Supplementary Online Content

Singla DR, Lawson A, Kohrt BA, et al. Implementation and effectiveness of nonspecialist-delivered interventions for perinatal mental health in high-income countries: a systematic review and meta-analysis. *JAMA Psychiatry*. Published online February 3, 2021. doi:10.1001/jamapsychiatry.2020.4556

eTable 1. PRISMA Checklist

eFigure 1. Risk Assessment

eTable 2. Trial Characteristics, N = 46

eTable 3. Data Used to Calculate the Standardized Mean Difference and Standard Error for Each Outcome From Each Study, N = 44

eFigure 2. Forest Plot Examining a Subgroup Analysis of Outcome Tool (Diagnostic vs Self-Assessment)

eFigure 3. Forest Plot Examining a Subgroup Analysis of Age (Mixed Age vs Adult)

eAppendix. Leave-One-Out Analyses

eReferences

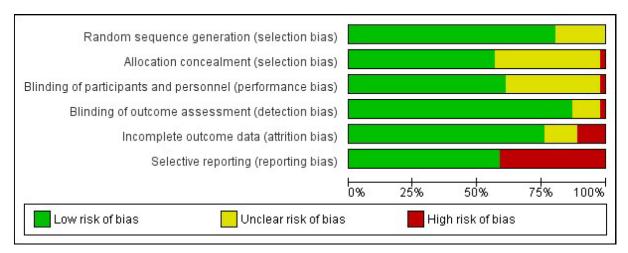
This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. PRISMA Checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	2-3
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	5
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	5
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	6
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	6
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	6
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	6
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	6-7

Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	6-7
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	Table 1
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	7
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	7
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I ²) for each meta-analysis.	7

eFigure 1. Risk Assessment



	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias	Blinding of outcome assessment (delection bias)	Incomplete outcome data (attition bias)	Selective reporting (reporting bias)
Armstrong et al. 1999		7	•			•
Barnes et al. 2009	3	7	•	•	•	•
Brugha et al. 2000	•	•	•		•	•
Chen et al. 2000	3	7	7	•	•	
Cooper et al. 2015	7	•	7		•	
Dennis et al. 2009	•	7	•	•	•	
Dimidjian et al. 2017	•	•	•	•		•
Field et al. 2013	7	2	7	2	•	•
Gagnon et al. 2002	2	?	2	•	•	•
Gamble et al. 2005	•	•	•	•	•	•
Giallo et al. 2014	•	•	•	•	•	•
Hagan et al. 2004	•	•	•	•	•	
Hayes et al. 2001	•	•	2	•	•	•
Holden et al. 1989	•	3	•		3	
Honey et al. 2002	•	3	7	•	•	•
Howell et al. 2012	•	3	•	•	•	•
Howell et al. 2014		3	2	•	•	•
Kenyon et al. 2016	•	•	7	•	•	•
Lavender & Walkinshaw 1998	•	•	•		7	•
Le et al. 2011	7	•	•	7	•	•
Letourneau et al. 2011	•	•	•	•	•	
Lieu et al. 2000	•	•	7	3	•	
MacArthur et al. 2002	•	•	•	•	•	
Milgrom et al. 2011	•	7	7			
Morrell et al. 2009a	•	•	•		•	•
O'Mahen et al. 2014	•	•	•	•	•	•
Prendergast & Austin 2001		3	•	3	7	•
Priest et al. 2003	•		•		3	
Ravn et al. 2012	•	•	•		•	
Reid et al. 2002	•	3	3		•	
Saisto et al. 2001	•	•	7	•	•	
Segre et al. 2015	•	3	3			
Shields et al. 1997	(2)	•	2	•	7	•
Shorey et al. 2015	•	•	•	•	•	
Shorey et al. 2019	•	•	•	•		•
Stamp et al. 1995	•	•	•	•	•	
Taft et al. 2011	•	•	•	•	•	
Tam et al. 2003	•	•	•	•	•	•
Toohill et al. 2014	•	3	•	•	•	
Waldenstrom et al. 2000	•	•	3	•	•	
Weis et al. 2017	•	3	?	•	•	•
Wickberg & Hwang 1996	3	7	•	•	•	•
Wiggins et al. 2005	•	•	•	•	•	
Wiklund et al. 2010	3	3	•	•	•	•
Zlotnick et al. 2006	•	7	2	7	7	•
Zlotnick et al. 2016		•	•	•	•	

eTable 2. Trial Characteristics, N=46

Reference	Secondary papers	Country	Sample Size	Trial Design	Recruitment Setting	Intervention	Control Group	Type of NSP Provider	Mental Health Outcome	Assessment Tool	Risk of Bias
Armstrong et al. (1999) ¹	Armstrong et al. (2000) ²	Australia	181	RCT	Primary Care	6 sessions of structured nurse home visiting	TAU + encouragement to use community child health service	Nurse	Depression	EPDS	Low
Barnes et al. (2009) ³	NA	United Kingdom	292	Cluster RCT	Primary Care	Peer volunteer home visiting	TAU	Community member volunteers	Depression	SCID, EPDS	Moderate
Brugha et al. (2000) ⁴	Brugha et al. (1998) ⁵	United Kingdom	209	RCT	Primary Care	6 structured group CBT+ psychoeduca tion sessions	TAU (routine antenatal care)	Nurses and occupational therapists	Depression, anxiety	EPDS, STAI	Low
Chen et al. (2000) ⁶	Chen et al. (1999) ⁷	Taiwan	60	RCT	Primary Care	4 weekly supportive group meetings	TAU	Nurse	Depression	BDI	High
Cooper et al. (2015) ⁸	Cooper et al. (2003) ⁹	United Kingdom	301	RCT	Primary Care	psychoeduca tion home visits targeting mother- infant relationship	TAU	Health visitors	Depression	EPDS, SCID	Low
Dennis et al. (2009) ¹⁰	Dennis (2003) ¹¹	Canada	701	RCT	Primary Care	4 sessions of telephone- based peer support	TAU + community postpartum care resources and drop-in centers shared	Peers	Depression	EPDS, SCID	Low

