one session running for approximately an hour; delivered by a psychologists with a background in cognitive behavioral therapy. Randomized n= 27, analyzed n= 27 (ITT), post-treatment data= 23 n= 4
Comparison **Participants (n)** **Drop-outs (n)**	Usual care case-management by their midwife or GP and referred to other services/agencies as necessary Randomized n= 27, analyzed n= 27 (ITT), post-treatment data = 21 n= 6
Outcomes	**Degree of symptoms** - Depression (BDI-II; 0 to 63; higher=more), mean (SD): Pre-treatment: I= 30.70 (9.28); C= 30.77 (8.71) Post-treatment: I= 12.81 (9.61); C= 18.42 (9.85) - Anxiety (BAI; 0 to 63; higher=more), mean (SD): Pre-treatment: I= 22.37 (10.05); C= 20.59 (10.67) Post-treatment: I= 10.40 (7.59); C= 17.38 (7.94)

	Diagnosis - na **Suicide** - na **Quality of life** - na **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - The helpfulness of the intervention, mean/max (SD): I= 8.6/10 (1.4); C= na - Satisfaction with the treatment, mean/max (SD): I= 9/10 (0.9); C= na - Intervention had been sufficient to address the problems they had been facing, n/N I=19/19 ; C= na
Comments **Risk of bias**	 Low

Author **Year** **Country** **Ref #**	Burns 2013 UK (9)
Study design **Setting** **Recruitment**	RCT All Midwives in North Bristol, UK, a mainly urban setting with some areas of high deprivation, were approached and invited to refer women to the trial Women were recruited at their midwife 'booking appointment'. For those consenting to be contacted, and if the midwife indicated on the 3-question screen that the women may be suffering from depression and would like help, she was given a more detailed information sheet about the trial and a leaflet on CBT.
Population	n= 36; mean age (SD): I= 28.2 (5.0), C= 30.1 (6.2) ; nulliparous= na ; gestational age at intervention start, mean weeks (SD): I=13 .1 (3.2), C= 12.7 (2.2); Depression/anxiety, median CIS-R Score (SD): I= 26.5 (7.9), C= 30.5 (7.5).
Inclusion criteria	- ICD-10 criteria on the CIS-R for depression (mild, moderate or severe) - women over 16 years of age - between 8 and 18 weeks pregnant - screened positive on a 3-question depression screen Exclusion criteria: currently receiving CBT or any individual or group psychological therapy for depression or if they had a psychotic illness, did not have sufficient command of English to complete the questionnaires or benefit from an individual talking therapy without an interpreter
Follow up	- 15 weeks post-randomization. - 33 weeks post-randomization.
Intervention **Participants (n)** **Drop-outs (n)**	CBT up to 12 individual sessions of CBT at the woman's home by one of two therapists (one with master's level experience and the other with doctoral experience in CBT) Randomized n= 18, analyzed n= 16 n= 2
Comparison	usual care

	9 to 6 appointments with midwives plus scans (a dating and anomaly scan)
Participants (n)	Randomized n= 18, analyzed n= 13
Drop-outs (n)	n= 5
Outcomes	**Degree of symptoms** - Depression (CIS-R: higher= more) mean (SD): Pre-treatment: na Post-treatment: I= 12.4 (9.2), C= 22.3 (11.1) - Depression (EPDS; 0 to 30; higher=more), mean (SD): Pre-treatment: na Post-treatment: I= 7.9 (4.7), C= 13.8 (7.5) **Diagnosis based on cut-offs** - Depression (diagnosis on the CIS-R), n (%): Pre-treatment: I= 18 (100%); C= 18 (100%) Post-treatment: I= 18-11=7 (39%); C= 18-5=13 (72%) **Suicide** - na **Quality of life** - Patient Health (PHQ-9; 0 to 27; higher=more), mean (SD): Pre-treatment: na Post-treatment: I= 6.2 (4.2), C=11.8 (7.8) - Physical quality of life (SF12, physical component; higher=more), mean (SD): Pre-treatment: I= 43.7 (6.6), C= 45.3 (6.8) Post-treatment: I= 34.5 (7.8), C= 38.5 (5.8) -Mental quality of life (SF12, mental component; higher=more), mean (SD): Pre-treatment: I= 39.9 (7.6), C= 37.5 (8.2) Post-treatment: I= 52.1 (6.4), C= 42.9 (8.9) - Quality of life (EQ-5D; 0 to 1; higher=more), mean (SD): Pre-treatment: I= 0.6 (0.3), C= 0.6 (0.2) Post-treatment: I= 0.78 (0.16), C= 0.72 (0.17) **Antenatal attachment** - Prenatal Attachment Inventory (21 to 84; higher=more), mean (SD): Pre-treatment: na Post-treatment: I= 60.4 (3.0), C= 47.2 (3.3) **Experience of treatment/Side effects/Sick leave** - na
Comments **Risk of bias**	 Low

