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Biological and Psychosocial Predictors of Postpartum Depression: Systematic Review and Call for Integration
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SUPPLEMENT A: TABLE 1

Biological and Psychosocial Predictors of Postpartum Depression

ID	Authors (Date)	Study Design	Participants[a]	Predictor(s)/ Timing *(Stimulation tests in italics)*	Measure of PPD/ Timing	Control Variables/ Other Predictors in Final Model	Did Measure(s) Predict PPD?
SECTION 1: STUDIES ON BIOLOGICAL MEASURES							
1	Albacar et al. (2010)	LG	1,053 mothers of Spanish origin, mostly married/ cohabiting, employed, low to medium educ., no current psychiatr. care	**FT4, TSH, TPOAb** in serum, **CRP** in plasma 8-9am, 24-48 hrs pp	**EPDS**>9, confirmed w/ dx (**DSM-IV**) 24-48hrs, 8, 32 wks pp	Employment status, sick leave	Binary and multivar. logistic models n.s.
2	Alvim-Soares et al. (2013)	CS	116 Cauc. women delivering in a maternity unit in Brazil	**COMT** (Val^{158}Met)	**EPDS**>12 8 wks pp	-	Homozygous Met allele carriers w/ more PPD
3	Binder et al. (2010)	LG	188 preg. US women w/ maj. depr. hx; 88% White Non-Hisp.; Excl.: suicidal, psychotic, anemia, abnormal TSH, drug, alcohol abuse	**5-HTT** (5-HTTLPR)	**HAM-D**, confirmed w/ **SCID mood module** ≤8 wks, 9-24 wks pp	Age, race, educ., marital status, GA at delivery, gravidity, parity	Short allele w/ increased likelihood of PPD before 8 wks pp
4	Bloch et al. (2000)	LG	16 US non-preg. parous women, ≥1 yr from last birth; healthy, no meds, euthymic, no non-puerperal depr. hx, 8 w/ and 8 w/o PPD hx; 22-45 yrs; Excl.: premenstrual dysphoric disorder	**Estradiol, progesterone** Preg. simulation: GRH analog for 5 mos; in mos 2-3 *estradiol* and *progesterone*; in mos 4 placebo instead of active meds (withdrawal)	**SCID** (for DSM-IV), **SADS,** sx w/ **EPDS, BDI, Cornell Dysthymia Scale** Wk 1-4 and 9-12 wks after withdrawal	-	No group differences in estradiol or progesterone; Sx only among women w/ PPD hx
5	Boufidou et al. (2009)	LG	56 Greek, physically healthy, preg. women; 93% breastfeeding; Excl.: Being single, psychiatr. hx, premature labor, labor complic.	**TNF-α, IL-6** in serum early in labor, and in CSF before epidural	**PBQ, EPDS** On admission and daily, 1-4 days pp (PBQ); day 4 and 6 wks pp (EPDS)	Preg. duration, menstrual cycle in days, BMI	Simple comparisons: higher serum IL-6 at 1 day pp, higher TNF-α in CSF at 3 days pp in cases (PBQ); Multiple regressions: higher TNF-α (mean PBQ), higher IL-6 and TNF-α (EPDS, 4 days pp) and higher IL-6 (6 wks pp) in CSF of cases
6	Chatzicharalampous et al. (2010)	LG	57 married, preg. Greek women, w/o psychiatr. hx, current antidepressant meds, obstetric complic., eating disorders	**Estradiol, progesterone, testosterone** in blood Daily, admission for delivery to 4 days pp	**PBQ** sx and cutoff 8.2, **EPDS** sx cutoff 11 Daily 1-4 days (PBQ), 4 days, 6 wks pp (EPDS)	Preg. duration	N.s. for simple correlations and multiple regression model
7	Corwin et al. (2008)	LG	25 US mothers, 73% married, 73% breastfeeding at birth, 58% on day 28 pp; 92% White; Excl.: multiple birth, C-section, delivery complic.; pp: any disease, most meds	**IL-1β, IL-6** in urine Within 24 hrs of giving birth; 9-10am, 7,14,28 days pp	**CES-D**>10 7,14,28 days pp	-	IL-6 fell over time only in women w/o PPD; higher day 14 IL-1β in day 28 cases *Note: IL-6 not detectable in most women at 14 and 28 days pp*
8	Costas et al. (2010)	LG	1,804 Spanish mothers, no psychiatr. treatment in preg.; 31% w/ family hx, 16% w/ personal hx of psychiatr. treatment; Excl.: neonatal death *Sample overlaps w/ Study ID 40*	**508 polymorphisms in 44 genes (**related to HPA axis, sex hormones and effects of stress on prefrontal cortex)	**EPDS**>8, confirmed w/ DSM-IV dx based on **Diagnostic Interview for Genetic Studies** 2-3 days; 8,32 wks pp	-	7 polymorphisms on estrogen receptor 1, protein kinase C beta, PENK genes sig. before multiple test correction; haplotype combination (rs198183, rs381901, rs2051684) on protein kinase C beta sig.

9	Doornbos et al. (2009)	LG	98 Cauc. women w/ healthy preg., healthy infants from the Netherlands; Excl.: diabetes, vegan diet *Note: Secondary analysis from trial on dietary supplements*	**5-HTT, MAO-A, COMT**	**EPDS** sx 6, 12 wks pp	Treatment group	MAO-A (low activity variant), COMT (met/met) w/ more sx, trend for 5-HTT (long allele); stronger effect in women w/ MAO-A (low activity) and COMT (met/met) at 6 wks pp
10	Engineer et al. (2013)	CS[b]	140 Cauc. women from the UK; Excl.: anemia, thyroid disease, pre-existing mental illness, antidepressant or other meds influencing risk for perinatal depr.	**Glucocorticoid receptor** (BclI, ER22/23EK), **CRH receptor 1** (rs1876828, rs242939, rs242941)	**EPDS** sx, >9 2-8 wks pp	-	CRHR1 rs242939 G allele, rs242941 T allele w/ sx. BclI (C/G) and CRHR1 (A/G) minor alleles more frequent in cases, stronger effect for carriers of both alleles. C-G-T haplotype of CRHR1 over-represented in cases
11	Epperson et al. (2006)	CS	23 mothers, 9 w/ and 14 w/o PPD; otherwise healthy, neg. tox. screen, not menstruating, med free, 87% breastfeeding	**Estradiol, progesterone** in serum 0-6 mos pp	**Clinical Interview,** 19-item **HAM-D**>17 0-4 mos pp	Age	Estradiol levels higher in cases
12	Fasching et al. (2012)	LG	361 German women w/ healthy preg.; 43% primiparous; Excl.: psychiatr. disorders	**TPH2** (14 single nucleotide polymorphisms combined into haplotype blocks)	**EPDS** sx 48-72 hrs pp, 6-8 mos pp	-	Haplotype block in promoter region (rs11178993, rs6582071, rs11178997) w/ sx at 6-8 mos pp
13	Figueiredo & Costa (2009)	CS[b]	91 primiparous women from Portugal; 99% Cauc.	**Cortisol** in 24-h urine 21-28 wks' GA, 3 mos pp	**EPDS** sx 3 mos pp	Prenatal depr., and pre- and postnatal anxiety and bonding	No sig. associations
14	Glynn & Sandman (2014)	LG	170 US women w/ singleton preg. and delivery ≥37 wks' GA; 52% non-Hisp. White, 21% Latina, 11% Asian; Excl.: Smoking, conditions affecting neuroendocrine function	**Cortisol, ACTH**, and **CRH** in plasma 15,19,25,31,36+ wks' GA; 3, 6 mos pp	**EPDS** > 9, > 13 3, 6 mos pp	Maternal age, BMI, educ., income, parity, GA	Simple comparisons: CRH at 25, 31, 36+ wks w/ sx at 3 mos pp; Multilevel modeling: Cases at 3 mos pp w/ accelerated CRH between 20-25 wks' (EPDS >9), 19 and 27 wks' GA (EPDS >13); higher levels between 23-31 wks (EPDS >9), 26-31 wks (EPDS >13)
15	Groër (2005)	CS	183 US mothers, exclusively breast (n=84) or formula (n=99) feeders, 64% married, 84% Cauc.; Excl.: <18 or >45 yrs, preg. complication, infant morbidity, chronic illness, meds influencing immune function *Sample overlaps w/ Studies 17, 205*	**Cortisol** and **prolactin** in serum, **ACTH** in plasma 8-11am, 4-6 wks pp	**POMS-D** sx and highest vs. lowest decile 4-6 wks pp	-	Odds of higher cortisol in highest compared to lowest decile greater than 6:1, but t-test n.s. Prolactin lower in highest compared to lowest decile
16	Groer & Davis (2006)	CS	181 US mothers, exclusively breast- or formula feeding, mostly married, low SES, white; Excl.: <18 or >45 yrs, PTB, preg./ labor/ delivery complic., chronic illness, meds influencing immune function *Sample overlaps w/ Studies 16, 205*	**IFN-γ** and **IL-10** in serum 8-11am, 4-6 wks pp	**POMS-D** sx 4-6 wks pp	Income, marital status, age, feeding status	POMS-D correlated w/ IFN-γ in formula feeders, but not in breastfeeders. No association w/ IL-10 or the IFN- γ/IL-10 ratio
17	Groer & Vaughan (2013)	LG	119 US women w/ singleton preg., mostly white; Excl.: <18 or > 45 yrs, chronic disease, med affecting immunity, IVF, fetal anomalies	**TPOAb** 16-25 wks' GA	**POMS-D** >20 1 wk; 1, 2, 3, 4, 5, 6 mos pp	Age, marital status	TPOAb+ women had higher depr. scores

18	Guintivano et al. (2014)	LG	51 US preg. women w/ depr. or bipolar disorder hx (n=32 euthymic in 3rd trim., but depr. within 4 wks pp; n=19 depr. prepartum of which 12 remained depr. pp); 70% Cauc.	**DNA methylation** (estrogen mediated epigenetic change; 1578 differentially methylated regions) 1st, 2nd or 3rd trim.	**DSM-IV** dx	-	Increase in estrogen-mediated DNA methylation change in PPD group; two genes related to estrogen signaling (promoter regions of HP1BP3 and TTC9B genes) emerged as most sig. biomarkers of PPD
19	Hohlagschwandtner et al. (2001)	CS[b]	193 women w/ normal singleton preg. from Austria; Excl.: serious marital, health or SES problems, psychiatr. hx, fetal complic.	**Cortisol, estradiol, progesterone, testosterone, prolactin** in serum 38-40 wks' GA, and fasting at 1, 3 days pp	**POMS-D** sx Daily, day 1 pp until discharge	-	More sx w/ higher testosterone levels
20	Jolley et al. (2007)	LG	22 US preg. women, mostly breastfeeding; Excl.: <20 or >40 yrs, disease, preg. problems, smoking, most meds, EPDS ≥12 at 8 mos' GA, impaired physical activity readiness; 86% Cauc.	**Cortisol** in serum, **ACTH** in plasma Before (-15, -10 min), during (+10 min), immediately after (+22 min) and +32, 42, 52, 62 min; response to *treadmill exercise*; Afternoon, after infant feeding, 6, 12 wks pp	**PPD Screening Scale** >59 6, 12 wks pp	Baseline, 10 min lag between cortisol and ACTH peak	No direct effects for cortisol and ACTH, but steeper slopes of the ACTH-to-cortisol regression lines in non-cases (i.e., cases had higher ACTH and lower cortisol at each time point) at 6 and 12 wks pp
21	Khabour et al. (2013)	CS	370 pp women from Jordan, 130 w/ PPD; 99.5% married; Excl.: previous psychiatr. disorder, <17 or > 45 yrs	**5-HTT** (5HTTLPR), **TPH1** (A218C), **TPH2** (G1463A)	**EPDS** >12 4-6 wks pp	-	No sig. associations
22	Klier et al. (2007)	LG	192 women w/ normal, singleton preg. from Austria; Cauc.; Excl.: serious health problems (except maj. depr.), fetal complic., most meds	**Estradiol, progesterone** in plasma 8-10am; day 1, 3 pp	**SCID** (DSM-III-R): current PPD, depr. hx, healthy controls; **SRDS**, **EPDS** sx Day 5 pp (SCID), daily days 1-10 pp (SRDS), 6 mos (EPDS)	-	Day 5 cases had higher day 3 estradiol than controls; No effects for progesterone; Hormonal change scores not correlated w/ sx at 6 mos
23	Lambrinoudaki et al. (2010)	LG	57 preg., married Greek women, 93.3% breastfeeding; Excl.: Preg. complic., thyroid, eating or psychiatr. disorders	**FT4, fT3, TSH, TPOAb, TgAb** in blood Upon delivery and daily until day 4 pp	**EPDS, PBQ** daily days 1-3 pp (PBQ), day 4 pp, 6 wks pp (EPDS, PBQ)	Preg. duration	More sx (PBQ) w/ lower fT3 on day 4, and mean of days 1-4 pp
24	Le Donne et al. (2012)	CS	74 married Italian mothers, healthy preg. w/o stressors, healthy neonate, no alcohol/ drug abuse; Excl.: psychiatr. disorders, endocrine disease, head-trauma, drugs affecting thyroid system, localized or systemic disease	**FT3, fT4, TSH, TPOAb, TgAb** in serum 8am, day 3 pp Thyroid dysfunction: high TSH, low fT4 and fT3	**EPDS, MADRS** sx and EPDS >9, >11, >12 or >13; MADRS >14 Day 3 pp	-	Simple comparisons: cases (EPDS ≥13 or ≥14) had greater levels of TPOAb and TgAb; Multiple regression analyses w/ all variables (including the T4/T3 ratio) did not show effects
25	Letourneau et al. (2011)	CS	53 mothers scoring >12 on EPDS w/ healthy preg. and healthy infants from Canada; Excl.: co-morbid mental health conditions, corticosteroid med	**Cortisol** in saliva 15-30 min after waking, 10-11am, 3-5pm, evening before bed; once at 3-12 mos pp (area under the curve)	**EPDS** sx 3-12 mos pp	Low income, NICU, premature, difficult life circumstances, depr. severity, below average response to caregiver	Simple comparisons: more sx w/ lower cortisol; Multivar.: n.s.; but reverse directionality (cortisol was outcome variable)