Dimidjian et al. (2017) ¹²	NA	USA	163	RCT	Primary Care	10 sessions of BA	TAU	Nurse, midwife, and occupational therapists	Depression, anxiety	PHQ-9, GAD-7	Low
Field et al. (2013) ¹³	Field et al. (2009) ¹⁴	USA	44	RCT	Primary Care	12 sessions of IPT Group Therapy delivered by peers	12 sessions of IPT Group Therapy, delivered by specialists	Peers	Depression	CES-D	High
Gagnon et al. (2002) ¹⁵	NA	Canada	586	RCT	Primary Care	1 Home visit follow up	TAU (standard clinic follow-ups post partum)	Nurse	Anxiety	STAI	Moderate
Gamble et al. (2005) ¹⁶	Gamble et al. (2009) ¹⁷	Australia	103	RCT	Primary Care	2 sessions of brief CBT- based counselling	TAU	Midwife	Depression, anxiety	EPDS, DASS-21	Low
Giallo et al. (2014) ¹⁸	Dunning et al. (2013) ¹⁹	Australia	202	RCT	Primary Care	Psychoeduca tion + CBT with or without telephone calls	TAU	Maternal and child health nurses	Depression, anxiety	DASS-21	Low
Hagan et al. (2004) ²⁰	NA	Australia	199	RCT	Primary Care	6 sessions of CBT	TAU	Midwife	Depression, Anxiety	SADS, EPDS, BDI, GHQ	Low
Hayes et al. (2001) ²¹	NA	Australia	206	RCT	Primary Care	Psychoeduca tion Package	Not Reported	Midwife or Research Assistant	Depression	POMS	Low
Holden et al. (1989) ²²	Holden (1986) ²³	Scotland	55	RCT	Primary Care	8 counselling visits	TAU	Health Visitor	Depression	Goldberg's Standardized Interview, EPDS	Moderate
Honey et al. (2002) ²⁴	NA	United Kingdom	45	RCT	Primary Care	8 sessions of brief psychoed + CBT group	TAU	Home health visitor	Depression	EPDS	Low

Howell et al. (2014) ²⁵	Howell et al. (2012) ²⁶	USA	540	RCT	Primary Care	Two step behavioural intervention	Enhanced Treatment as Usual with routine postpartum education	Clinical research coordinators	Depression	EPDS	Low
Howell et al. (2012) ²⁶	NA	USA	540	RCT	Primary Care	Two step behavioural intervention	Enhanced Treatment as Usual with routine postpartum education	Bilingual research staff	Depression	EPDS	Moderate
Kenyon et al. (2016) ²⁷	Kenyon et al. (2012) ²⁸ ; Kenyon et al. (2017) ²⁹	United Kingdom	1324	RCT	Primary Care	Lay support pregnancy outreach program	TAU (provision of referrals to midwives or other agencies)	Pregnancy Outreach Worker	Depression	EPDS	Low
Lavender & Walkinsha w (1998) ³⁰	NA	United Kingdom	114	RCT	Primary Care	Postnatal midwife stress debriefing	TAU	Midwife	Depression, Anxiety	HADS	Low
Le et al. (2011) ³¹	Muñoz et al. (2007) ³²	USA	217	RCT	Primary Care	8 Sessions of CBT-based group intervention	Not Reported	Bilingual Research Staff	Depression	BDI-II, Mood Screener	Low
Letournea u et al. (2011) ³³	NA	Canada	60	RCT	Advertiseme nts on radio, TV, and online media and referrals	Home-based peer support sessions	2 weeks of peer support after a 12- week waiting period	Peer volunteers	Depression	EPDS	Low
Lieu et al. (2000) ³⁴	Escobar et al. (2001) ³⁵	USA	1163	RCT	Primary Care	Home Follow-Up Visit	TAU (Pediatric clinic visit within 48 hours of discharge)	Nurse	Depression	CES-D	Moderate
MacArthur et al. (2002) ³⁶	NA	United Kingdom	2064	Cluster RCT	Primary Care	6 sessions of Individualize d	TAU	Midwife	Depression	EPDS	Low

						community- based care					
Milgrom et al. (2011) ³⁷	NA	Australia	68	RCT	Primary Care	6 sessions of CBT	TAU	Nurse	Depression	BDI-II	Low
Morrell et al. (2009a) ³⁸	Morrell et al. (2009b) ³⁹	United Kingdom	418	Cluster RCT	Primary Care	Up to 10 CBT and PCA home visits in the first postnatal month	TAU	Community health visits	Depression, anxiety	EPDS, STAI	Low
O'Mahen et al. (2014) ⁴⁰	O'Mahen et al. (2012) ⁴¹	United Kingdom	83	RCT	Online	12 sessions of online BA	TAU + access to Netmums chat room	Bachelor- level Mental health workers	Depression, anxiety	EPDS, GAD-7	Low
Prenderga st & Austin (2001) ⁴²	NA	Australia	37	RCT	Unknown	6 sessions of CBT	Enhanced Treatment as Usual + six weekly clinic visits	Nurse	Depression, Anxiety	EPDS, MADRS, DASS-21	Insufficient
Priest et al. (2003) ⁴³	NA	Australia	1745	RCT	Primary Care	An individual stress debriefing session within 72 hours of delivery	TAU	Midwife	Depression	EPDS	Low
Ravn et al. (2012) ⁴⁴	NA	Norway	106	RCT	Primary Care	11 sessions of the Mother— Infant Transaction program	TAU	Nurse	Depression	CES-D	Low
Reid et al. (2002) ⁴⁵	NA	Scotland	1004	RCT	Primary Care	Psychoeduca tion Support Group	TAU	Midwife	Depression	EPDS	Low