1.2 Mindfulness

Author	Yang
Year	2019
Country	China
Ref #	(10)
Study design	RCT
Setting	Women's Hospital School of Medicine at Zhejiang University, April to June 2018.

Recruitment	Recruitment was conducted in the obstetrics clinic of the hospital. Women who went to the hospital between 24 and 30 weeks' gestation for regular antepartum examinations were screened for depressive or anxious symptoms
Population	n= 123; mean age (SD): I= 31.31 (4.97), C= 30.38 (3.91) ; nulliparous, n(%): I= 39 (62.9), C= 38 (62.3); gestational age at baseline: I= 25.52 (1.84), C= 26.33 (3.45); Depression/anxiety: see outcomes
Inclusion criteria	- women aged more than 18 years - 24 to 30 weeks' gestation - low-risk pregnancy at the start of the intervention - internet access - fluent in Chinese and able to complete the questionnaires, - elevated depressive or anxious symptoms as determined by either a PHQ-9 score of more than 4 or a GAD-7 score of more than 4 The exclusion criteria: history or current diagnosis of a psychosomatic disease (physical symptoms or illness that results from interplay of psychosocial and physiologic processes, such as hypertension, diabetes mellitus, or asthma), current substance abuse, previous participation in psychological therapy or a stress reduction program, history of suicide attempts, current use of any psychoactive drug, and a high level of depression (PHQ-9 score > 14) or anxiety (GAD-7 score > 14), regular mind-body practice (yoga, meditation, or mindfulness practice).
Follow up	
Intervention	Mindfulness 4 sessions of 40 minutes during 8 weeks, adapted for pregnant women, in mobile application with interactive learning between instructors and learners, homework, conducted by 2 nurses and one midwife, supervised by a psychologist.
Participants (n)	Randomized n= 62, analyzed n= 62 (ITT)
Drop-outs (n)	n= 10
Comparison	Routine care antepartum health education related to childbirth, breastfeeding, nutrition, and parenting. Women were referred to receive psychological counselling if necessary. Women in the control group were also enrolled in a Wechat group to interact with each other.
Participants (n)	Randomized n= 61, analyzed n= 61 (ITT)
Drop-outs (n)	n= 11
Outcomes	**Degree of symptoms** - Depression (PHQ-9; 0 to 27 ; higher=more), mean (SD): Pre-treatment: I= 5.98 (2.24); C= 5.72 (2.65); p=0.609 Post-treatment: I=3.58 (2.32); C= 6.26 (3.31); p<0.001 - Anxiety, GAD (GAD-7; 0 to 21; higher=more), mean (SD): Pre-treatment: I= 5.52 (2.55); C= 5.19 (2.64); p=0.601 Post-treatment: I= 2.97 (2.34); C= 5.26 (2.88); p<0.001 **Diagnosis** - na **Suicide** - na **Quality of life** - na **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - na