26	Light et al. (2004)	CS[b]	35 US mothers w/ healthy, full-term infants, 10 used cocaine in preg., all cocaine users and 11 non-users bottle-fed; Excl.: serious cardiovascular, renal, pulmonary disorder, prescription meds	**Oxytocin, epinephrine** (plasma), **norepinephrine** (plasma, urine), **cortisol** (serum, urine) Plasma: baseline, 2 min into *speech stressor*; serum: baseline; 9-10am, 2 days (w/ and w/o pre-stress baby holding), 1-11 mos pp, 24h urine between sessions	**BDI** sx 1-11 mos pp	-	More sx w/ higher norepinephrine baseline and stress levels on both days
27	Lucas et al. (2001)	CS[b]	641 healthy women from Spain, 29.6% breastfeed for ≥2 mos; Cauc.	**FT4, TSH, TPOAb, TgAb, TRAb** in blood 36 wks' GA-4 days pp; 1, 3, 6, 9, 12 mos pp Thyroid dysfunction: abnormal fT4 and/ or TSH, confirmed by Ab status (unique effects of T4, TSH, Ab status not reported)	**BDI** sx and > 20 36 wks' GA-4 days pp; 1, 3, 6, 9, 12 mos pp	-	No differences in # of cases or sx severity between women w/ and w/o thyroid dysfunction
28	Maes et al. (2000)	LG	91 healthy preg. women from Belgium; Excl.: PTB, infections, labor complic., C-section after labor, any disease except depr., use of psychotropic meds or meds affecting immune or endocrine function	**IL-6, IL-6 receptor, IL-1 receptor antagonist, gp130 (a signal transducer for IL-6), leukemia inhibitory factor receptor** in serum 8am, 3-5 days before estimated delivery; day 1, 3 pp	**SRDS** "reactors" (highest quartile for change score from preg. to day 3 pp) vs. "nonreactors" 3-5 days before estimated delivery; day 1, 3 pp	-	Depr. reactors w/ higher IL-6 and IL-6 receptor levels than non-reactors (overall, prenatally and at 1 and 3 days pp) and higher IL-6 x IL-6 receptor values (overall and at 1 and 3 days pp)
29	McCoy et al. (2008)	CS[b]	51 US preg. women; Excl.: pos. drug screen, EPDS>13 in 3rd trim., C-section, multiple preg.	**FT4, TSH, TPOAb, TgAb** in plasma 3rd trim, 4 wks pp	**EPDS** sx 4 wks pp	-	More sx w/ higher TSH and in Ab pos. women at 4 wks pp
30	Meltzer-Brody et al. (2011)	LG	484 US preg. women, married, primiparous, at least some college, and income>200% poverty line; Mostly White	**CRH** in plasma <20 wks' GA, 24-29 wks' GA	**EPDS** sx and > 11 12 wks, 1 yr pp	Age, time of day, race/ ethn., parity, educ., marital status, income, BMI	No sig. associations
31	Mileva-Seitz et al. (2013)	CS[b]	187 Cauc. mothers from Canada; 94% w/ partner; Excl.: premature delivery, stillbirth or termination	**Oxytocin peptide gene** (rs2740210, rs4813627) and **oxytocin receptor gene** (rs237885)	**CES-D** 6 mos pp	Mother's early life care quality, age, educ., parity, infant gender and activity in final model	No main effects, but less sx w/ increasing quality of early life care, in particular among women w/ the C/C (rs2740210) and G/G (rs4813627) genotypes
32	Mitchell et al. (2011)	LG	1,206 mothers from large US cities; about 25% married; 63% Black, 21% Hisp., 13% White	**5-HTT** (5-HTTLPR, STin2 VnTR)	DSM-IV dx based on **CIDI short form** 1 yr pp	Yrs of educ. in final model; Control for hospital, city, race, age, marital status, preg. use of tobacco, alcohol or drugs, low birth weight, mother injured by father during preg., neighborhood safety, soc. supp., mother immigrant	No main effect; Yrs of educ. decreases PPD for homozygous short allele carriers of the 5-HTTLPR (12% per year) and homozygous long allele carriers of STin2 VnTR (10% per year); combined effect: 18% decrease in odds of PPD per yr

33	Nappi et al. (2001)	CS	40 married, well-educ., primiparous, breastfeeding Italian mothers w/ normal preg. and healthy infant; Excl.: hx of depr., neuroactive drugs, alcohol abuse	**Cortisol, estradiol, prolactin** in plasma, **progesterone** in serum 8-8:30am, day 3 pp	Modified **HAM-D** sx and score 11-18, **SBS** sx and cutoff=8 Day 3 pp	-	More sx (HAM-D) w/ lower progesterone
34	O'Keane et al. (2011)	LG	70 full-term, mostly primiparous UK women; Excl.: past or current psychiatr. disorder, maj. obstetric, medical or neurological problem, multiple preg., most meds, <19 or >45 yrs	**Cortisol, ACTH, CRH, estriol, progesterone** in blood 11am-3pm, >4 hrs after waking, >1hr after breastfeeding; at 36 wks' GA, and days 1, 3, 5 or 2, 4, 6 pp	**PBQ** sx Day 1, 3, 5 pp or day 2, 4, 6 pp	-	More sx w/ less pronounced perinatal CRH decrease, w/ higher ACTH pp and lower estriol pp
35	Okun et al. (2011)	LG	56 US mothers w/ hx of PPD or maj. depr. disorder, not depr. at 36 wks' GA of current preg., wide SES distribution, 95% married/cohabiting; 93% Cauc.	**Cortisol, estradiol, progesterone, IL-6** in plasma 2,3,4,6,8,11,14,17 wks pp	**HAM-D**: 2 scores of >14 within 1 wk, and 2 psychiatrists agreeing on dx (**DSM-IV**) 2,3,4,6,8,11,14,17 wks pp	Meds (3 groups: placebo, nortriptyline, sertraline), covariates time-dependent	No sig. associations
36	Pedersen et al. (2007)	LG	31 US preg. women mostly married, some college, 9 w/ depr. hx; Mostly Cauc.; Excl.: <18 or > 42 yrs, current mood, psychotic, anxiety, eating, substance use disorders, medical disorder, obstetric complic., most meds, C-section, premature birth	**FT4, total T4, fT3, total T3, TSH** in blood, **T3 resin uptake** in serum; (fT4 index computed) 10am-3pm, 32-35,36,37 wks' GA	**EPDS** sx and >9, **BDI** sx and >17 at one or more time points every other wk, 2-24 wks pp (sx averaged across 2-6, 8 –12, 14-18, 20-24 wks)	-	More sx at 2-6 wks w/ lower average antenatal total T4 levels and w/ lower average antenatal fT4 index
37	Pinsonneault et al. (2013)	CS	257 Canadian women w/ full-term healthy infant; 91% Cauc.; Excl.: bipolar or psychotic disorder, risk for suicide, homicide, infanticide, drug or alcohol abuse; serious medical condition	**ESR1** (TA repeat, rs2077647, rs988328, rs1801132, rs1884051, rs3020327, rs9340958, rs3020434, rs3798577), **COMT** (rs4680)**, TPH2** (rs7305115)**, DRD2** (rs2283265)**, HTR2A** (rs6311, rs6314)**, DAT, MAO-A** (pVNTR, rs1137070)**, SERTLPR, SLC6A3** (ln8VNTR, rs6347, rs27072)	**EPDS, MADRS, DSM (SCID), MINI** Within 12 wks pp	Age	ESR1 TA repeat (L allele) and rs2077647 (G allele) w/ high EPDS score and dx, only TA repeat w/ EPDS sig. after correction for multiple tests; COMT rs4680, MAOA rs1137070 HTR2A rs6314 sig. in some models; Interactions: ESR1 TA repeat (long allele) w/ serotonin SERTLPR (short allele) w/ higher risk
38	Rich-Edwards et al. (2008)	LG	616 preg. US women, 64% income > $70 ,000, 93% at least some college, 87% married, 50% nulliparous, all live-births; 77% Cauc., 12% Black	**CRH** in plasma 25-37 wks' GA	**EPDS** >12 6 mos pp	Age, race/ ethn., income, marital status, parity, PTB	No sig. associations
39	Sanjuan et al. (2008)	LG	1,407 women from Spain; 46% primiparous, 31% w/ family and 16% w/ personal hx of psychiatr. treatment; Excl.: psychiatr. care during preg., neonatal death *Sample overlaps w/ Study 8*	**5-HTT** (5-HTTLPR, Stin2 Vntr)	**EPDS** sx and >9, confirmed by **Diagnostic Interview for Genetic Studies** adapted for PPD 8, 32 wks pp	Age	Higher EPDS scores w/ 5-HTT expression levels at 8 wks; no association for dx