Saisto et	NA	Finland	176	RCT	Primary Care	5 CT	TAU (routine	Midwife and	Depression,	BDI,	Low
al. (2001) ⁴⁶					,	sessions	obstetric check- ups)	Family Physician	anxiety	Pregnancy Anxiety Scale	
Segre et al. (2015) ⁴⁷	Brock et al. (2017) ⁴⁸	USA	66	RCT	Primary Care	6 sessions of listening visits	Wait-list Control Group	Community Health Worker	Depression, anxiety	EPDS, IDAS- GD, HRSD	Moderate
Shields et al. (1997) ⁴⁹	Turnbull et al. (1995) ⁵⁰	Scotland	1299	RCT	Primary Care	Midwife managed care	Not Reported	Midwife	Depression	EPDS	Moderate
Shorey et al. (2015) ⁵¹	Shorey et al. (2015) ⁵²	Singapor e	122	RCT	Primary Care	Postnatal psychoeduca tion home visit and weekly follow up phone calls	TAU (routine postnatal appointments)	Midwife	Depression	EPDS	Low
Shorey et al., 2019 ⁵³	Shorey et al., 2018 ⁵⁴	Singapor e	138	RCT	Primary Care	4-week peer support intervention	TAU (routine postnatal care)	Peer	Depression, anxiety	EPDS, PHQ-9, STAI	Low
Stamp et al. (1995) ⁵⁵	NA	Australia	144	RCT	Primary Care	3 sessions of non- directive support	TAU	Midwife	Depression	EPDS	Low
Taft et al. (2011) ⁵⁶	Taft et al. (2003; 2009 ⁵⁷)	Australia	174	Cluster RCT	Primary Care	4 sessions of mentor support	TAU	Nurse, Family Physician, and Peers	Depression	EPDS	Low
Tam et al. (2003) ⁵⁸	NA	Hong Kong	516	RCT	Primary Care	Educational counselling sessions	TAU (routine postnatal clinic follow-ups at 6 weeks postpartum)	Nurse	Depression, anxiety	HADS	Low
Toohill et al. (2014) ⁵⁹	Fenwick et al. (2013 ⁶⁰ ; 2015 ⁶¹)	Australia	339	RCT	Primary Care	2 sessions of psychoeduca tion	TAU	Midwife	Depression	EPDS	Low

Waldenstr	NA	Australia	1000	RCT	Primary Care	Team	TAU (standard	Midwife	Depression	EPDS	Low
om et al.						midwife sup	birth centre and				
(2000)62						port	midwifery care)				
Weis et al.	NA	USA	367	RCT	Primary Care	8 sessions of	TAU	Peers	Depression,	EPDS, PSEQ-SF	Low
(2017) ⁶³						peer support			anxiety		
Wickberg	NA	Sweden	48	RCT	Primary Care	6	TAU	Midwife	Depression	MADRS	Moderate
& Hwang						Counselling					
(1996) ⁶⁴						sessions					
						provided by					
						nurses					
Wiggins et	NA	United	731	RCT	Primary Care	12 monthly	TAU (Routine	Health	Depression	EPDS, GHQ	Low
al. (2005) ⁶⁵		Kingdom				supportive	health visiting	Visitors			
						listening	services)				
						visits					
Wiklund et	NA	Sweden	67	RCT	Primary Care	3 sessions of	TAU + one	Midwife	Depression	EPDS	High
al. (2010) ⁶⁶						CBT sessions	debriefing				
							session with a				
							midwife/obstetr				
							ician				
Zlotnick et	NA	USA	99	RCT	Primary Care	4 group IPT	TAU	Nurse	Depression	BDI, LIFE	Insufficient
al. (2006) ⁶⁷						sessions	(standard				
							antenatal care)				
Zlotnick et	NA	USA	205	RCT	Primary Care	4 group IPT-	TAU	Nurse and	Depression	LIFE	Low
al. (2016) ⁶⁸						based	(standard	post-			
						psychoeduca	antenatal care)	bachelor's			
						tion sessions		research staff			

Note. CT=cognitive therapy; CBT=cognitive behavioral therapy; IPT=interpersonal therapy; RCT=randomized controlled trial; TAU=treatment as usual; BDI=Beck Depression Inventory; BDI-II=Beck Depression Inventory II; CES-D=Center for Epidemiologic Studies Depression Scale; DASS-21=Depression Anxiety and Stress Scale – 21; EPDS=Edinburgh Postnatal Depression Scale; GAD-7=General Anxiety Disorder – 7; GHQ=General Health Questionnaire; HADS: Hospital Anxiety and Depression Scale; HRSD=Hamilton Rating Scale for Depression; IDAS-GD=General Depression Scale of the Inventory of Depression and Anxiety Symptoms; LIFE=Longitudinal Interval Follow-up Examination; MADRS=Montgomery-Asberg Depression Rating Scale; PHQ-9=Patient Health Questionnaire – 9; POMS=Profile of Mood States; PSEQ-SF=Prenatal Self-Evaluation Questionnaire – Short Form; SADS=Schedule for Affective Disorders and Schizophrenia; SCID=Structured Interview for Diagnostic and Statistical Manual; STAI=State Trait Anxiety Inventory