Comments **Risk of bias**	 Moderate

Author **Year** **Country** **Ref #**	Zemestani 2019 Kurdistan (11)
Study design **Setting** **Recruitment** **Population** **Inclusion criteria** **Follow up**	RCT Women were recruited from eight medical and obstetric services in Qorveh city, Kurdistan province, Iran. Study information was provided to mental health clinicians, gynecologists, and midwives, and they were encouraged to refer potentially eligible women. n=38 ; mean age (SD)= 28.63 (3.02); nulliparous, n(%): I= 6 (32%), C= 7 (37%) ; gestational age at enrollment, mean (SD): I= 18.27 (6.71), C= 16.85 (5.62); Depression/anxiety: see outcomes - pregnant women - within 1 to 6 months of gestational age - meeting DSM-5 criteria for depression and anxiety disorders - with a score > 20 on the Beck Depression Inventory-II - with a score > 22 on the Beck Anxiety Inventory - aged 18 years or older. Exclusion criteria: diagnostic criteria for other DSM-5 psychiatric disorders, including current psychotic disorders, bipolar disorder, substance abuse or dependence, personality disorders, taking psychotropic drugs, and risk pregnancies. - Post-treatment - 1-month post-treatment follow-up
Intervention **Participants (n)** **Drop-outs (n)**	Mindfulness (cognitive therapy based) 8 weekly 2-h group sessions; focus on formal and informal mindfulness and meditation practices customized for the perinatal period; delivered by a trained master's level clinical psychologist with 2 years of clinical experience and received supervised training. Randomized n= 19, analyzed n= 19 (ITT) n= 4
Comparison **Participants (n)** **Drop-outs (n)**	Care as usual Randomized n= 19, analyzed n= 19 (ITT) n= 1
Outcomes	**Degree of symptoms** - Depression (BDI-II; 0 to 63; higher=more), mean (SD): Pre-treatment: I= 35.76 (10.97); C= 36.60 (7.23) Post-treatment: I= 15.15 (2.23); C= 38.86 (6.01) 1-month follow-up: I= 15.53 (3.55); C= 37.80 (7.50) - Anxiety (BAI; 0 to 63; higher=more), mean (SD): Pre-treatment: I= 31.92 (5.61); C= 32.66 (4.80) Post-treatment: I= 18.15 (3.91); C= 33.73 (4.93) 1-month follow-up: I= 19.15 (3.41); C= 32.73 (4.87) **Diagnosis** - na **Suicide** - na **Quality of life**

	- na **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - na
Comments **Risk of bias**	 Moderate

Author **Year** **Country** **Ref #**	Guardino 2014 USA (12)
Study design **Setting** **Recruitment** **Population** **Inclusion criteria** **Follow up**	RCT university clinic that primarily serves privately insured women who receive prenatal care from a large group of physicians and midwives in accordance with American College of Obstetrics & Gynecology standards. Participants were a volunteer sample of pregnant women from the clinic. During clinic hours, medical staff introduced potentially eligible patients to research staff. Participants were also recruited through fliers describing the study and listing eligibility criteria that were distributed and displayed at the faculty practice and in locations around the UCLA campus. n= 47; mean age (SD)= 33.13 (4.79); nulliparous= 78%; gestational age in weeks at baseline= 17.78 (5.10); Depression: na; Anxiety: see outcomes - were pregnant and between 10- and 25-weeks gestation - a singleton pregnancy - could speak and read English fluently - were over the age of 18 - were willing and able to attend the six-week mindfulness course - were willing and able to provide informed consent - elevated levels of perceived stress (total score above 34 on PSS) - elevated levels of pregnancy-specific anxiety (total score above 11 on PSA) - post-intervention - 6 weeks later
Intervention **Participants (n)** **Drop-outs (n)**	Mindfullness Mindful Awareness Practices classes with home practice (MAPS); 6-week series of 2-h classes; delivered by trained instructor Randomized n= 24, analyzed n= 20 n= 4
Comparison **Participants (n)** **Drop-outs (n)**	Reading control reading a book and learn about important aspects of healthy pregnancy, including stress management. Randomized n= 23, analyzed post-intervention n= 20, analyzed 6-week follow-up n= 16 Post-intervention n= 3; 6-week follow-up n=7
Outcomes	**Degree of symptoms** - Anxiety state (STAI-S; 20 to 80; higher=more), mean (SD): Pre-treatment: I= 45.69 (7.64); C= 44.37 (10.98) Post-treatment: I= 39.47 (6.27); C= 37.35 (11.51) 6-week follow-up: I= 38.11 (8.78); C= 36.19 (10.84) - Stress (PSS-14; 0 to 56; higher=more), mean (SD): Pre-treatment: I= 41.81 (6.00); C= 39.91 (8.55) Post-treatment: I= 37.30 (5.38); C= 35.80 (8.01)