40	Scrandis et al. (2008)	LG	27 preg. US women at high risk for PPD; Mostly Afr.-Am.; Incl.: ≥18 yrs, maj. recurrent mood disorder hx, anxiety disorder in preg., ≥1 maj. stressful soc. situation in past yr; Excl.: autoimmune disorder, drug abuse, hx of psychosis, active infections, anti-depressant meds	**CRP, IL-6** in serum 35-38 wks' GA, 1-5 days, 5-6 wks pp	**HAM-D** 1-5 days pp, 5-6 wks pp	-	Higher CRP w/ atypical depr. at 1-5 days pp; No associations at 5-6 wks for CRP, no associations for IL-6
41	Skalkidou et al. (2009)	LG	347 Swedish preg. women; Excl.: intrauterine demise, infant in NICU *Sample overlaps* w/ *Studies 202, 203*	**IL-6** in blood During routine intravenous catherization before delivery	**EPDS** >13 on day 5, >11 at 6 wks, >11 at 6 mos pp Day 5, 6 wks, 6 mos pp	Leptin, BMI at 6 wks pp, age, preg. duration, infant gender, smoking in preg.	No sig. associations
42	Skrundz et al. (2011)	LG	73 Swiss preg. women; Excl.: disease, fetal malformation, pre-preg. BMI ≥32, smoking	**Oxytocin** in plasma 1-3 pm, 30-34 wks' GA	**EPDS** >9 within first 2 wks pp	Prenatal depr., length of gestation	Multiple regression: Lower oxytocin in cases; oxytocin classified 83.6% of sample correctly into cases vs. non-cases
43	Stuebe et al. (2013)	CS[b]	48 preg. US women w/ intent to breastfeed; 83% White, 15% Black/Afr.-Am.; Excl.: current psychiatr. disorder except unipolar depr. and anxiety, substance use, medical conditions interfering w/ breastfeeding	**Oxytocin, estradiol, progesterone, prolactin, cortisol, CRH, fT4, total T4** in plasma Baseline (all), at 1,3,7 min (oxytocin), 10 min of *breastfeeding* (oxytocin, prolactin), after post feeding rest (oxytocin, prolactin, cortisol, CRH, T4) 2, 8 wks pp	**EPDS** >9 at 2 and 8 wks pp	-	Lower baseline oxytocin in cases at 2 wks; Lower baseline and stimulated oxytocin and T4 at 8 wks; smaller oxytocin area under the curve in cases at 8 wks
44	Sylvén et al. (2013)	LG	347 women from Sweden; > 95% Cauc.; Excl.: Intrauterine demise, infants in NICU	**FT4, TSH** in blood Upon delivery	**EPDS** >11 Day 5, 6 wks, 6 mos pp	Previous psychiatr. contact, smoking, pre-preg. BMI, sleep	High TSH w/ more depr. sx at 6 mos; Lower fT4 w/ more sx at 5 days
45	Taylor et al. (2009)	CS	21 mothers w/ and w/o PPD from Switzerland, mostly married, breastfeeding	**Cortisol** in saliva Waking, +30 min, +3, +12 hrs, 6-8 wks pp	**EPDS** >12 6-8 wks* pp	-	Sig. cortisol increase from waking to +30 min in women w/o but not in women w/ PPD
46	Wissart et al. (2005)	LG	73 preg. Afro-Jamaican women in Jamaica; Excl.: thyroid disease hx, medical illness, depr., substance abuse	**Total T4, fT3, TSH** in blood 8, 28, 35 wks' GA, day 1 pp, 6 wks pp	**SRDS** <50 normal, 50-59 mild, 60-69 moderate, ≥70 severe 6 wks pp	-	T4 changes from 28 wks' GA-6 wks pp w/ PPD; Each unit increase in T4 change increased odds of being more depr. by a factor of 0.75
47	Yim et al. (2009)	LG	100 US women w/ singleton preg., all live births; 54% non-Hisp. White, 22% Hisp. White, 12% Asian, 7% Afr.-Am.; Excl.: <18 yrs, conditions affecting neuroendocrine function, drug and alcohol abuse *Sample overlaps w/ Study 49*	**Cortisol, ACTH, CRH** in plasma 15,19,25,31,37 wks' GA	**EPDS** sx and >9 9 wks pp	Time of day, depr. in preg.	Simple comparisons: more sx w/ higher ACTH at 25 wks' GA, higher CRH at 25, 31 wks' GA; Multivar.: More sx w/ higher CRH at 25 wks' GA; Multilevel modeling: Accelerated CRH increases in cases from 23-26 wks' GA, differences in CRH level from 18 wks' GA throughout preg.

48	Yim et al. (2010)	LG	307 US women w/ singleton, full-term preg., all live births; 49% non-Hisp. White, 20% Hisp. White, 12% Asian, 10% Afr.-Am., 9% Asian; Excl.: <18 yrs, conditions affecting neuroendocrine function, drug and alcohol abuse *Sample overlaps w/ Study 48*	**β-Endorphin** in plasma 15,19,25,31,37 wks' GA, 9 wks pp	**EPDS** sx and >9 9 wks pp	Time of day, depr. in preg.	Among women who are euthymic at 25 wks' GA, β-endorphin throughout preg. is predictive of PPD, no effect among women who are symptomatic at 25 wks' or when sample is split by depr. mood at other GAs
SECTION 2: STUDIES ON PSYCHOSOCIAL PREDICTORS							
49	Abbott & Williams (2006)	CS	1,363 Pacific Island mothers from Australia; 47% Samoan, 21% Tongan, 17% Cook Islands Maori, 4% Niuean	**Stress** due to insufficient money for food (30 predictor variables, but incomplete information provided) **Marital status, relationship happiness** 6 wks pp	**EPDS** >12 6 wks pp	Age, educ., ethn., household income; cultural orientation, parity, satisfaction w/ home, difficulty w/ transport, reaction to preg., satisfaction w/ birth experience and w/ baby's sleep pattern in final model.	Univar.: More stress, being non-partnered, married but separated, unmarried or not living together, and low relationship happiness w/ more PPD; Multivar.: More stress and low relationship happiness w/ more sx
50	Ahmad & Munaf (2006)	CS	90 married Pakistani mothers of healthy newborns	**Family structure** (nuclear vs. joint) 1 day pp	**BDI** sx 1 day pp	-	Univar.: Women in nuclear family unit had more sx than those living w/ extended family
51	Akincigil et al. (2010)	LG	4,348 urban US mothers, 76% near/below poverty level; 48% Afr.-Am., 27% Hisp., 22% White	**Marital status, partner relationship quality** (disagreement, violence, supportiveness), **perc. family supp.** Immediately post birth	**CIDI** (Short Form) dx (consistent w/ DSM-IV) 1 yr pp	Educ., race/ethn., age, income to poverty ratio, infant birth weight, # of children, self-rated health, prenatal substance use	Univar.: married < cohabiting < non-cohabiting/no relationship; Violence, disagreement about preg., relationship quality predictive after contr. for marital status; Full model: Relationship quality, lack of relationship, family supp. neg. related; disagreement about preg. pos. related; violence, marital status n.s.; Relationship quality mediated association w/ marital status and PPD
52	Ali et al. (2009)	LG	267 Pakistani mothers living in "peri-urban" areas, 88% Muslim, 37% w/ formal educ.	**Family/soc. supp.**, **abuse** of mother or child in home Within 10 days pp	Pos. combined screen for depr. and anxiety sx; confirmed w/ DSM IV dx 1, 2, 6, 12 mos pp	Age, study site, planned preg., breast-feeding difficulties	Univar. and multivar.: Domestic violence toward mother or child w/ increased risk of depr. (timing unspecified); Stress and supp. findings not reported
53	Appolonio & Fingerhut (2008)	CS	87 active duty US military mothers who gave birth to healthy babies; 62% Cauc., 16% Hisp., 14% African origin	**Amount of supp.** (general), **partner relationship satisfaction** (1-item), **marital status, life stress, child care stress, difficult infant temperament** Within 6 mos after delivery (M=12 wks)	**EPDS** >11 Within 6 mos after delivery (M=12 wks)	-	Univar.: Low soc. supp., low relationship satisfaction, increased life and child care stress, and difficult infant temperament w/ sx

54	Bjerke et al. (2008)	CS[b]	197 preg., mostly married, unemployed immigrant Pakistani women in Norway	**LEs** in last 12 mos, **marital status** (single vs. married)**, family structure** (nuclear vs. extended), perc. **soc. supp., partner attachment** Timing unclear (women seen once during preg., 6-12 wks pp)	**EPDS** >9 6-12 wks pp	-	Univar.: More LEs, low partner attachment, and single status among women w/ PPD
55	Boury et al. (2004)	CS	151 low income US mothers receiving public assistance, w/ at least one child <2 yrs; all women also participated in clinical trial for weight management (mean BMI: 30); 91% Cauc., 7% Afr.-Am.	**Perc. stress, financial stress, soc. supp. number and satisfaction** M=30 wks pp (55% ≤6 mos pp, 31% 6-12 mos pp, 14% >1 yr pp)	**BDI** sx and categorical: normal 0-9, mild 10-16, moderate/ severe ≥17 30 wks pp	Primipara, age, smoking	Univar.: Higher perc. and financial stress, lower supp. number and satisfaction w/ sx; More perc. stress in mild than normal group; More perc. and financial stress, less supp. satisfaction in moderate/severe group than normal group; Multivar.: Perc. stress w/ sx
56	Boyce (2003)	LG	914 mothers in secondary analysis of 2 datasets of English-speaking women, mostly married or in relationship, w/ healthy infants and w/o psychosis or maj. medical condition; "Risk Factor Study": n=424; "Outcomes Study": n=490	**Current intimate relationship, soc. supp., partner status, LEs** 1 wk pp	Risk Factor Study: **EPDS** >12 on 2 occasions and **SCID** dx within 6 mos pp Outcomes study: EPDS >12 at 8 wks pp	-	Lack of partner and ≥1 LEs w/ PPD in Risk Factor Study; Unsatisfactory instrumental and emot. supp., arguments w/ partner, low satisfaction or poor partner supp. w/ PPD in Outcomes Study
57	Boyce & Hickey (2005)	LG	425 mothers of healthy infants from Australia	**Intimate relationship functioning, soc. supp.**, **quality of key relationships** 2 days pp **Changes in relationship** 6, 12, 18, 24 wks pp **LEs** in last 12 months 12 wks pp	**EPDS** >12 on two consecutive occasions, confirmed w/ **SCID** 2 days; 6, 12, 18, 24 wks pp	Age, educ., baseline EPDS, self and family hx of depr., vulnerable and low organized/ responsive personality	Univar.: Intimate relationship functioning at 2 days pp (global dissatisfaction, problems communication, deficient emot. supp.), unsatisfactory soc. supp. and ≥ 1 LE w/ PPD; worsening relationship n.s.; Multivar.: All n.s.
58	Britton (2011)	CS	296 US mothers of singleton newborns w/o need for NICU care; 74% Cauc., 10% Hisp., 6% Asian/Pacific Islander, 4% Native American	**Soc. supp., infant temperament, recent LEs, perc. perinatal stress** 1 mo pp	**BDI** sx 1mo pp	Depr. hx, trait anxiety, self-concept, marital satisfaction, preg. planning, family income, educ.	Soc. supp., perc. perinatal stress and infant temperament independently predictive of sx
59	Certain et al. (2008)	CS	1,519 US mothers recruited at postnatal medical visit; 89% White, 6% Hisp., 5% Black	Retrospective report of **emot. or physical abuse** by known perpetrator in last 12 mos M=45 days pp	**EPDS** >12 M=45 days pp	Age, ethn., employment, marital status, educ., tobacco/alcohol use, # of children in final model	Report of abuse w/ more sx
60	Cerulli et al. (2011)	CS	188 US mothers from urban pediatric clinic w/ infant under 14 mos who attended well-baby visit in first 12 mos post-birth, 80% never married	**IPV** (hx, during preg. or first mo pp) 2 wks-14mos pp	Maj. or minor depr. w/ **SCID**-IV 2 wks-14 mos pp	Race, cohabitation, prior depr.	Univar.: IPV in past yr w/ PPD; Multivar.: n.s.