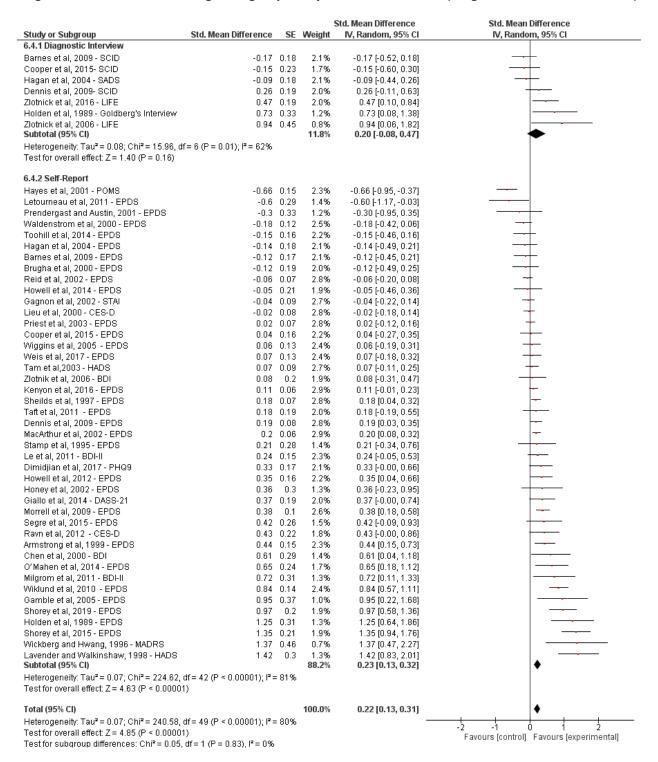
eTable 3. Data Used to Calculate the Standardized Mean Difference and Standard Error for Each Outcome From Each Study, N=44

Study	Outcome	Interv	ention Group	p	Coi	ntrol Group		Effec	t Size
		Effective Sample Size	Mean	SD	Effective Sample Size	Mean	SD	Std Mean Difference	Std. Error
Armstrong et al. (1999)¹	Depression	86	5.67	4.14	88	7.9	5.89	0.44	0.15
Barnes et al. (2009) ³	Depression	68 ^A	7	5.9	68 ^A	6.3	5.5	-0.12	0.17
Brugha et al. (2000) ⁴	Depression	94	24/94 ^B		96	21/96 ^B		-0.12	0.19
Chen et al. (2000) ⁶	Depression	30	10/30 ^B		30	18/30 ^B		0.61	0.29
Cooper et al. (2015) ⁸	Depression	82	7.4	4.66	83	7.6	4.77	0.04	0.16
Dennis et al. (2009) ¹⁰	Depression	297	7.93	4.68	315	8.89	5.24	0.19	0.08
	Anxiety	297	35.1	11.85	315	36.88	12.85	0.14	0.08
Dimidjian et al. (2017) ¹²	Depression	70	8.76	5.39	68	10.46	4.71	0.33	0.17
	Anxiety	70	8.07	5.5	68	10.87	4.84	0.54	0.17
Gagnon et al. (2002) ¹⁵	Anxiety	259	28.7	7.9	253	28.4	8	-0.04	0.09
Gamble et al. (2005) ¹⁶	Depression	50	4/50 ^B		53	17/53 ^B		0.95	0.37
	Anxiety	50	1/50 ^B		53	6/53 ^B		1.01	0.61
Giallo et al. (2014) ¹⁸	Depression	45	3.07	4.05	59	5.24	7.01	0.37	0.19
	Anxiety	45	1.8	3.03	59	3.07	3.54	0.3	0.19
Hagan et al. (2004) ²⁰	Depression	87	29/87 ^B		89	25/89 ^B		-0.14	0.18
Hayes et al. (2001) ²¹	Depression	95	5 ^c	1.83 ^C	93	4 ^C	1.17 ^C	-0.66	0.15
Holden et al. (1989) ²²	Depression	26	10.5 ^C	1.18 ^C	24	12 ^C	1.18 ^C	1.25	0.31
Honey et al. (2002) ²⁴	Depression	23	14.87	5.97	24	16.95	5.44	0.36	0.3
Howell et al. (2014) ²⁵	Depression	249	15/249 ^B		251	14/251 ^B		-0.05	0.21
Howell et al. (2012) ²⁶	Depression	227	20/227 ^B		242	37/242 ^B		0.35	0.16
Kenyon et al. (2016) ²⁷	Depression	519	6.76	0.23 ^D	489	7.35	0.24 ^D	0.11	0.06
Lavender & Walkinshaw	Depression	58	5/58 ^B		56	31/56 ^B		1.42	0.3
(1998) ³⁰	Anxiety	58	4/58 ^B		56	28/56 ^B		1.44	0.32
Le et al. (2011) ³¹	Depression	94	10.56	7.76	92	12.66	9.56	0.24	0.15
Letourneau et al. (2011) ³³	Depression	28	11.8	4.68	23	8.68	5.44	-0.6	0.29
Lieu et al. (2000) ³⁴	Depression	580	126/580 ^B		583	123/583 ^B		-0.02	0.08
MacArthur et al. (2002) ³⁶	Depression	569	6.40	8.18 ^E	499	8.06	8.19 ^E	0.2	0.06
Milgrom et al. (2011) ³⁷	Depression	22	6.1	4.8	23	11.8	9.8	0.72	0.31
Morrell et al. (2009a) ³⁸	Depression	196 ^A	9.2	5.4	106 ^A	11.3	5.8	0.38	0.1
	Anxiety	196 ^A	41.7	11.8	106 ^A	45.5	12.5	0.31	0.12
O'Mahen et al. (2014) ⁴⁰	Depression	41	11.05	4.71	42	14.26	5.11	0.65	0.24