	6-week follow-up: I= 36.17 (5.90); C= 37.42 (7.27) **Diagnosis** - na **Suicide** - na **Quality of life** - na **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - na
Comments **Risk of bias**	 Moderate

Author **Year** **Country** **Ref #**	Vieten 2008 USA (13)
Study design **Setting** **Recruitment** **Population** **Inclusion criteria** **Follow up**	RCT The study took place at a large private non-profit hospital in San Francisco, California. Participants were recruited through physicians' offices, childbirth education classes, advertisements, and flyers at other locations pregnant women frequent. n= 31; mean age (SD)= 33.9 (3.8); nulliparous= na; gestational age at baseline=25 (SD, 4.0; range, 18–31); Depression/anxiety: see outcomes section. - women in the second and third trimesters - between 12- and 30-weeks gestation at the start of the intervention - able to speak and read English - affirmative response to the question ''Have you had a history of mood concerns for which you sought some form of treatment, such as psychotherapy, counseling, or medication?'' Exclusion criteria: (1) a history of mental disorders that had a psychotic, dissociative, hallucinatory, or delusional component or (2) an inability to attend each of the classes or participate in the assessments. postintervention (third trimester)
Intervention **Participants (n)** **Drop-outs (n)**	Mindfulness group training; 2 h per week for 8 weeks; facilitated by a licensed clinical psychologist trained in mindfulness-based interventions and a certified prenatal yoga instructor; Group sizes ranged from 12 to 20 women. Randomized n= 15, analyzed n= 13 n=2
Comparison **Participants (n)** **Drop-outs (n)**	Wait-list control Randomized n= 19, analyzed n= 18 n=1
Outcomes	**Degree of symptoms** - Depression (CES-D; 0 to 60; higher=more), mean (SD): Pre-treatment: I= 20.4 (8.4); C= 14.2 (5.4) Post-treatment: I= 16.2 (7.3); C= 17.2 (7.4) Pre-post-change: I= -3.6 (5.2); C= +4.6 (7.3) - State anxiety (STAI-S; 20 to 80; higher=more), mean (SD): Pre-treatment: I= 43.8 (12.4); C= 35.6 (10.9)

	Post-treatment: I= 35.4 (9.1); C= 35.6 (8.4) Pre-post-change: I= -6.9 (7.6); C= 0.35 (7.5) **Diagnosis** - na **Suicide** - na **Quality of life** - na **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - na
Comments **Risk of bias**	 Moderate

1.3 Behavioral activation

Author **Year** **Country** **Ref #**	Dimidjian 2017 US (14)
Study design **Setting** **Recruitment** **Population** **Inclusion criteria** **Follow up**	RCT four sites in different regions of the United States within the National Institute of Mental Health funded Mental Health Research Network in the United States, including Seattle, Washington (Group Health Cooperative), Minneapolis, Minnesota (HealthPartners), Denver, Colorado (Kaiser Permanente Colorado), and Atlanta, Georgia (Kaiser Permanente Georgia). These large integrated healthcare systems provide general medical and mental health care to defined populations, including members enrolled via commercial insurance, Medicaid, and other low-income programs Enrollment occurred between April 2012 and June 2013 and assessment concluded in October 2014. Recruitment strategies included referral from obstetric care providers, self-referral in response to written information provided during or after obstetric or behavioral health visits, outreach calls to women with elevated scores at obstetric visits or mailed screening with the PHQ-9. n= 163; mean age (SD)= 28.75 (5.67); nulliparous, n(%)= 64 (39%); gestational age at intervention start= na ; Depression/anxiety: see outcomes (a) pregnant (b) receiving care at one of the four sites (c) aged 18 or older (d) baseline score of ≥ 10 on the PHQ-9 (e) English speaker (f) no known diagnosis of bipolar or psychotic disorder, active substance dependence, or immediate risk of self-harm or need for hospitalization. Consistent with a pragmatic trial design, prior or current use of medication or psychotherapy was not restricted. In addition, we expanded the eligibility criterion to a baseline score of ≥ 10 on the PHQ-9 (from the initial plan to require ≥ 15 given clinical guidelines in the delivery settings that recommended additional screening and intervention for such patients). - 5 weeks after randomization - 10 weeks after randomization (not reported here) - 3 months postpartum (not reported here)
Intervention	Behavioral Activation