61	Chaaya et al. (2002)	LG	396 mostly married urban and rural Lebanese mothers	**Number of close friends** (dichotomized 0-1 and 2+), **SLEs** 24 hrs pp	**EPDS** >12 4-5 mos pp	Prenatal depr., chronic maternal health problems, delivery type, area (urban/ rural), lifetime depr., educ., working status, breastfeeding in final model	Univar.: 0 or 1 close friends w/ more PPD; SLEs w/ PPD in rural area only; Multivar.: n.s.
62	Chatterji & Markowitz (2012)	CS[b]	3,350 biolog. or adoptive mothers in the US who had worked either part-time or full-time during preg. and returned to work either part-time or full-time by 9 mos pp	**Marital status,** length of **family leave** and **paid leave** after childbirth	**CES-D** sx and >14 9 mos pp	Age, educ., race/ethn., child age, parity, marital status, region, urban residence, receiving welfare, infant low birthweight, infant prematurity	Less than 12 weeks of maternal leave w/ more sx
63	Chen et al. (2013)	LG	203 mothers who immigrated from China or Vietnam to Taiwan; all married to Taiwanese men.	**Soc. supp.** 1, 6 mos pp	**EPDS** sx 1, 6 mos pp	Length of time in Taiwan, local language ability, soc. acculturation, age, educ.al level, work status, family SES, parity	Univar.: Soc. supp. at 1 mo w/ lower sx at 1, 6 mos pp; Soc. supp. at 6 mos w/ lower sx at 6 mos; Multivar.: Soc. supp. at 1 mo indirectly predicted sx at 6 mos via soc. attitude and supp. at 6 mos; Pos. soc. attitude moderated (decreased) neg. relationship between PPD at 1 mo and soc. supp. at 6 mos
64	Cheng & Pickler (2009)	CS	152 US mothers, 95% foreign-born; 100% Asian (Taiwanese or Chinese decent)	**Soc. supp.** (importance and amount received), **perc. stress** During 1st yr pp (average of 6 mos)	20-item **CES-D:** sx and cutoff 16 During 1st yr pp (average of 6 mos)	Baby's age, length of stay in US, employment, and parity in final model	Univar. and multivar.: Received soc. supp. w/ fewer sx; supp. importance, perc. stress w/ more sx; Relationship between stress and depr. moderated by received supp. and importance of supp.
65	Chien et al. (2012)	CS	380 mothers from Taiwan, half immigrant (Chinese, Vietnamese), half native, all married	**Received soc. supp. (**informational, emot., household**)** Within 1st yr pp (M=6 mos)	**EPDS** >9 Within first yr pp (M=6 mos pp)	Immigrant status, income sufficiency, decision-making power	Univar.: Lower soc. supp. w/ PPD (all subtypes for native women, only informational and emot. for immigrant women); Multivar.: n.s.
66	Choi et al. (2013)	CS[b]	262 Japanese mothers	**Parent relationships** in childhood (maternal/ paternal care, overprotection), **financial distress** 3-12 mos pp	**Zung Self-Rating Depression Scale** sx 3-12 mo pp	-	Lower parental care, higher paternal overprotection, lower maternal overprotection w/ sx
67	Chung et al. (2013)	CS	249 mothers from urban hospitals in Korea; Excl.: current or past psychiatr. illness, maj. chronic diseases, obstetric or preg. complic., infant complic.	**Stressful events** during preg., **soc. supp.** 3-7 days pp	**EPDS** sx 3-7 days pp	Household income, self-esteem, antenatal depr.	Stressful events during preg. w/ sx; Soc. supp. indirectly w/ sx via self-esteem, antenatal depr., and stressful events
68	Cohen et al. (2002)	CS	200 English-speaking Canadian mothers w/ full-term singleton preg. and infants w/o sig. medical problems	**Adult physical, sexual, or emot. abuse (**dichotomous**), Child physical, sexual, or emot. abuse/neglect** (dichotomous), **Soc. supp. (**low/high) 8-10 wks pp	**EPDS** >11 8-10 wks pp	Hx of depr., panic during preg., preg. complic.	Univar.: Low soc. supp., adult emot. abuse w/ PPD; Multivar.: Low soc. supp., emot. abuse sig. contr. for maternal complic., only soc. supp. sig. when also contr. for depr. hx and panic

69	Cooklin et al. (2011)	CS	1,300 employed mothers from Australia, 82% married, 85% born in Australia/ New Zealand	**Partner status, unhappiness w/ partner**, **lack of soc. supp., SLEs**, **lack of favorable job conditions** (job security/ autonomy, flexible start/finish times, access to paid family leave) Within 12 mos pp (M=8.8 mos pp)	**Kessler-6** >7 Within 1st yr (M=8.8 mos pp)	Prior depr., SES, single-mother household, # of children in household, infant age, hrs employed, child care type also in model	Relationship unhappiness, lack of soc. supp., decreasing number of favorable job conditions w/ PPD
70	Cryan et al. (2001)	CS	377 urban Irish mothers	**Marital status, presence/absence of confidant** 6-12wks pp	**EPDS** >12 6-12 wks pp	Age, employment, parity, delivery method, prior miscarriage, prior depr. treatment	Absence of confidant sig., marital status n.s.
71	Da Costa et al. (2000)	LG	80 English- or French-speaking preg. women from Canada, married or in stable relationship	**Marital quality** 8-14 wks' GA **Supp. satisfaction, network size** 8-14, 18-19, 31-32 wks' GA **Daily stress**, **preg.-specific stress** 8-14 wks' and then monthly throughout preg. **Infant Temperament** 4-5 wks pp	**EPDS** >13, >9 and **Lubin Depr. Adjective Check-List** >13 4-5 wks pp	Prenatal depr., anxiety, self-confidence, emot. coping in 3rd trim., labor or delivery complic. in final model	Infant temperament w/ PPD
72	Dagher et al. (2009), Dagher et al. (2011)	CS (2009), LG (2011)	817 employed US mothers w/ healthy, singleton birth; 87% White	**Work demands** 11 wks pp **Total workload, job flexibili**ty, supervisor and coworker **supp.**, **soc. supp.** from family and friends, **infant sleep problems, infant irritable temperament** 5 wks, 11 wks, 6 mos pp	**EPDS** sx 2009 paper: 11 wks pp 2011 paper: 5, 11 wks, 6 mos pp	2009 paper: Age, race, educ., marital status, poverty, occupation, leave status, prenatal mood disturbance; 2011 paper: Breastfeeding	2009 paper: Univar.: Psychol. demands w/ more sx; schedule autonomy, coworker supp., perc. control w/ fewer sx; Multivar.: Schedule autonomy, perc. control w/ fewer sx; For women w/ low coworker supp., decision latitude w/ fewer sx; 2011 paper: Higher total workload, lower job flexibility, lower soc. supp. from friends and family, infant sleep problems w/ sx
73	Dagher & Shenassa (2012)	CS	662 US mothers, 46% married, 31% college degree, one third smokers; 76% White	**Responsibility-related** and **infant-related stress** 8 wks pp	**EPDS** sx (w/ item 10, suicidal thoughts, excluded) 8 wks pp	Age, race, birth place, educ., marital status, self-reported health, labor/ delivery complic., infant sex, breastfeeding, health behaviors	Responsibility- and infant-related stress w/ sx
74	Davis et al. (2003)	CS	62 mothers of very premature (<32 wks) singleton infants w/o congenital anomalies from Australia, 92% Australian-born	**Perc. Stress** 1 mo pp	**EPDS** >11 1 mo pp	Nurse supp. and maternal educ.	Univar. and multivar.: Greater perc. stress w/ sx
75	Dennis et al. (2004)	CS	594 English-speaking Canadian mothers; 91% Cauc. *Samples of Studies 76-80 overlap*	Psychosoc. health (substance use + **family violence**), **global soc. supp., relationship-specific supp.** (partner, mother, mother-in-law, other mothers), **LEs** 1wk pp	**EPDS** >9 1 wk pp	Recent immigrant, vulnerable personality, depr. hx, preg.-induced hypertension, readiness for hospital discharge, satisfaction w/ feeding method	Univar.: Psychosoc. risk, low global and partner-specific supp. w/ PPD; Multivar.: low global supp. w/ PPD

76	Dennis & Letourneau (2007)	LG	498 English-speaking Canadian mothers; 91% Cauc. *Samples of Studies 76-80 overlap*	**Global supp.**, **relationship-specific supp.** (partner, mother, other women w/ children) 1 wk pp	**EPDS** >12 8 wks pp	Income, depr. at 1 wk pp	Partner alliance and nurturance, and attachment w/ peer mothers w/ PPD.; global supp. n.s.
77	Dennis & Ross (2006a)	LG	594 Canadian women recruited at 32 wks' GA or at discharge post birth, mostly married; 175 w/ sx at 1 wk, 101 w/ sx at 8 wks pp; Mostly white *Samples of Studies 76-80 overlap*	**LEs** (in past 12 mos), **perc. stress, psychosoc. risk (**endorsement of substance use, family violence, childhood sexual abuse) **Relationship status, soc. supp.** (perc. global/ relationship-specific, available instrumental and emot.), **relationship-specific conflict** 1 wk pp	**EPDS** >9 1, 8 wks pp	-	Cases at 1 wk pp who remained cases at 8 wks had higher psychosoc. risk (partner's drug abuse, childhood sexual abuse); less global, partner, maternal, other mothers' supp.; lack of available emot. supp.; and conflict w/ partner or other mothers; Cases at 8 wks who were also cases at 1 wk had more LEs and perc. stress, less global supp. and supp. from mother in law, more conflict w/ husband; Relationship status n.s.
78	Dennis & Ross (2006b)	LG	396 English-speaking Canadian mothers, 94% Cauc. *Samples of Studies 76-80 overlap*	**Partner-specific supp.**, **pp-specific partner supp.** 4 wks pp **Partner conflict** 1 wk pp	**EPDS** sx and >9 8 wks pp	-	Univar.: Low partner supp. (soc. integration subscale strongest), low pp supp., high conflict sig.; Multivar.: Soc. integration subscale partner supp., encouragement to seek help sig.
79	Dennis & Vigod (2013)	LG	497 English-speaking Canadian mothers, 92% Cauc. *Samples of Studies 76-80 overlap*	Childhood **abuse**, **IPV**, **partner substance abuse, marital status** Antenatal (reported 1 wk pp)	**EPDS** >9 8 wks pp	Own substance abuse, ethn., income, educ., parity, personal hx of depr.	Univar.: partner substance abuse, physical and emot. IPV, childhood or adult sexual abuse, parent physical abuse sig.; Marital status n.s.; Multivar.: childhood physical abuse, partner substance abuse sig.
80	des Rivières-Pigeon et al. (2001)	CS	447 French-speaking mothers of singleton infants from Canada, 91% living w/ husband or boyfriend	Presence of **stressors** measured 3 ways: 1) ≥1 **stressful event** of 11 (e.g. health problems, divorce); 2) baby's **health problems**; 3) **relationship stressors** (# of people w/ whom mother reported conflict); Soc. supp. **network size**, **lack of soc. supp.** when needed, **relationship status** 6 mos pp	**CES-D** sx 6 mos pp	# of children, educ.	Univar.: Stressful events, # of relationship conflicts, mother's and baby's health problems, # of people in network, lack of help when needed w/ sx; Multivar.: Maj. stressors, lack of supp. when needed and # of relationship conflicts predicted sx; Interactions n.s.
81	Dewing et al. (2013)	CS	249 mothers participating in a child health and nutrition program in South Africa	**Food insecurity**	**EPDS** >13 3 mos pp	Age, HIV dx, smoking, marital status, employment, housing	Food insecurity w/ PPD
82	Diaz et al. (2007)	LG	69 English- or Spanish-speaking low-income, mostly immigrant US Latinas in 2nd trim. and in intimate relationship w/o maj. depr. disorder, substance abuse, psychosis or serious medical conditions	**Soc. supp.**, **marital quality** Monthly, 2nd trim.-6 mos pp	**CES-D** sx Monthly, 2nd trim.-6 mos pp	High vs. low risk for depr. at baseline	High-risk women showed larger decline in depr. if they had high supp. (interaction); Higher pp marital quality compared to prenatal predicted greater decline in depr. sx