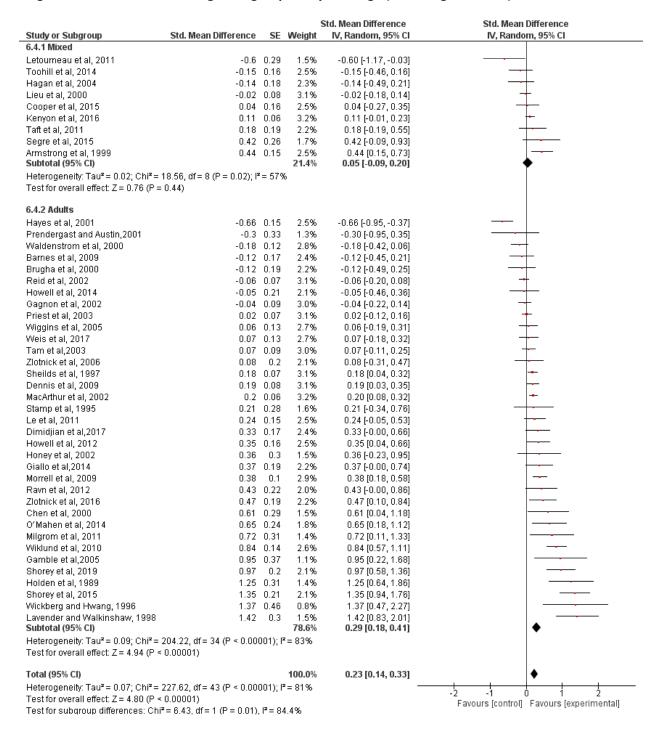
	Anxiety	41	8.71	4.61	42	11.29	5.49	0.5	0.22
Prendergast & Austin (2001) ⁴²	Depression	17	8.1	2.9	20	6.5	6.2	-0.3	0.33
Priest et al. (2003) ⁴³	Depression	870	318/870 ^B		875	311/875 ^B		0.02	0.07
Ravn et al. (2012) ⁴⁴	Depression	43	8.3	5.1	44	10.9	6.7	0.43	0.22
Reid et al. (2002) ⁴⁵	Depression	344	6.1	5.17	388	5.8	4.49	-0.06	0.07
Segre et al. (2015) ⁴⁷	Depression	41	11.03	7.3	25	14.29	8.19	0.42	0.26
Shields et al. (1997) ⁴⁹	Depression	426	8.1	4.9	362	9	4.9	0.18	0.07
Shorey et al. (2015) ⁵¹	Depression	56	6.8	2.7	54	10.6	2.9	1.35	0.21
Shorey et al. (2019) ⁵³	Depression	54	9.8	2.2	57	12	2.3	0.97	0.20
	Anxiety	50	79.8	11.3	52	87.7	11.3	0.69	0.20
Stamp et al. (1995) ⁵⁵	Depression	64	8/64 ^B		64	11/64 ^B		0.21	0.28
Taft et al. (2011) ⁵⁶	Depression	85 ^A	8.9	5	41 ^A	9.9	6.3	0.18	0.19
Tam et al. (2003) ⁵⁸	Depression	261	3.3	2.9	255	3.5	3	0.07	0.09
	Anxiety	261	3.8	3.5	255	3.9	3.5	0.03	0.09
Toohill et al. (2014) ⁵⁹	Depression	101	45/101 ^B		97	50/97 ^B		-0.15	0.16
Waldenström et al. (2000) ⁶²	Depression	361	58/361 ^B		323	12/323 ^B		-0.18	0.12
Weis et al. (2017) ⁶³	Depression	121	4.03	3.64	125	4.3	4.3	0.07	0.13
	Anxiety	121	83.26	16.34	125	79.45	15.41	-0.24	0.13
Wickberg & Hwang (1996) ⁶⁴	Depression	15	3/15 ^B		16	12/16 ^B		1.37	0.46
Wiggins et al. (2005) ⁶⁵	Depression	149	38/149 ^B		303	90/303 ^B		0.06	0.13
Wiklund et al. (2010) ⁶⁶	Depression	33	8/33		34	20/34		0.84	0.14
Zlotnick et al. (2006) ⁶⁷	Depression	46	9.39	7.42	40	10.1	9.41	0.08	0.2
Zlotnick et al. (2016) ⁶⁸	Depression	101	16/101 ^B		96	30/96 ^B		0.47	0.19

- A. Effective sample sizes were calculated for cluster trials using intraclass correlation coefficient and average cluster size. https://training.cochrane.org/handbook/current/chapter-23#section-23-1-4 For Barnes (2009) and MacArthur (2002) an ICC of 0.1 was reported for the sample size calculation. No ICC was reported for Morrell (2009); 0.1 was used as a conservative estimate. Taft (2011) reported an ICC of 0.04.
- B. Proportions were used to estimate standardized mean difference and standard error using the Campbell Collaboration Calculator: http://www.campbellcollaboration.org/escalc/html/EffectSizeCalculator-SMD10.php
- C. Mean in the table was calculated from median reported in the study, which was converted into a mean value using Vassar Statistics: http://vassarstats.net/median_range.html
- D. In the original paper, standard errors were provided instead of means. Standard errors were used with samples sizes and means to calculate the SMD using the Campbell Collaboration Calculator: http://www.campbellcollaboration.org/escalc/html/EffectSizeCalculator-SMD10.php
- E. Standard deviations were not provided. These were calculated using the RevMan calculator: https://training.cochrane.org/resource/revman-calculator

eFigure 2. Forest Plot Examining a Subgroup Analysis of Outcome Tool (Diagnostic vs Self-Assessment)



eFigure 3. Forest Plot Examining a Subgroup Analysis of Age (Mixed Age vs Adult)



eAppendix. Leave-One-Out Analyses

In the leave-one-out analyses, removal of the depression treatment trial with the largest effect size⁶⁴ resulted in a SMD of 0.34 (95% CI = 0.14 to 0.55, I^2 =67%); the removal of the depression treatment trial with the smallest effect size³³ resulted in a SMD of 0.44 (95% CI = 0.24 to 0.63, I^2 =62%). Removal of the depression treatment trial with the largest³⁸ and smallest⁴² sample size resulted in an SMD of 0.39 (95% CI = 0.15 to 0.64, I^2 =71%) and 0.42 (95% CI = 0.21 to 0.63, I^2 =68%), respectively. The removal of the depression prevention trial with the largest³⁰ and smallest²¹ effect size resulted in a SMD of 0.16 (95% CI = 0.06 to 0.27, I^2 =82%) and SMD of 0.22 (95% CI = 0.11 to 0.32, I^2 =81%), respectively. Removal of the depression prevention trial with the largest³⁶ and smallest⁶⁶ sample size resulted in an SMD of 0.19 (95% CI = 0.07 to 0.31, I^2 =84%) and 0.16 (95% CI = 0.06 to 0.27, I^2 =81%), respectively.