	10-session duration; 2 days of in-person workshops and self-paced reading followed by ongoing weekly group telephonic supervision (90 min) and individual supervision as needed (30 min); held by 8 providers (4 with nursing degree, 3 with master's degree in behavioral health, 1 registered occupational therapist)
Participants (n)	Randomized n=86, analyzed n= 67
Drop-outs (n)	n= 19
Comparison	Treatment as usual
Participants (n)	Randomized n=77, analyzed n= 64
Drop-outs (n)	n=13
Outcomes	**Degree of symptoms** - Depression (PHQ-9; 0 to 27; higher= more), mean (SD): Pre-treatment: I= 14.83 (3.47); C= 14.60 (3.20) Post-treatment: I= 11.56 (4.77); C= 12.00 (4.56) - Anxiety (GAD-7; 0 to 21; higher=more), mean (SD): Pre-treatment: I= 13.23 (4.30); C= 13.50 (4.01) Post-treatment: I= 10.43 (4.80); C= 11.50 (5.01) - Stress (PSS-10; 0 to 40; higher=more), mean (SD): Pre-treatment: I= 26.40 (5.38); C= 25.73 (4.76) Post-treatment: I= 23.49 (6.16); C= 24.68 (6.70) **Diagnosis** - na **Suicide** - na **Quality of life** - na **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - na
Comments	
Risk of bias	Moderate

1.4 **Interpersonal Psychotherapy (IPT)**

Author	Lenze
Year	2017
Country	US
Ref #	(15)
Study design	RCT
Setting	an urban prenatal clinic, low income perinatal population.
Recruitment	Pregnant women were recruited from an urban prenatal clinic by flyers posted in the OB-Gyn clinic, OB-Gyn clinic staff referral, and referrals from community social service agencies.
Population	n= 42 ; mean age (SD): I= 26.90 (5.81), C= 26.38 (5.90) ; nulliparous= na; nr of pregnancies, mean (SD): I= 1.52 (1.47), C= 1.81 (1.88); gestational age at enrollment, mean (SD): I=23.38 (6.58), C= 25.76 (4.57); Depression/anxiety: na
Inclusion criteria	- ages 18 and older - between 12- and 30-weeks gestation - singleton pregnancies

	- EPDS scores ≥10 and meeting diagnostic criteria (DSM) for current Major Depression, Dysthymia, or Depression NOS Exclusion criteria: psychotic disorders, current substance abuse, or medically high-risk pregnancies
Follow up	- post treatment at 37–39 weeks gestation
Intervention	Brief Interpersonal Psychotherapy 9 sessions; Therapists included the PI (a clinical psychologist with 15 years of experience) and two master's level clinicians.
Participants (n)	Randomized n= 21 , analyzed n= 21 (ITT), completer n =19
Drop-outs (n)	n= 2
Comparison	Enhanced Treatment as Usual referred to community resources (including specialty mental health). Additionally, brief case management, diapers and other baby supplies were provided.
Participants (n)	Randomized n= 21 , analyzed n= 21 (ITT), completer n =19
Drop-outs (n)	n= 2
Outcomes	**Degree of symptoms** - Depression (EPDS; 0 to 30; higher=more), mean (SD): Pre-treatment: I= 17.81 (3.71); C= 17.90 (4.60) Post-treatment: I= 12.12 (5.33); C= 11.21 (6.80) - Anxiety (brief STAI; 20 to 80 or 6 to 24 if not converted to STAI-scores; higher=more/less), mean (SD): Pre-treatment: I= 15.57 (4.11); C=15.05 (4.31) Post-treatment: I= 13.67 (4.50); C= 14.16 (4.83) **Diagnosis** - na **Suicide** - na **Quality of life** - na **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - Client Satisfaction (CSQ; 8 to 32; higher= more), mean (SD): Post-treatment: I= 30.60 (1.89); C= na
Comments	
Risk of bias	Moderate