83	Dolbier et al. (2013)	LG	299 non-Hisp. white and Afr.-Am. mothers in rural US; 60% below federal poverty level	**Subjective SES, relationship status** 6 mos pp	**EPDS** >9 and >12 1, 6 mos pp	Poverty, educ., race	Univar.: Single and unmarried relationship status w/ PPD (>9) at 1 mo pp; Multivar.: Lower subjective SES w/ PPD (>9, >12) at 6 mos pp; Marital status n.s. at 1 mo pp after contr. for race
84	Eastwood et al. (2013)	CS	15,389 mothers living in 101 Australian suburbs (data drawn from 3 sources)	Six factors derived from suburb-level variables: **neighborhood adversity,** soc. cohesion, health behaviors, housing quality, soc. services, and **supp. networks**	**EPDS** >9 2-3 wks pp	Most parsimonious model: entropy, nurse visit rate, percent living in apartments, smoking	Univar.: All variables sig.; Multivar.: Lack of soc. supp. w/ higher PPD odds
85	Eberhard-Gran et al. (2002)	CS	416 mothers from a total sample of 2,730 women from Norway	**Emot. impact of 10 LEs** in past 12 months 6 wks pp	**EPDS** >9 6 wks pp	-	Greater impact of LEs w/ PPD
86	Ehrlich et al. (2010), Harville et al. (2009)	LG	292 US women from New Orleans and Baton Rouge who were preg. during or shortly after Hurricane Katrina; 68% White, 29% Black *Ehrlich et al. (2010) are 208 women w/ 6 and/ or 12 mos follow-up*	**Hurricane experience** (damage, illness/injury, and danger) assessed during hospitalization at time of birth, **loss of resources** 6 mos pp	**EPDS** >12 8-10 wks, 6 mos, 12 mos pp	Age, race, educ., marital/ partnership status, parity and income (income not in 6 and 12 mos models)	Perc. or experienced danger, injury to self or other, severe impact on property w/ PPD at 8-10 wks pp; ≥2 severe experiences of the storm w/ PPD at 8-10 wks pp; Hurricane experience and nontangible loss of resources w/ PPD at 6 and 12 mos
87	Escribà-Agüir & Artazcoz (2011)	LG	687 Spanish preg. women, majority Spanish natives	**Marital dissatisfaction, available confidant, affective soc. supp., neg. LEs** 28-31 wks' GA, 3 mos pp	**EPDS** >12 3, 12 mos pp	Model 1: Partner depr., depr. hx, time of data collection (3 vs. 12 mos pp); Model 2: Above + 3rd trim. depr.	Univar.: All variables w/ sx; Multivar.: Marital dissatisfaction and neg. LEs w/ PPD sx in both models
88	Escribà-Agüir et al. (2013)	LG	914 Spanish preg. women recruited in 1st trim.	**Partner/family substance abuse** 1st trim. **Perc. soc. supp.** (affective, emot./ informational, instrumental), current and lifetime **IPV** 5, 12 mos pp	**EPDS** >10 5, 12 mos pp	Prenatal depr., prenatal health status	Multivar.: Current psychol. IPV, low tangible, affective soc. supp., partner/family substance abuse w/ PPD
89	Fagan & Lee (2010)	LG	100 adolescent preg. women ages 13 to 19 from the US whose partners participated in fathering intervention; 41% Black, 41% Latina	**Partner's involvement in preg./ caregiving**, **satisfaction w/ level of partner involvement**, **partner received supp., partner conflict, parenting stress** 5-9 mos' GA, 3 mo pp	**CES-D** sx 3 mos pp	# of sessions attended by partner, maternal race and ethn., educ., co-habitation, prenatal depr. sx	Univar.: Satisfaction w/ pp involvement, pp supp., preg. pp conflict and parenting stress w/ sx; Multivar.: Satisfaction w/ involvement pp sig., contr. for supp. and conflict (but not after contr. for parenting competence)
90	Faisal-Cury et al. (2004)	CS	113 mothers from Brazil, married or living w/ child's father; Excl.: hx of depr., psychiatr. treatment, alcohol, drug use, severe infant health problems; 65% White	**LEs** in past 12 mos 10 days pp	**BDI** >15 for depr.; **SBS** >8 or **Pitt's Depression Inventory** >20 for blues 10 days pp	-	No sig. associations
91	Faisal-Cury et al. (2013)	CS	701 low-income women in Brazil; 47% White	**Partner status, IPV** prior, during, after preg. (psychol., physical, sexual)**, sexual abuse** before age 16, perc. **soc. supp.** 12 mos pp	**Self-Report Questionnaire (SRQ-20)** >7 12 mos pp	Income, partner status, ethn., age, educ., prenatal depr.	Univar.: low soc. supp., psychol. IPV, physical/ sexual IPV, early life sexual abuse sig.; Partner status n.s.; Multivar.: Contr. for soc. supp., all types of IPV sig.; IPV pp, or preg. and pp sig.

92	Feeney et al. (2003)	LG	76 married Australian couples undergoing transition to parenthood	**Attachment** (discomfort w/ closeness, relationship anxiety), **spousal caregiving** (sensitivity, proximity, cooperation, compulsive); **relationship satisfaction**; **soc. supp.** (perc. network) 2nd trim. **Infant temperament** 6 wks pp	**Depression Anxiety and Stress Scale** sx 6 wks pp	Prenatal depr.	Univar.: Relationship anxiety, infant temperament sig.; Multivar.: Relationship anxiety predictive; Sx highest when relationship anxiety and compulsive care both high
93	Figueiredo et al. (2007)	LG	108 mostly Portuguese preg. women (54 adolescents 14-18 yrs, 54 adult); 98% Cauc.	**Cohabitation w/ partner, family of origin** 24-36 wks' GA	**EPDS** >12 and sx 2-3 mos pp	Age, educ., employment, parity, prenatal depr. sx	Linear regression: living w/ family w/ greater sx; Logistic regression: Living w/ partner w/ increased risk of PPD
94	Forman et al. (2000)	LG	5,091 preg. women from Denmark enrolled at 16 wks' GA and followed to pp	**Perc. isolation, marital status** 30 wks' GA	**EPDS** >12 4 mos pp	Age, parity, occupational status, personal and family psychiatr. hx, preg. distress, neg. perinatal events	Univar.; Perc. soc. isolation and marital status sig.; Multivar.: Perc. soc. isolation sig.
95	Gao et al. (2009)	CS	130 married middle-class couples from mainland China w/ first and singleton births, no birth complic. or psychiatr. hx	**Soc. supp., perc. Stress** 6-8 wks pp	**EPDS** sx 6-8 wks pp	Maternal educ., parent-in-law preference for male baby and husband depr.	Univar. and multivar.: Lower soc. supp. and greater perc. stress w/ PPD
96	Gao et al. (2008)	CS	1,085 Pacific Island mothers from New Zealand, cohabiting w/ spouse or partner; 49% Samoan, 24% Niuean, 14% Tongan, 7% Non-Pacific	**Verbal aggression, minor or severe physical violence** 6 wks pp	**EPDS** >12 6 wks pp	Ethn., income, parity, satisfaction w/ home, transportation problems, reaction to preg., satisfaction w/ infant sleep, happiness in relationship, insufficient money for food	Univar.: Verbal aggression and physical violence; severe physical violence stronger odds than minor violence; Multivar.: Physical violence only; small difference in odds between severe and mild violence
97	Garabedian et al. (2011)	CS	5,380 US women ≥18 yrs from Kentucky Women's Health Registry w/ ≥1 live birth; Mostly white, non-Hisp.	**IPV (**physical, sexual, stalking), **non-partner sexual violence, childhood abuse** (physical, sexual) Retrospective report of experiences at any time in life and in childhood	**Self-report** of PPD hx; Retrospective report of PPD sx in any previous preg.	Age, marital status, obstetrical hx, breastfeeding, tobacco and substance use hx	All adult violence and childhood physical abuse w/ PPD; Dose-response increase in PPD odds for each type of violence endorsed
98	Gauthier et al. (2010)	LG	331 Canadian preg. women cohabiting w/ child's father, w/ singleton preg. and delivery >34 wks' GA, w/o maj. complic.	**Anxious attachment** to partner 2nd-3rd trim.; 2, 5 mos pp	**EPDS** sx 2, 5 mos pp	Motivation for being parent, parenting self-efficacy	Simple correlations: Anxious attachment at all times w/ sx; Cross-lagged associations: Anxious attachment at 2 mos pp w/ sx at 5 mos, contr. for earlier depr.
99	Giardinelli et al. (2012)	LG	590 preg. women from Italy attending childbirth preparation course	**Family conflict, partner conflict** 28-32 wks' GA	**EPDS** >9 3 mos pp	-	Family and partner conflict w/ PPD in whole sample, but n.s. for de novo PPD
100	Gold et al. (2013)	CS	153 mothers of sick, hospitalized newborns in Ghana	**Marital status, soc. supp.** (relative available to help post-hospital)**, IPV** Timing unspecified	**PHQ-9;** None <5, Mild 5-9, Mod/severe >9 Timing unspecified	Maternal age, educ., financial status, rural versus urban residence, parity, self-rated poor health, depr. hx	Univar.: Lack of soc. supp., IPV w/ higher PPD, marital status n.s.; Multivar.: IPV w/ higher PPD

101	Gomez-Beloz et al. (2009)	CS	2,317 Peruvian mothers	Lifetime and preg. **IPV** 1-4 days pp	**Physical Health Questionnaire-Depression Subset** sx 1-4 days pp	Age, educ., employment status; preg. model also adjusted for marital status	Lifetime and preg. IPV sig.
102	Grazioli & Terry (2000)	CS	57 first-time mothers from Australia, married or in stable relationship	**Parental stress, infant temperament** 6 wks pp	**EPDS** sx 6 wks pp	Depr. sx in 3rd trim.	Univar. and multivar.: Greater parental stress w/ sx
103	Gremigni et al. (2011)	LG	70 primiparous Italian women receiving care at regional public hospital and cohabiting w/ baby's father	**Partner supp. expectations, partner relationship adjustment** 38 wks' GA **Confirmation of partner supp. expectations** (dichotomous) 3 mos pp	**EPDS** >9 3 mos pp	Age, educ., depr. hx, prior miscarriage in final model	Lower partner supp. than expected w/ PPD; Relationship adjustment and partner supp. expectations in preg. n.s. both univar. and multivar.
104	Grote & Bledsoe (2007)	LG	179 married nulliparous preg. women from the US; Predominantly White	**Stress frequency** (financial, spousal, physical, work stress) 5 mos' GA	**Symptom Check List - Depression subscale** 6, 12 mos pp	Antenatal depr. sx, individual income and optimism in final models	Simple comparisons: Higher financial, spousal, physical stress w/ sx at 6, 12 mos pp; work stress w/ sx at 12 mos; Multivar.: Financial, spousal, and physical stress interacted w/ optimism in predicting sx at 6 and/or 12 mos
105	Grussu & Quatraro (2009)	LG	297 Italian-born preg. women attending antenatal classes, mostly married or cohabiting and middle SES; Excl.: "psychol. problems"	**Soc. supp.** (family/ friend confidant), **marital satisfaction, LEs** 8-9 mos' GA	**EPDS** >8 and **General Health Questionnaire** >3 6-8 wks pp	Prenatal anxiety, educ.	Univar.: Soc. supp. from family and friends, life stress (moving only) w/ PPD; marital satisfaction n.s.; Multivar.: Soc. supp. from friends w/ PPD; marital satisfaction, family supp., and moving not in final model
106	Hagen (2002)	CS	128 mostly married US and Canadian mothers w/ infants 3-32 wks old, low to middle income	**Relationship quality, soc. constraints** from partner on abortion 3-32 wks pp (M=11)	**EPDS** sx 3-32 wks pp (M=11)	-	Soc. constraints on abortion (especially from partner) w/ increased sx for mothers w/ unwanted/ unplanned preg.
107	Hamdan & Tamim (2011)	LG	137 Arabic- or English-speaking, married and mostly college-educ. (71%) preg. women in the United Arab Emirates, 53% from Arabian Peninsula and Levant Countries, 47% from North Africa and other countries (e.g., India, Pakistan)	**LEs** 2nd trim.	**EPDS** sx and if >9, dx confirmed w/ **MINI-Major Depression Module** 2 mos pp	-	No sig. associations
108	Haslam et al. (2006)	LG	168 Australian preg. women w/ relationship partners and first births, half college-educ.	**Marital status** 3rd trim. **Available supp. (**parents, partner**)** 4 wks pp	Combined **EPDS** and **BDI** sx 4 wks pp	Antenatal depr., income, preg. planning, self-efficacy in final model	Univar.: marital status, parent supp. sig. (not partner); Multivar.: self-efficacy mediated effect of parent supp.
109	Hayes et al. (2010)	CS	7,154 US mothers w/ recent live births from Hawaii (data from Hawaii PRAMS, 2004-2007); 22% Hawaiian, 20% Filipino, 19% White, 12% Japanese, 11% Chinese, 5% Korean, 4% Other Pacific Islander	**IPV** during preg. Timing unspecified	**PHQ-2** scored into 3 groups: depr./possible depr./none Timing unspecified	Race/ethn., age, educ., preg. intent, smoking/drug use in preg., low SES	IPV during preg. w/ increased odds of depr. and "possible" depr.