Removal of the trial with the biggest effect size¹⁶ that assessed anxiety treatment resulted in a SMD of 0.31 (95% CI = 0.06 to 0.56, I^2 =74%); removal of the trial with the smallest effect size¹⁵ that assessed anxiety treatment resulted in a SMD of 0.40 (95% CI = 0.25 to 0.56, I^2 =0%). Removal of the anxiety treatment trial with the largest¹⁵ and smallest⁴⁰ sample size resulted in a SMD of 0.40 (95% CI = 0.25 to 0.56, I^2 =0%) and 0.29 (95% CI = 0.03 to 0.56, I^2 =72%), respectively. Removal of the anxiety prevention trial with the largest⁶³ and smallest³⁰ effect sizes resulted in a SMD of 0.12 (95% CI = -0.14 to 0.38, I^2 =82%) and 0.46 (95% CI = 0.08 to 0.84, I^2 =88%), respectively. Removal of the anxiety prevention trial with the largest¹⁰ and smallest³⁰ sample size resulted in a SMD of 0.41 (95% CI = 0.11 to 0.92, I^2 =91%) and 0.12 (95% CI = -0.14 to 0.38, I^2 =82%), respectively.

eReferences

- 1. Armstrong K, Fraser J, Dadds M, Morris J. A randomized, controlled trial of nurse home visiting to vulnerable families with newborns. *Journal of paediatrics and child health.* 1999;35(3):237-244.
- 2. Armstrong K, Morris J. Promoting secure attachment, maternal mood and child health in a vulnerable population: a randomized controlled trial. *Journal of paediatrics and child health*. 2000;36(6):555-562.
- 3. Barnes J, Senior R, MacPherson K. The utility of volunteer home-visiting support to prevent maternal depression in the first year of life. *Child: care, health and development.* 2009;35(6):807-816.
- 4. 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(6):1273-1281.
- 5. Brugha TS, Sharp H, Cooper S-A, et al. The Leicester 500 Project. Social support and the development of postnatal depressive symptoms, a prospective cohort survey. *Psychological medicine*. 1998;28(1):63-79.
- 6. Chen C-H, Tseng Y-F, Chou F-H, Wang S-Y. Effects of support group intervention in postnatally distressed women: A controlled study in Taiwan. *Journal of psychosomatic research*. 2000;49(6):395-399.
- 7. Chen C-H, Wu H-Y, Tseng Y-F, Chou F-H, Wang S-Y. Psychosocial aspects of Taiwanese postpartum depression phenomenological approach: a preliminary report. *The Kaohsiung journal of medical sciences.* 1999;15(1):44-51.
- 8. Cooper PJ, De Pascalis L, Woolgar M, Romaniuk H, Murray L. Attempting to prevent postnatal depression by targeting the mother–infant relationship: a randomised controlled trial. *Primary health care research & development*. 2015;16(4):383-397.
- 9. Cooper PJ, Murray L, Wilson A, Romaniuk H. Controlled trial of the short-and long-term effect of psychological treatment of post-partum depression: I. Impact on maternal mood. *The British Journal of Psychiatry*. 2003;182(5):412-419.
- 10. Dennis C-L, Hodnett E, Kenton L, et al. Effect of peer support on prevention of postnatal depression among high risk women: multisite randomised controlled trial. *Bmj.* 2009;338:a3064.
- 11. Dennis C-L. The effect of peer support on postpartum depression: a pilot randomized controlled trial. *The Canadian Journal of Psychiatry.* 2003;48(2):115-124.
- 12. Dimidjian S, Goodman SH, Sherwood NE, et al. A pragmatic randomized clinical trial of behavioral activation for depressed pregnant women. *Journal of Consulting and Clinical Psychology*. 2017;85(1):26.
- 13. Field T, Diego M, Delgado J, Medina L. Peer support and interpersonal psychotherapy groups experienced decreased prenatal depression, anxiety and cortisol. *Early human development*. 2013;89(9):621-624.
- 14. Field T, Deeds O, Diego M, et al. Benefits of combining massage therapy with group interpersonal psychotherapy in prenatally depressed women. *Journal of bodywork and movement therapies*. 2009;13(4):297-303.
- 15. Gagnon AJ, Dougherty G, Jimenez V, Leduc N. Randomized trial of postpartum care after hospital discharge. *Pediatrics*. 2002;109(6):1074-1080.
- 16. Gamble J, Creedy D, Moyle W, Webster J, McAllister M, Dickson P. Effectiveness of a counseling intervention after a traumatic childbirth: a randomized controlled trial. *Birth.* 2005;32(1):11-19.