Author	Grote
Year	2016
Country	US
Ref #	(16) see also (17)
Study design	RCT
Setting	Seattle-King county Public Health System, July 2009- January 2014
Recruitment	Social workers and nurses were the studies primary referral sources who routinely screened pregnant patients for depression. Patients scoring 10 or above on the PHQ-9
Population	n= 164; mean age (SD)= 27.0 (6.0); nulliparous= na; gestational age at intervention start= na; Depression/anxiety: probable major depressive disorder=100%; probable PTSD = 65%
Inclusion criteria	- age 18 or above

	- diagnosis of probable major depressive disorder - and/or diagnosis of probable dysthymia based on the MINI-International Neuropsychiatric Interview - 12 to 32 weeks gestation - telephone access - English speeking Exclusion criteria: acute suicidal behavior or multiple prior suicidal attempts, schizophrenia, bipolar disorder, recent substance abuse/dependence, severe intimate partner violence necessitating crisis intervention, or currently seeing a psychiatrist or psychotherapist.
Follow up	- 3 month (88% still pregnant) - 6 month (not reported here) - 12 month (not reported here) - 18 month (not reported here)
Intervention	Collaborative depression care including brief IPT (8 sessions), pharmacotherapy, or both, telephone plus in-person visits, proactive outreach after missed sessions, case management to meet basic needs (MOMCare)
Participants (n)	Randomized n= 83, analyzed n= 81
Drop-outs (n)	n= 2
Comparison	Enhanced usual care intensive maternity support services; more and longer visits 6 to 8 half-hour visits; multidisciplinary team of public health social workers, nurses, and nutritionists.
Participants (n)	Randomized n= 85, analyzed n= 83
Drop-outs (n)	n= 2
Outcomes	**Degree of symptoms** - Depression (SCL-20; 0 to 4; higher=more), mean (SD): Pre-treatment: na Post-treatment (reported for 2 subgroups with/without PTSD): I_PTSD(n=48)= 1.12 (0.55); C_PTSD(n=58)= 1.42 (0.76) I_noPTSD(n=33)= 1.01 (0.63); C_noPTSD(n=25)= 0.99 (0.50) For data over subgroups see (17) **Diagnosis** - na **Suicide** - na **Quality of life** - na **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - na
Comments	
Risk of bias	Low

Author	Grote
Year	2015
Country	US
Ref #	(17) see also (16)
Study design	RCT
Setting	Seattle-King county Public Health System, July 2009- January 2014

Recruitment	Social workers and nurses were the studies primary referral sources who routinely screened pregnant patients for depression. Patients scoring 10 or above on the PHQ-9
Population	n= 168; mean age (SD)= 27.4 (6.1); nulliparous= na; gestational age in weeks at baseline= 22.4 (6.1); Major depressive disorder (PHQ)=162 (96.4%)
Inclusion criteria	- age 18 or above - diagnosis of probable major depressive disorder - and/or diagnosis of probable dysthymia based on the MINI-International Neuropsychiatric Interview - 12 to 32 weeks gestation - telephone access - English speaking Exclusion criteria: acute suicidal behavior or multiple prior suicidal attempts, schizophrenia, bipolar disorder, recent substance abuse/dependence, severe intimate partner violence necessitating crisis intervention, or currently seeing a psychiatrist or psychotherapist.
Follow up	- 3 month (88% still pregnant) - 6 month (not reported here) - 12 month (not reported here) - 18 month (not reported here)
Intervention	Collaborative depression care including brief IPT (8 sessions), pharmacotherapy, or both, telephone plus in-person visits, proactive outreach after missed sessions, case management to meet basic needs (MOMCare)
Participants (n)	Randomized n= 83, analyzed n= 71
Drop-outs (n)	n= 12
Comparison	Enhanced usual care intensive maternity support services; more and longer visits 6 to 8 half-hour visits; multidisciplinary team of public health social workers, nurses, and nutritionists.
Participants (n)	Randomized n= 85, analyzed n= 80
Drop-outs (n)	n= 5
Outcomes	**Degree of symptoms** - Depression (SCL-20; 0 to 4; higher=more), mean (SD): Pre-treatment: I = 1.8 (0.6); C= 1.8 (0.6) Post-treatment: I = 1.08 (0.64); C= 1.26 (0.64) **Diagnosis** - na **Suicide** - na **Quality of life** - na **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - na
Comments	
Risk of bias	Low