110	Hergüner et al. (2013)	CS	105 mothers of infants with normal, low and very low birth weight in Turkey; Excl.: depr. treatment, multiple births, birth defects.	**Perc. soc. supp.** 5 mos pp	**EPDS** sx, >12 5 mos pp	-	Lower soc. supp. w/ more sx
111	Hibino et al. (2009)	LG	99 married women who were preg. immediately after or during maj. earthquake and living in disaster area during earthquake in Japan	**Earthquake exposure** (evacuation, subjective feelings or anxiety about an earthquake, degree of damage to home, earthquake intensity) 20 wks (avg) after quake and 32 wks' (avg) GA	**EPDS** sx Avg of 26.7 days pp	Age, GA at time of earthquake and sense of coherence (i.e., stress resistance) in final model	Univar.: Anxiety about earthquake w/ sx; Multivar.: Sense of coherence in preg. moderated association between sx and anxiety about earthquake
112	Ho et al. (2013)	CS	186 first-time mothers w/o obstetric complic. in Taiwan	**Relationship quality**, perception of **father's participation in childcare, supp. for maternal role** from friends, parents, other family members 1 wk-2 mos pp	**EPDS** sx	Confidence to cope w/ motherhood, life satisfaction	Univar.: Relationship quality, perception of father's participation in childcare, supp. for maternal role w/ sx; Multivar.: Father's participation in childcare w/ sx in stepwise model
113	Honey, Bennett & Morgan (2003); Honey, Morgan & Bennett (2003)	LG	223 preg. women w/ first births in the UK from a total sample of 306 studied in 3rd trim.	**Appraisal of anticipated childcare stress, daily hassles, partner relationship length, mother relationship quality, available supp.** (non-partner/mother confidants, access to childcare), **supp. satisfaction** 28-42 wks' GA (M=34) **Frequency of childcare stress, supp. satisfaction** 5-9 wks pp (M=6)	**EPDS** sx and >12 6 wks pp	Depr. hx, depr. during preg.; antenatal appraisal, coping; neg. postnatal appraisal (threat, low 'controllable by self')	Univar.: Cases reported more hassles, low access to childcare help, and low satisfaction w/ soc. supp.; Multivar.: Frequency of childcare stressors, hassles since preg., low access to childcare help, and low pre- and postnatal soc. supp. satisfaction w/ sx
114	Horowitz et al. (2005)	CS	143 US mothers; 65% White, 25% Black, and 9% other	**Financial stress** 2-30 wks pp (avg 11 wks)	**Lubin Depression Adjective Check-List** (depr. mood) and **Brief Symptom Inventory** (clinical depr. sx) 2-30 wks pp (avg 11 wks)	Predictors in canonical correlations: maternal attributes (age, parity, depr. hx, time since delivery), resources (income, marital status, partner help/ emot. supp., perceptions (parenting evaluation, infant centrality)	Financial stress w/ greater mood sx but lower clinical sx in one of the two canonical variate pairs
115	Howell et al. (2005)	CS	655 urban English or Spanish speaking US mothers w/ normal birth weight infants w/o maj. complic.; 55% Cauc., 29% Hisp., 16% Afr.-Am. *Sample overlaps w/ Study 118*	**Marital status**, **soc. supp.** and **criticism, infant colic** 2-6 wks pp (asked about 1st and 2nd wk pp)	2-item **Primary Care Evaluation screener** scored as yes/no 2-6 wks pp (asked about 1st and 2nd wk pp)	Race, depr. hx, physical sx, physical functional limitations, infant-related role demands, self-efficacy, access and trust in health care in final model	Univar.: Soc. supp. sig., infant colic sig. among White and Hisp. but not among Afr.-Am. women; Multivar.: Soc. supp. and infant colic sig.

116	Howell et al. (2006)	CS	720 primarily low and middle income US mothers; 50% Cauc., 26% Hisp., 15% Afr.-Am., 5% Asian *Sample overlaps w/ Study 117*	**Marital status, soc. supp.** and **criticism, infant colic** 2-6 wks pp (asked about 1st and 2nd wk pp)	2-item **Primary Care Evaluation screener** scored as yes/no 2-6 wks pp (asked about 1st and 2nd wk pp)	Race, depr. hx, physical sx, infant colic, functional impairment and self-efficacy in final model	Univar.: Lack of soc. supp., criticism, infant colic w/ sx; Multivar.: Lack of soc. supp., infant colic sig.; Interaction between soc. supp. and self-efficacy n.s.
117	Husain et al. (2012)	LG	208 preg. English- or Urdu-speaking 1st and 2nd generation Pakistani women w/ singleton preg. from the UK; Excl.: diagnosed physical or learning disability	**LEs** and **difficulties** in past 12 mos, **marital status**, **adequacy of soc. supp.** (family, friends, sig. other), **soc. isolation, lack of soc. supp., dissatisfaction w/ supp., availability of confidant** 3rd trim.	**EPDS** >11 6 mos pp	Age	Univar.: Life difficulties (financial, marital, other relationship, entrapment), not being married, soc. isolation, and low soc. supp. (all sources) w/ PPD; Family and partner supp. w/ resolved PPD over time; Multivar.: Soc. isolation, others' health difficulties, and difficulties not related to health w/ PPD
118	Husain et al. (2011)	LG	763 preg. women from Pakistan	**LEs** and **difficulties** in past 12 mos 3rd trim.	**EPDS** >11 3 mos pp	For persistent depr. (3rd trim. to 3 mos pp): Age, income, educ., work outside home, husband educ./ employment, husband away for >1 mo, # children, ever lost child, separate family, med, disability, current psychol. distress	Univar.: LEs w/ persistent depr. and de novo onset pp; Logistic regression (conducted for persistent vs. resolved depr. only): LEs w/ persistent depr.
119	Iles et al. (2011)	LG	212 married or cohabiting English-speaking couples from the UK w/ partner present during labor/delivery, no NICU or hx of domestic violence; 98% White	**Partner attachment anxiety** and **avoidance** 6 wks **Satisfaction w/ partner supp.** 1 wk, 6 wks, 3 mos pp	**EPDS** sx 6 wks, 3 mos pp	Age, trait anxiety, individual and partner's earlier PPD sx, partner's attachment anxiety and avoidance in final model	Univar.: Dissatisfaction w/ supp. and attachment anxiety and avoidance predictive at all time-points; Multivar.: Maternal attachment anxiety predictive of sx at 6 wks; partner's attachment anxiety predictive at 3 mos; Dissatisfaction w/ partner supp. partially mediated effect of combined attachment security on 6 wk sx
120	Ingram & Taylor (2007)	LG	118 ante- and postnatal records of first births in the UK, 80% low SES	**Practical** and **emot. soc. supp.** 30-36 wks' GA	**EPDS** ≥13 6 wks pp	-	Low prenatal emot. supp. w/ PPD
121	Kendall-Tackett et al. (2013)	CS	6,410 mothers who completed online survey (944 w/ hx of sexual assault), 74% from US; 91% Cauc.	Hx of **sexual assault** 0-12 mos pp	**PHQ-2** sx	Feeding method	Sexually assaulted women had greater sx than those w/o hx of assault
122	Kim et al. (2008)	LG	60 South Korean preg. women (30 depr. and 30 non-depr.) out of 239 enrolled	**Marital satisfaction** 24 wks' GA **Childcare stress** 1 wk, 6 wks pp	**EPDS, BDI** sx; dx confirmed w/ **SCID** (DSM-IV) for women w/ EPDS scores >9 1 wk, 6 wks pp	Prenatal depr. Sx	Univar.: Marital satisfaction w/ lower BDI scores at 1 wk pp and lower EPDS and BDI scores at 6 wks pp; Childcare stress at 1 and 6 wks pp w/ higher BDI scores at 1 and 6 wks and higher EPDS scores at 6 wks pp; childcare stress at 1 wk pp also w/ EPDS at 1 wk pp; Multivar. (predicting PPD at 6 wks): n.s.

123	Kirpinar et al. (2010)	LG	479 Turkish-speaking preg. women from Turkey, 57% primary school educ. or more	**Perc. family soc. supp., family size** 3rd trim. **Marital quality** 6 wks pp (asked about first 6 wks pp)	**EPDS** sx and >12 6 wks pp	Health insurance, previous contraceptive use, psychiatr. hx and prenatal anxiety in final model	Univar.: Family size and poor marital quality sig.; Multivar.: Marital quality sig.
124	Kozinsky et al. (2011)	CS	3,952 mothers from two population-based cohorts recruited in 1996 (n=2,333) and 2006 (n=1,619) from Hungary; Excl.: illiteracy, stillbirth/ perinatal death and depr. due to other reasons	**Marital status,** Presence/absence of **divorce, partner relationship problems, family, friend or neighbor relationship problems; LEs** in past yr 6-10 wks pp	**Leverton questionnaire** ≥12 6-10 wks pp	1996 cohort: Age, type of residence, unplanned preg., maj. depr. hx, independent management of daily problems in final model; 2006 cohort: Primiparity, independent management of daily problems, unplanned preg., low income, intention to return to work in final model	Univar. and multivar.: All relationship variables w/ PPD in both cohorts; Maj. LEs (≥2) w/ PPD in 2006 cohort only
125	Kritsotakis et al. (2013)	LG	356 preg. women in Greece, recruited through mother-child cohort study; singleton live-birth preg. only	**Marital status, soc. capital** (total; structural, cognitive subscales) 24 wks' GA	**EPDS** sx 8-10 wks pp	Age, educ., physical activity before preg., smoking during preg.	Univar.: low total, low cognitive soc. capital w/ sx; Multivar.: Total soc. capital, structural, cognitive subscales sig. in linear regression; Low total, cognitive supp. w/ sx contr. for prior depr.
126	Kruse et al. (2013)	LG	567 primiparous women recruited via prenatal clinics in the US	**Partner status, IPV** <28 wks' GA **Partner relationship quality, expected partner supp.** at delivery 35 wks' GA Post-delivery **partner supp. satisfaction** 6 wks pp	**PPD Screening Scale** sx 6 wks pp	Labor experience	Univar.: partner relationship quality w/ sx; Partner status, IPV, and partner x IPV interaction n.s.; Multivar.: Post-delivery supp. satisfaction w/ PPD contr. for partner status, IPV, labor experience; When all variables entered, only relationship quality and supp. satisfaction sig.
127	Kuo et al. (2004)	CS	3,952 English- or Spanish- speaking, Latin American or Latin Caribbean origin mothers from the US; Excl: women from Puerto Rico or Brazil, medical or psychol. conditions	**Perc. soc. supp., marital status** Immediate pp period before discharge from hospital	**CES-D** ≥16 Immediate pp period before discharge from hospital	Age, nationality, educ., income, employment, immigration status, drug use, health care, acculturation	Univar.: Marital status, soc. supp. sig.; Multivar.: Soc. supp. sig.; Marital status effect sig. but weakened when adjusted for other demographics
128	Kuscu et al. (2008)	CS	100 Turkish mothers w/o medical or preg.-related problems in first wk pp	**Soc. supp.**, **adult attachment**, quality and quantity of **supp. network** 7-10 days pp	**EPDS** sx 7-10 days pp	State anxiety in final model	Univar.: Neg. associations w/ living w/ extended family, family supp., "special other" supp., and secure attachment style; pos. associations w/ avoidant and ambivalent attachment; Multivar.: Presence of wider soc. network, family supp., low ambivalent attachment predictive