- 17. Gamble J, Creedy DK. A counselling model for postpartum women after distressing birth experiences. *Midwifery*. 2009;25(2):e21-e30.
- 18. Giallo R, Cooklin A, Dunning M, Seymour M. The efficacy of an intervention for the management of postpartum fatigue. *Journal of Obstetric, Gynecologic & Neonatal Nursing*. 2014;43(5):598-613.
- 19. Dunning M, Seymour M, Cooklin A, Giallo R. Wide Awake Parenting: study protocol for a randomised controlled trial of a parenting program for the management of post-partum fatigue. *BMC public health.* 2013;13(1):26.
- 20. Hagan R, Evans SF, Pope S. Preventing postnatal depression in mothers of very preterm infants: a randomised controlled trial. *BJOG: An International Journal of Obstetrics & Gynaecology*. 2004;111(7):641-647.
- 21. Hayes BA, Muller R, Bradley BS. Perinatal depression: a randomized controlled trial of an antenatal education intervention for primiparas. *Birth.* 2001;28(1):28-35.
- 22. Holden JM, Sagovsky R, Cox JL. Counselling in a general practice setting: controlled study of health visitor intervention in treatment of postnatal depression. *BMJ.* 1989;298(6668):223-226.
- 23. Holden J. Counselling: Instructions to Primary Care Workers. I: J. *Cox (red) Postnatal Depression:* A Guide for Health Professionals Edinburgh: Churchill Livingstone. 1986.
- 24. Honey KL, Bennett P, Morgan M. A brief psycho-educational group intervention for postnatal depression. *British Journal of Clinical Psychology*. 2002;41(4):405-409.
- 25. Howell EA, Bodnar-Deren S, Balbierz A, et al. An intervention to reduce postpartum depressive symptoms: a randomized controlled trial. *Archives of women's mental health.* 2014;17(1):57-63.
- 26. Howell EA, Balbierz A, Wang J, Parides M, Zlotnick C, Leventhal H. Reducing postpartum depressive symptoms among black and Latina mothers: a randomized controlled trial. *Obstetrics and gynecology.* 2012;119(5):942.
- 27. Kenyon S, Jolly K, Hemming K, et al. Lay support for pregnant women with social risk: a randomised controlled trial. *BMJ open.* 2016;6(3):e009203.
- 28. Kenyon S, Jolly K, Hemming K, et al. Evaluation of Lay Support in Pregnant women with Social risk (ELSIPS): a randomised controlled trial. *BMC pregnancy and childbirth*. 2012;12(1):11.
- 29. Kenyon S, Hewison A, Dann S-A, et al. The design and implementation of an obstetric triage system for unscheduled pregnancy related attendances: a mixed methods evaluation. *BMC pregnancy and childbirth*. 2017;17(1):309.
- 30. Lavender T, Walkinshaw SA, Midwife TLiaR, Stephen Walkinshaw is a Consultant in Feto-Maternal Medicine at the Liverpool Women's Hospital M, England. Can midwives reduce postpartum psychological morbidity? A randomized trial. *Birth.* 1998;25(4):215-219.
- 31. Le H-N, Perry DF, Stuart EA. Randomized controlled trial of a preventive intervention for perinatal depression in high-risk Latinas. *Journal of consulting and clinical psychology*. 2011;79(2):135.
- 32. Muñoz RF, Le H-N, Ippen CG, et al. Prevention of postpartum depression in low-income women: Development of the Mamás y Bebés/Mothers and Babies Course. *Cognitive and Behavioral Practice*. 2007;14(1):70-83.
- 33. Letourneau N, Stewart M, Dennis CL, Hegadoren K, Duffett-Leger L, Watson B. Effect of home-based peer support on maternal—infant interactions among women with postpartum depression: A randomized, controlled trial. *International journal of mental health nursing*. 2011;20(5):345-357.
- 34. Lieu TA, Braveman PA, Escobar GJ, Fischer AF, Jensvold NG, Capra AM. A randomized comparison of home and clinic follow-up visits after early postpartum hospital discharge. *Pediatrics*. 2000;105(5):1058-1065.

- 35. Escobar GJ, Braveman PA, Ackerson L, et al. A randomized comparison of home visits and hospital-based group follow-up visits after early postpartum discharge. *Pediatrics*. 2001;108(3):719-727.
- 36. MacArthur C, Winter H, Bick D, et al. Effects of redesigned community postnatal care on womens' health 4 months after birth: a cluster randomised controlled trial. *The lancet*. 2002;359(9304):378-385.
- 37. Milgrom J, Holt CJ, Gemmill AW, et al. Treating postnatal depressive symptoms in primary care: a randomised controlled trial of GP management, with and without adjunctive counselling. *BMC Psychiatry*. 2011;11(1):95.
- 38. Morrell CJ, Slade P, Warner R, et al. Clinical effectiveness of health visitor training in psychologically informed approaches for depression in postnatal women: pragmatic cluster randomised trial in primary care. *BMJ*. 2009;338:a3045.
- 39. Morrell CJ, Warner R, Slade P, et al. Psychological interventions for postnatal depression: cluster randomised trial and economic evaluation. The PoNDER trial. *Health Technol Assess*. 2009;13(30):iii-iv, xi-xiii, 1-153.
- 40. O'Mahen H, Richards D, Woodford J, et al. Netmums: a phase II randomized controlled trial of a guided Internet behavioural activation treatment for postpartum depression. *Psychological medicine*. 2014;44(08):1675-1689.
- 41. O'Mahen H, Fedock G, Henshaw E, Himle JA, Forman J, Flynn HA. Modifying CBT for perinatal depression: what do women want?: a qualitative study. *Cognitive and Behavioral Practice*. 2012;19(2):359-371.
- 42. Prendergast J, Austin M-P. Early Childhood Nurse-Delivered Cognitive Behavioural Counselling for Post-Natal Depression. *Australasian Psychiatry*. 2001;9(3):255-259.
- 43. Priest SR, Henderson J, Evans SF, Hagan R. Stress debriefing after childbirth: a randomised controlled trial. *Medical Journal of Australia*. 2003;178(11):542-545.
- 44. Ravn IH, Smith L, Smeby NA, et al. Effects of early mother—infant intervention on outcomes in mothers and moderately and late preterm infants at age 1 year: A randomized controlled trial. *Infant Behavior and Development.* 2012;35(1):36-47.
- 45. Reid M, Glazener C, Murray GD, Taylor GS. A two-centred pragmatic randomised controlled trial of two interventions of postnatal support. *Bjog.* 2002;109(10):1164-1170.
- 46. Saisto T, Salmela-Aro K, Nurmi JE, Könönen T, Halmesmäki E. A randomized controlled trial of intervention in fear of childbirth. *Obstet Gynecol.* 2001;98(5 Pt 1):820-826.
- 47. Segre LS, Brock RL, O'Hara MW. Depression treatment for impoverished mothers by point-of-care providers: A randomized controlled trial. *Journal of consulting and clinical psychology*. 2015;83(2):314.
- 48. Brock RL, O'Hara MW, Segre LS. Depression Treatment by Non-Mental-Health Providers: Incremental Evidence for the Effectiveness of Listening Visits. *American journal of community psychology*. 2017;59(1-2):172-183.
- 49. Shields N, Reid M, Cheyne H, et al. Impact of midwife-managed care in the postnatal period: An exploration of psychosocial outcomes. *Journal of Reproductive and Infant Psychology*. 1997;15(2):91-108.
- 50. Turnbull D, Reid M, McGinley MC, Shields NR. Changes in midwives' attitudes to their professional role following the implementation of the midwifery development unit. *Midwifery*. 1995;11(3):110-119.
- 51. Shorey S, Chan SW, Chong YS, He HG. A randomized controlled trial of the effectiveness of a postnatal psychoeducation programme on self-efficacy, social support and postnatal depression among primiparas. *J Adv Nurs.* 2015;71(6):1260-1273.