Author	Field
Year	2013
Country	US
Ref #	(18)
Study design	RCT

Setting	USA, two prenatal ultrasound clinics at a large university medical center.
Recruitment	Recruitment at two prenatal ultrasound clinics (recruitment sample = 182) at a large university medical center.
Population	n= 44; mean age (SD)=24.9 (5.4); nulliparous= na; gestational age at intervention start= 22 weeks gestation; Depression/anxiety: all were diagnosed with dysthymia or major depression on the SCID based on DSM IV symptoms. The women were primarily low income and Hispanic or African-American women with a high-school education.
Inclusion criteria	1) depressed, as diagnosed on the Structured Clinical Interview for Depression (SCID) 2) pregnant with one child 3) uncomplicated pregnancy with no medical illness 4) younger than 40-years-old 5) no drug use (i.e., prescribed or illicit)
Follow up	Post treatment at 34 weeks gestation.
Intervention	Interpersonal psychotherapy groups of 8 persons (1h per week for 12 weeks); the therapist was trained in these techniques and received ongoing supervision from another trained therapist. (Control group in the study)
Participants (n)	Randomized n= 24, analyzed n= 22
Drop-outs (n)	n= 2
Comparison	Peer support Groups of 8 persons (20-minutes per week for 12 weeks) (Intervention group in the study)
Participants (n)	Randomized n= 24, analyzed n= 22
Drop-outs (n)	n= 2
Outcomes	**Degree of symptoms** **-** Depression (CES-D; 0 to 60; higher=more), mean (SD): Pre-treatment: I= 20 (10); C= 26.8 (5.7); Post-treatment: I= 17.5 (6.7); C= 21.0 (7.4); **-** State Anxiety (STAI-S; 20 to 80; higher=more), mean (SD): Pre-treatment: I= 41.3 (10.3); C= 48.5 (6.1); Post-treatment: I= 38.7 (11.3); C= 43.2 (6.2) **Diagnosis** - NA **Suicide** - NA **Quality of life** - NA **Antenatal attachment** - NA **Experience of treatment/Side effects/Sick leave** - NA
Comments	
Risk of bias	Moderate

Author	Spinelli
Year	2013
Country	US
Ref #	(19)
Study design	RCT
Setting	Sept 2005 to May 2011 in New York, US

Recruitment	Prospective research participants were referred to the Maternal Mental Health Program at New York State Psychiatric Institute from the obstetrics departments of New York Presbytarian Hospital at Columbia University College of Physicians and Surgeons (Columbia), New York Presbytarian Hospital at Weill Cornell Medical College (Cornell), and St Luke's Roosevelt Hospital.
Population	n= 142 ; mean age (SD): I= 30.0 (6.9, C= 28.9 (6.6) ; nulliparous, n(%): I= 26 (36), C= 17 (24) ; gestational age at intervention start, mean (SD): I=22.4 (6.0), C= 22.1 (7.0); Depression: see inclusion criteria
Inclusion criteria	- DSN-IV criteria for major depressive disorder - between 12- and 33-weeks gestation - between 18 to 45 years of age Exclusion criteria: psychotic, had abused drugs or alcohol in the past 6 months, acute risks for suicide, psychotropic medication.
Follow up	- visit week 4 - visit week 8 - visit week 12
Intervention	Interpersonal psychotherapy 12 weeks; 6 psychotherapists with with at least 5 years of psychotherapy experience
Participants (n)	Randomized n= 72, analyzed n= na
Drop-outs (n)	n= na
Comparison	Parenting education program 12 weeks 45-min sessions
Participants (n)	Randomized n=70, analyzed n= na
Drop-outs (n)	n= na
Outcomes	**Degree of symptoms** - Depression (HDRS17; 0 to 52; higher=more): Interaction group x time: F(3,104)=0.40, p=0.756 Data extracted from figure, mean (SD): Pre-treatment: I= 17.5 (3.7); C= 18.0 (4.0) Post-treatment: I= 8.2 (5.1); C= 8.8 (5.9) - Depression (EPDS; 0 to 30; higher=more), Interaction group x time: F(3,104)=0.06, p=0.979 Data extracted from figure, mean (SD): Pre-treatment: I= 17.7 (3.7); C= 18.1 (4.1) Post-treatment: I= 8.7 (4.8); C= 9.4 (5.5) **Diagnosis** - na **Suicide** - na **Quality of life** -na **Antenatal attachment** - Maternal fetal attachment (MFAS; 24 to 120; higher=more), mean (SD): Pre-treatment: I= na; C= na Post-treatment: I= na; C= na **Experience of treatment/Side effects/Sick leave** - na
Comments	
Risk of bias	Moderate