129	LaCoursiere et al. (2012)	LG	1,038 mothers of live-born singleton infants in the US; 87% Cauc.	**Financial, partner-associated, emot.** and **traumatic stressors** in preg. 24-48 hrs pp	**EPDS** >11 6-8 wks pp	Age, gravidity, race/ethn., educ., pre-preg. BMI, hx of abuse, depr. hx in final model	Preg. stressors predicted increased risk of PPD, especially among women w/ abuse hx
130	Lee et al. (2011)	CS	60 mothers who conceived by IVF in Taiwan	**Available soc. supp., family function, perc. stress** 6-9 wks pp	**BDI-II** sx 6-9 wks pp	Age, length of infertility, frequency of IVF treatment, # of births, delivery type, parenting confidence, stress	Multivar.: Soc. supp. sig.
131	Lee & Hsu (2012)	CS	55 US mothers of low birth weight infants; 69% Black, 16% White, 13% Hisp.	**Perc. Stress** 2 wks pp	**EPDS** sx 2 wks pp	-	Greater perc. stress w/ sx
132	Lefkowitz et al. (2010)	LG	60 US mothers of infants admitted to NICU; 71% Cauc.	**LEs** 3-5 days after NICU admission	**PPDS** sx ≥30 days after Time 1 (median days=32.5)	-	Univar.: More LEs w/ sx
133	Leigh & Milgrom (2008)	LG	161 preg. women from Australia, mostly married or in stable relationship, 88% Australian-born	Recent maj. **LEs**, **soc. supp.,** hx of **childhood abuse** 26-34 wks' GA **Parenting stress** 10-12 wks pp	**BDI** sx and >12 10-12 wks pp	Prenatal anxiety/ depr., age, educ., income, hx of depr., hx of miscarriage/ abortion, neg. cognitive style, self-esteem in final model	Univar.: Soc. supp., abuse hx and parenting stress w/ sx; Multivar.: Parenting stress remained sig. in final model; Mediation analyses suggest that prenatal depr. is a mediator in the link between LEs and PPD
134	Leung et al. (2005)	LG	385 Hong Kong Chinese preg. women living w/ baby's father	**Perc. stress**, **supp. expected/received**, **supp. importance**, source-specific **desired/received supp.** (partner, parents, in-laws), **dissatisfaction w/ supp.** 36 wks' GA, 6 wks pp **Childcare stress** 6 wks pp	**EPDS** sx 6 wks pp	Age, educ., income, delivery mode, parity, antenatal depr.	Univar.: Ante- and postnatal perc. stress, childcare stress, postnatal supp. (lower received emot./ material supp., lower partner/ parent supp., higher importance), and dissatisfaction w/ family supp. w/ more sx; Multivar.: Block variables pp stress, pp received supp. and supp. dissatisfaction w/ sx
135	Leung et al. (2013)	LG	475 preg. women in Canada	**LEs** in preg., 12 mos before preg., before age 17; **soc. supp.** Multiple times in preg.	**EPDS** >9 12 wks pp	2nd and 3rd trim. depr. sx, selenium supplement intake in final model	Univar.: More LEs in this preg. and lower prenatal, pp supp. w/ PPD; Multivar.: Soc. supp. pp w/ lower PPD
136	Lobato et al. (2012)	CS	811 urban Brazilian mothers receiving care from public primary health centers; Excl.: multiple births, partner relationship <1 mo, contraindication for breastfeeding	**Physical IPV** in past yr (CTS-2), **partner alcohol and drug misuse** **SLEs** (tested as control only) 0-5 mos pp	**EPDS** >11 0-5 mos pp	Socioeconomic, demographic and reproductive characteristics, SLEs, perinatal care, birth outcomes	Single incident of IPV w/ PPD when no partner alcohol misuse; Two or more incidents of IPV w/ PPD when alcohol misuse present
137	Logsdon & Usui (2001)	CS	201 US mothers: 107 White low risk, married w/ term infants, no preg./ delivery complic., no hx of mental illness; 37 White w/ preterm NICU infants w/ similar demographics; 57 Afr.-Am. low income, term and preterm infants, most unmarried	Importance and receipt of **soc. supp., closeness to partner** 4-8 wks pp	**CES-D** sx 4-8 wks pp	Self-esteem	Partner closeness and quantity of supp. w/ lower sx; importance of supp. w/ more sx

138	Logsdon et al. (2008)	CS	85 mostly low-SES, 13-18 yr old adolescent mothers from the US w/ first live birth in past 4- 6 wks	**Received soc. supp., soc. network size, perc. stress, community violence** (victim and witness scales) 4-6 wks pp	**CES-D** sx 4-6 wks pp	Antidepressant use, and, depending on model: Age, sense of mastery, self esteem, race (minority or not), SES	Perc. stress and community violence w/ PPD; Network size w/ PPD contr. for antidepressants and received supp.; marginal controlling for other psychosoc. variables
139	Ludermir et al. (2010)	LG	1,045 Brazilian preg. women	**IPV during preg.** (psychol. and/or physical/sexual), **cohabitation w/ partner, relationship quality** (communication + control), **soc. supp.** 3rd trim.	**EPDS** >11 and sx 5-10 mos pp (M=8)	Age, race, educ., employment, length of study follow-up, hx and current mental illness	Univar.: not living w/ or poor communication w/ partner, high control by partner, no soc. supp., psychol. violence, combined physical/sexual and psychol. violence all sig.; Multivar.: Only partner violence results given; psychol. and physical/ sexual and psychol. sig. after controls and other soc. variables
140	Mao et al. (2011)	CS	376 Chinese married first-time mothers w/ healthy newborn; Excl.: depr. or self-harm hx, family psychiatr. hx, hypnotics usage	**Soc. supp., relationship w/ mother-in-law, perc. stress** 6-8 wks pp	**EPDS** >12 6-8 wks pp	Partner depr., infant sleep	Low soc. supp., tense relationship w/ mother-in-law and perc. stress w/ sx
141	Martinez-Schallmoser et al. (2003)	LG	66 US Spanish-speaking or bilingual Mexican American preg. women w/ prior births, medically low-risk, all married or partnered, 98% born in Mexico	**Parenting soc. supp.** (need, satisfaction w/ supp., network size; # of conflicting relationships); **family quality** (satisfaction; importance of relatives, partner, children) 34-36 wks' GA, 4-6 wks pp	**CES-D** sx 4-6 wks pp	Prenatal depr., ethnic identity/ acculturation	Univar.: Greater need for supp., lower satisfaction w/supp., conflict network size (pre and postnatal) sig.; Multivar.: Low prenatal supp. satisfaction, low pp family quality, high pp supp. need, large network size pp, interaction of pp supp. satisfaction by need (direction not specified) all w/ higher PPD
142	Matthey et al. (2000)	LG	157 Australian preg. women and their partners selected for normal distribution of maternal defense style; Excl.: PTB	**Partner supp.** (care, control), **relationship w/ own parents** (care, protection), **interpersonal sensitivity** 20-24 wks' GA	**BDI** >9, **EPDS** >12, **General Health Questionnaire** >7 6 wks (BDI, EPDS), 4 mos (BDI), 12 mos pp (BDI, General Health Questionnaire)	Prenatal depr., partner's depr.	Univar.: High maternal control, interpersonal sensitivity at 6 wks pp; low maternal care, high maternal control, high partner control at 4 mos pp; and low partner care, high interpersonal sensitivity at 12 mos pp associated w/ PPD among women not depr. prenatally; Multivar.: High partner control sig. at 4 and 12 mos pp
143	Maxted et al. (2005)	CS	93 US mothers from outpatient colic clinic (51 low, 28 moderate, 14 high depr.)	**Parenting stress, colic sx, infant temperament, soc. supp. helpfulness, family functioning** 9 wks pp	**BDI** (<10 low severity, 10-17 moderate sx, >17 clinically sig. sx) 9 wks pp	-	Women w/ clinical PPD had more frequent and intense parenting stress and infants w/ more fussy/difficult temperament; Women w/ low depr. had better family functioning than those w/ moderate and high depr.
144	McGrath et al. (2008)	LG	139 US mothers; 89% Cauc.	**Infant temperament** and **childcare stress** 2, 6 mos pp	**EPDS** >11 2, 6 mos pp	Lifetime hx of maternal abuse, prenatal anxiety in 3rd trim.	Difficult infant temperament w/ PPD at 2 and 6 mos; Childcare stress n.s.

145	McMahon et al. (2005)	LG	100 Australian mothers w/ first births and no twins, highly educ., living w/ baby's father	**Early parent relationship**, **marital satisfaction, attachment style** (anxiety, discomfort w/ closeness) 4 mos pp	**CIDI** dx, **CES-D** sx 4 mos pp (CIDI, CES-D), 12 mos pp (CES-D); "Persistent depr." if CES-D >16 at 12 mos pp	Educ., English as a second language, ego defense style, baseline depr.	Univar.: Lower paternal care, lower marital satisfaction, anxious and uncomfortable attachment w/ dx at 4 mos pp; Lower maternal care correlated w/ sx at 12 mos; Poorer attachment and marital satisfaction correlated w/ sx at 4 and 12 mos; Multivar.: Low maternal care, low marital satisfaction, anxious attachment predicted persistent depr.; Anxious attachment mediated maternal care association w/ sx
146	McVey & Tuohy (2007)	CS	415 married, mostly well-educ. mothers of infants up to 12 mos from the UK	**Soc. supp. availability**, **change in marital quality** (1-item) 0-12 mos pp (M=6.55 mos)	**EPDS** subscale scores (depr. sx, anhedonia, anxiety sx) 0-12 mos pp	Other EPDS subscales	Decline in marital quality, high supp. availability, low supp. satisfaction w/ sx; Decline in marital quality w/ anhedonia sx
147	Meredith & Noller (2003)	CS	72 married Australian women, half participating in residential treatment for child-related difficulties	**Marital quality**, **attachment style, infant difficult temperament** Timing unspecified	**EPDS** >12 Timing unspecified	-	Depr. women more likely to report infant difficulty and preoccupied attachment; less likely to have secure attachment style
148	Milgrom et al. (2008)	LG	12,361 preg. women from Australia; 74% Australian-born, 8% Asian, 5% New Zealand/ Oceania	**Perc. emot./ practical supp., early relationship w/ mother, partner relationship, prior abuse, relationship status; LEs** in past yr, **daily hassles** 25 wks' GA	**EPDS** >12 6 wks pp	Antenatal depr., previous psychiatr. condition, antenatal "emot. problems", perfectionism	Univar.: Lack of partner, abuse hx, lack of soc. supp., low early maternal supp., maj. LEs and daily hassles w/ PPD; Multivar.: High partner supp. and minimal daily hassles w/ fewer sx
149	Mohammad et al. (2011)	LG	353 Arabic-speaking preg. women from Jordan	**Soc. supp. satisfaction, difficult marital relationship, relationship w/ mother-in-law, LEs, perc. stress** 3rd trim. (all); 6-8 wks pp, 6 mos pp (soc. supp. satisfaction, perc. stress)	**EPDS** >12 6-8 wks, 6 mos pp	Unplanned preg., antenatal depr., maternal self-efficacy, perc. parenting knowledge, baby gender, and 7 variables related to labor/ delivery care	Univar.: 3rd trim. and 6-8 wk stress and soc. supp., LEs, difficult relationship w/ spouse and mother in law w/ sx at 6-8 wks pp; 3rd trim. soc. supp. and 6-8 wk stress and soc. supp. w/ sx at 6 mos pp; Multivar.: Relationship w/ mother-in-law, pp soc. supp., and pp stress w/ average sx
150	Monk et al. (2008)	LG	56 US preg. women w/ singleton births from 186 studied in preg.; In full sample: 64% Latina, 17% Cauc., 13% Afr.-Am.	**Perc. Stress** 3rd trim., 4 mos pp	**CES-D** sx 4 mos pp	Depr. during preg., age, educ., state anxiety at 4 mos pp	Univar. and multivar.: Perc. stress at 4 mos pp w/ sx
151	Ngai & Chan (2011)	CS	181 married, Chinese, first-time mothers from Hong Kong; Excl.: <18 yrs, psychiatr. hx *Note: Secondary analysis of intervention study*	**Soc. supp., LEs impact** 6 wks pp	**EPDS** sx 6 wks pp	Maternal role competence and satisfaction, resourcefulness and intervention in final path model	In path analysis, soc. supp. and LEs impact directly w/ sx; soc. supp. mediated events - depr. association