- 52. Shorey S, Chan WC, Chong YS, He HG. A randomized controlled trial of the effectiveness of a postnatal psychoeducation programme on outcomes of primiparas: study protocol. *J Adv Nurs.* 2015;71(1):193-203.
- 53. Shorey S, Chee CYI, Ng ED, Lau Y, Dennis CL, Chan YH. Evaluation of a Technology-Based Peer-Support Intervention Program for Preventing Postnatal Depression (Part 1): Randomized Controlled Trial. *J Med Internet Res.* 2019;21(8):e12410.
- 54. Shorey S, Chee C, Chong YS, Ng ED, Lau Y, Dennis CL. Evaluation of Technology-Based Peer Support Intervention Program for Preventing Postnatal Depression: Protocol for a Randomized Controlled Trial. *JMIR Res Protoc.* 2018;7(3):e81.
- 55. Stamp GE, Williams AS, Crowther CA. Evaluation of antenatal and postnatal support to overcome postnatal depression: a randomized, controlled trial. *Birth.* 1995;22(3):138-143.
- 56. Taft AJ, Small R, Hegarty KL, Watson LF, Gold L, Lumley JA. Mothers' AdvocateS In the Community (MOSAIC)- non-professional mentor support to reduce intimate partner violence and depression in mothers: a cluster randomised trial in primary care. *BMC Public Health*. 2011;11(1):178.
- 57. Taft AJ, Small R, Hegarty KL, Lumley J, Watson LF, Gold L. MOSAIC (MOthers' Advocates In the Community): protocol and sample description of a cluster randomised trial of mentor mother support to reduce intimate partner violence among pregnant or recent mothers. *BMC Public Health*. 2009;9:159.
- 58. Tam WH, Lee DT, Chiu HF, Ma KC, Lee A, Chung TK. A randomised controlled trial of educational counselling on the management of women who have suffered suboptimal outcomes in pregnancy. *Bjog.* 2003;110(9):853-859.
- 59. Toohill J, Fenwick J, Gamble J, et al. A randomized controlled trial of a psycho-education intervention by midwives in reducing childbirth fear in pregnant women. *Birth.* 2014;41(4):384-394.
- 60. Fenwick J, Gamble J, Creedy DK, et al. Study protocol for reducing childbirth fear: a midwife-led psycho-education intervention. *BMC pregnancy and childbirth*. 2013;13:190-190.
- 61. Fenwick J, Toohill J, Gamble J, et al. Effects of a midwife psycho-education intervention to reduce childbirth fear on women's birth outcomes and postpartum psychological wellbeing. *BMC pregnancy and childbirth*. 2015;15:284-284.
- 62. Waldenström U, Brown S, McLachlan H, Forster D, Brennecke S. Does team midwife care increase satisfaction with antenatal, intrapartum, and postpartum care? A randomized controlled trial. *Birth.* 2000;27(3):156-167.
- 63. Weis KL, Lederman RP, Walker KC, Chan W. Mentors Offering Maternal Support Reduces Prenatal, Pregnancy-Specific Anxiety in a Sample of Military Women. *J Obstet Gynecol Neonatal Nurs.* 2017;46(5):669-685.
- 64. Wickberg B, Hwang CP. Counselling of postnatal depression: A controlled study on a population based Swedish sample. *Journal of Affective Disorders*. 1996;39(3):209-216.
- 65. Wiggins M, Oakley A, Roberts I, et al. Postnatal support for mothers living in disadvantaged inner city areas: a randomised controlled trial. *Journal of Epidemiology and Community Health*. 2005;59(4):288-295.
- 66. Wiklund I, Mohlkert P, Edman G. Evaluation of a brief cognitive intervention in patients with signs of postnatal depression: a randomized controlled trial. *Acta Obstet Gynecol Scand*. 2010;89(8):1100-1104.
- 67. Zlotnick C, Miller IW, Pearlstein T, Howard M, Sweeney P. A preventive intervention for pregnant women on public assistance at risk for postpartum depression. *Am J Psychiatry*. 2006;163(8):1443-1445.

68.	Zlotnick C, Tzilos G, Miller I, Seifer R, Stout R. Randomized controlled trial to prevent postpartum
5 0.	depression in mothers on public assistance. <i>Journal of affective disorders</i> . 2016;189:263-268.