Author	Grote
Year	2009
Country	US
Ref #	(20)
Study design	RCT
Setting	Pittsburgh, USA, from March 2004 through December 2006
Recruitment	participants were recruited from the public care outpatient obstetrics and gynecology clinic of a large women's hospital in Pittsburgh, Pennsylvania. Pregnant women were referred to the study by clinic health care professionals, the research registry, and clinic flyers.
Population	n= 53 ; mean age (SD): I= 24.3 (5.3), C= 24.7 (5.6) ; nulliparous= na; Number of children at home, mean (SD): I= 1.4 (1.7), C= 1.4 (1.3) ; gestational age in weeks at intervention start: I= 22.6 (6.7), C= 20.4 (6.8) ; Depression/anxiety: see outcomes
Inclusion criteria	- 18 years or older - 10 to 32 weeks gestation - cutoff score >12 on the Edinburgh Postnatal Depression Scale (EPDS) - English speaking - access to a telephone - living in the Pittsburgh region. Exclusion criteria: substance abuse or dependence within the preceding six months; actively suicidal; bipolar disorder, a psychotic disorder, or an organic mental disorder; an unstable medical condition that could produce symptoms confounding accurate assessment of mood symptoms (for example, untreated thyroid disease); severe intimate partner violence; and current receipt of another form of depression treatment (that is, psychotherapy or pharmacotherapy).
Follow up	baseline, 3 months postbaseline, and 6 months postpartum
Intervention	enhanced brief interpersonal psychotherapy 8 sessions; delivered by one doctoral-level clinician and one master's-level clinician, both of whom had supervised training and experience in enhanced IPT-B,
Participants (n)	Randomized n= 25, analyzed n= 25
Drop-outs (n)	n= na; Overall study attrition rate: N=7, 13%
Comparison	enhanced usual care usual care and written educational material, easy access to depression treatment and more monitoring of their depression severity and diagnostic status
Participants (n)	Randomized n= 28, analyzed n= 28
Drop-outs (n)	n= na; Overall study attrition rate: N=7, 13%
Outcomes	**Degree of symptoms** - Depression (EPDS; 0 to 30; higher=more), mean (SD): Pre-treatment: I= 18.9 (3.4); C= 18.1 (3.8) Post-treatment: I= 5.7 (4.6); C= 13.6 (6.6) -Depression (BDI; 0 to 63; higher=more), mean (SD): Pre-treatment: I= 24.3 (10.2); C= 25.9 (11.1) Post-treatment: I= 10.1 (7.7); C= 21.3 (11.1) - Anxiety (BAI; 0 to 63; higher=more), mean (SD): Pre-treatment: I= 14.4 (11.0); C= 16.3 (10.5) Post-treatment: I= 6.6 (5.1); C= 15.9 (8.8) **Diagnosis** - major depression on the SCID, n/total N (%)

	Pre-treatment: I= 23/25 (92%); C= 22/28 (79%) Post-treatment: I= (22-21)/22=1/22 (5%); C= (26-15)/26=11/26 (42%) **Suicide** - na **Quality of life** - na **Antenatal attachment** - na **Experience of treatment/Side effects/Sick leave** - na
Comments **Risk of bias**	 Moderate

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