152	Nunes & Phipps (2013)	CS	6,959 adolescent and adult mothers from the US; 10% 15-19 yrs, 20% 20-24 yrs, 25% 25-29 yrs, 45% >30 yrs; Ethn. varied by age group, >40% White, >27% Hisp., >6% Black in all groups; Excl.: prenatal depr.	**LEs**, **chronic stressors**, **soc. supp.** 21 days-10 mos pp (M=4 mos pp)	Modified version of the **PHQ-2** >5	All: Prior depr., mental health in preg., maternal race, preg. intention, husband/ partner did not want preg. in final model; Adolescent model: Prior depr. in final model	For all respondents: Stressors (argued more than usual, total stressors in preg.) and soc. supp. (help w/ baby care, someone to talk to about problems) w/ PPD in final model; Among adolescents: Stressors (argue more than usual), soc. supp. (help w/ money, w/ baby care, someone to talk to) w/ PPD in final model
153	Ogbonnaya et al. (2013)	LG	76 low-income US women, w/o current or prior severe mental illness; 53% Afr.-Am., 47% White	**Physical IPV** 6-7 mos' GA; 1, 6, 12 mos pp	**CES-D** sx 1, 6, 12 mos pp	IPV and PPD at previous time points	IPV w/ more sx at all times; Women w/ IPV had higher levels, but similar patterns over time
154	Oppo et al. (2009)	LG	1,066 mostly married preg. women from Italy (n=600 at last assessment)	**Relationship status, soc. supp., marital satisfaction, LEs** 3, 8 mos' GA; 1 mo pp **Childcare stress, infant temperament** 1 mo pp	**EPDS ≥13,** confirmed w/ **SCID** dx (DSM-IV) Any of 3 assessments (1, 3, 6 mos pp)	Prior depr./ anxiety, preg. depr./ anxiety, low SES, self-esteem, preg. intent, pp blues (separate models for each predictor time point)	Univar.: low soc. supp. (all times), low marital satisfaction (1 mo pp), more LEs (8 mos' GA, 1 mo pp), childcare stress (1 mo pp), difficult infant temperament sig.; Multivar.: At 3 mos' GA, all n.s. At 8 mos' GA, low soc. supp. sig.; at 1 mo pp, low soc. supp., childcare stress sig.
155	Page & Wilhelm (2007)	CS[b]	51 US mothers, married or w/ partner, large majority well educ.; 71% Cauc., 21% Hisp., 4% Asian	**Arguments** w/ family,others; **Partner supp., relationship depth; daily demands** from home, work and others 6 wks pp	**CES-D** sx divided into 3 groups (scores of 0-15, 16-23, 24-60) 6 wks pp	Antenatal depr. sx	Univar.: Family arguments, partner supp., relationship depth w/ sx; Partner supp. differentiated low/middle sx groups; Family arguments, relationship supp., relationship depth, demands from home differentiated low/high groups; Multivar.: Family arguments, relationship depth sig.
156	Perren et al. (2005)	CS[b]	74 first-time mothers in Switzerland; 74% married	**Parental stress** in 12 life domains; **Child difficulty** 2nd trim. (stress), and 1, 3, 12 mos pp	**EPDS** sx 1, 3, 12 mos pp	-	Parental stress w/ sx at all measurement points; Child difficulty n.s.
157	Phillips et al. (2010)	CS	157 English-speaking Australian mothers in a brief residential treatment program for early parenting difficulties, w/ infant >2 wks and <12 mos and no sig. intellectual disabilities	**Soc. supp.**, **attachment, infant difficulties, LEs** M=5 mos pp	**SCID** (DSM-IV; current or past dx; recurrent, de novo, past only, never depr.); **EPDS** sx M=5 mos pp	Depr. hx, anxiety, vulnerable personality, style, maternal-specific and general neg. attitudes	Univar.: Lower soc. supp., LEs, attachment anxiety and attachment avoidance w/ sx; Higher soc. supp. in those never depr. vs. recurrent depr.; Higher attachment anxiety in all depr. groups vs. never depr.; Avoidance higher in past and recurrent depr. vs. never depr.; Multivar.: n.s.
158	Qu et al. (2012)	CS	317 mothers from China, most married w/ high school educ. or lower, about half farm workers; 96.5% Han ethn.	**Earthquake exposure** (8.0 magnitude) during preg. assessed w/ 13 item author-constructed scale (e.g., injury to self, saw injury or death, loss of income) 1 wk pp	**CES-D** w/ cutoffs for little or no sx <16, mild sx 16-20, moderate sx 21-25, severe sx ≥26 1 wk pp	Age, living site, ethn., employment, marital status, educ., income, smoking, drinking, sleep, timing of earthquake, parity	Univar. and multivar.: High earthquake experience w/ PPD
159	Quelopana et al. (2011)	CS	163 Chilean mothers, w/ singleton full-term preg., presenting for follow-up healthcare	**Living w/ partner, soc. supp.** >2 wks pp	**PPDS** >59 >2wks pp	"Socio-demographic factors", age, feeling unhappy about last preg., smoking, breastfeeding	Univar.: Depr. women reported less soc. supp. (significance not given); Multivar.: Lack of childcare or emot. supp. sig.

160	Radesky et al. (2013)	LG	587 US mothers in educational randomized controlled trial; 73% White, Excl.: birth <34 wks' GA, serious infant medical conditions	Daily diary reports of **infant distress** (fussing, crying, or inconsolable crying) 5-6 wks pp	**EPDS** >10 8 wks pp	EPDS at 5– 6 wks pp, infant gender, GA, maternal age, parity, marital status, educ., income, race, breastfeeding, employment	Increased odds of PPD in mothers of infants w/ colic and mothers who recorded >20 mins/day of inconsolable crying
161	Ramchandani et al. (2009)	LG	1,035 mothers of singleton children born within a 7-wk period in 1990 in urban South Africa	**Soc. supp., partner supp., childhood physical abuse, early parent and sibling relationships, stressful events** during preg. (marital, family, economic, societal) Antenatal assessment, exact timing unspecified	**Pitt's Depression Inventory** sx and >19 6 mos pp	Maternal educ., childhood happiness, current mood (3 variables)	Univar.: Low supp. from parents/friends or partner, partner difficulties, poor early parent or sibling relationships, childhood abuse, all stressful events (including relationship stress) w/ PPD; Multivar.: Partner difficulties and exposure to extreme societal stressors w/ PPD and sx
162	Records & Rice (2005)	LG	50 mothers able to speak/read English, w/ healthy, full-term infant and no dx of depr.	Hx of or current **physical or sexual abuse** 1 wk pp	**CES-D** sx 1 wk pp **EPDS** sx 1, 2, 3, 4 mos pp	Depr. sx at 1wk pp	Univar.: Abuse experience w/ sx at 1 wk; 2, 3 mos pp; Multivar.: n.s. contr. for sx at 1 wk pp
163	Records & Rice (2009)	LG	96 English-speaking, mostly married preg. women w/ first births; Majority Cauc.	**Partner violence** 3rd trim.; 2,4,6,8 mos pp **Lifetime abuse** 3rd trim.	**EPDS** sx and >11, **CES-D** sx and >15 2, 4, 6 (EPDS), 8 mos pp (EPDS, CES-D)	Self-esteem, prenatal anxiety/ depr., hx of depr., preg. intent, soc. supp., marital status, marital satisfaction, life stress	Lifetime abuse predictive such that risk increases from 2 to 6 mos pp; Minimal current partner violence reported
164	Rich-Edwards et al. (2006)	CS[b]	1,278 mothers from the US, 18% foreign-born; 76% White, 9% Black, 6% Asian, 5% Hisp.	**Partner status, emot. and material supp.** from partner and family/friends, **financial hardship** 6 mos pp	**EPDS** >12 6 mos pp	Age, race/ethn., immigrant status, parity, birth weight, income, preg. intent	Family and partner supp., financial hardship pp w/ lower PPD
165	Ritter et al. (2000)	LG	191 low-income, inner-city preg. women from the US; 73% Eur.-Am., 27% Afr.-Am.	**Soc. supp. satisfaction, SLEs** ≤24 wks' GA, 7-9 wks before expected delivery; values aggregated	**Latent construct** of modified **BDI, RDC** interviewer-rated depr. severity and 1-item **dysphoric mood** 7-9 wks pp	Self-esteem, ethn., family income and prenatal depr. also in LISREL model	More supp. satisfaction and more SLEs w/ sx, after contr. for prenatal depr.; No evidence for stress-buffering interactions
166	Rodríguez et al. (2010); Valentine et al. (2011)	LG	210 English- or Spanish-speaking preg. Latina women from the US, 44% exposed to IPV	**Partner status, lifetime IPV, non-IPV trauma hx**, **soc. supp.** **Perc. stress** (analyses not available for "any PPD" analyses) >12 wks' GA	**BDI** fast screen, sx and >3; Persistent PPD: Above cutoff at >2 out of 4 time pts (i.e., including one assessment in preg.); Any PPD: above threshold at any time 3, 7, 12-13 mos pp	For PPD at each time point and persistent PPD: Mastery, avoidant coping, language For "any PPD": prenatal depr.	Univar.: Each time point and persistent depr. w/ exposure to IPV; Any PPD w/ recent IPV, non-IPV trauma and low soc. supp.; Multivar.: Persistent depr. w/ IPV exposure, lower soc. supp. and higher perc. stress; Any PPD w/ recent IPV

167	Rogers et al. (2013)	CS	73 mothers in the US w/ very preterm infants (<30 wks' GA); Half Afr.-Am. and Cauc.; Excl.: severe newborn health problems	**Soc. supp., LEs, parental role alteration, marital status**	**EPDS** sx Timing unclear	Age, race, educ., hx of depr. or anxiety, smoking, infant factors (# of days of ventilation, length of hospital stay, extent of brain injury)	Being married and parental role alteration w/ more sx
168	Rubertsson et al. (2005)	LG	2,430 preg. women from registered antenatal health clinics in Sweden, large majority at least high school educ.	**Marital status, SLEs** in the yr prior to preg. M=16 wks' GA	**EPDS** >11, categorized as always (including 16 wks' GA), vs. never above cutoff 2, 12 mos pp	≥3 children, Swedish not native language, elementary school educ., unemployed, small city as residential area, chronic illness	Univar.: Single relationship status, two or more LEs in yr before preg. w/ sx; Multivar.: ≥2 LEs w/ sx
169	Satoh et al. (2009)	CS	169 mothers from Japan	**Worries about baby care, partner relationship** ("cooperation"), **family structure** (nuclear vs. extended), **sociability** (network access/ supp.) 4 mos pp	**EPDS** sx 4 mos pp	General health problems, # of children, problems during preg. hospital stay	Univar. and multivar.: Higher worries about baby care, poor partner relationship, and low sociability w/ sx
170	Schachman & Lindsay (2013)	CS	71 US mothers married to active-duty military members; 82% Cauc., 10% Hisp.; Excl.: <18 yrs, mother on active duty, serious infant health condition	**LEs in past year, soc. supp.** 6-9 wks pp	**PPDS** (Short Form) >14 6-9 wks pp	-	Univar.: Greater family changes and strains, shorter duration of marriage, and lower soc. supp. w/ PPD
171	Secco et al. (2007)	LG	78 healthy adolescent preg. women from Canada, w/ term births, mean age 16.79; 48% Cauc., 41% Metis/First Nations	**Perc. family/friend supp.** 3rd trim. **Enacted supp.** 4 wks pp	**BDI**-II sx 4 wks pp	SES, child rearing competence	Univar.: Perc. but not enacted family supp. w/ lower sx; Multivar.: n.s.
172	Segre et al. (2007)	CS	4,332 US mothers in close relationships for ≥6 mos	**Marital status** M=4.6 mos pp	**Inventory to Diagnose Depression** M=4.6 mos pp	Income, occupational prestige, educ., age, race, Hisp. ethn., # of children	Univar. and multivar.: Being unmarried w/ PPD
173	Seimyr et al. (2013)	LG	232 preg. women in Sweden (195 completed questionnaires at 10-12 wks pp); 98% White	**Marital status, length of relationship** 4-6 wks pp	**BDI, EPDS** and **PPDS** sx 4-6, 10-12 wks pp	Age, length of educ., unemployment, personal, family hx of mental disorder/ depr.	Shorter length of relationship w/ EPDS at 4-6 pp only; not w/ BDI or PPDS sx at 4-6 wks or 10-12 wks pp
174	Seng et al. (2013)	LG	566 US preg. women expecting their first child, assigned to 3 cohorts based on hx of childhood maltreatment and PTSD screening criteria (319 PTSD pos., 380 trauma- exposed, no PTSD dx, 350 not-exposed); 57% Eur.-Am., 30% Afr.-Am., 9% Asian or Pacific Islander, 6% Latina	**Childhood trauma history** <28 wks gestation	**PPDS** (sx and scores >80) 6 wks pp	Preexisting mental health diagnoses, quality of life in late preg., and peritraumatic dissociation in labor	Univar.: Hx of maltreatment w/ sx but not w/ PPD; Multivar.: Hx of maltreatment n.s. contr. for pre-existing PTSD and depr.

175	Serhan et al. (2013)	CS	110 new mothers in Turkey	**Difficulty in baby care, anxiety about motherhood, partner relationship quality, supp. for baby care** 2-6 mos pp	**EPDS** >13 2-6 mos pp	Feeling "enough" in baby care	Univar.: Difficulty in baby care, anxiety about motherhood, "medium or bad" relationship w/ spouse, lack of supp. for baby care w/ sx; Multivar.: Anxiety about motherhood w/ PPD
176	Sheng et al. (2010)	LG	62 low-income, immigrant and US-born preg. Latinas, Spanish- or English-speaking w/o current maj. depr. episode, psychosis, serious medical problems or substance abuse, divided into high or low risk for PPD based on sx or hx of depr.	**Perc. supp. satisfaction** from partner and parents 12-39 (M=27) wks' GA, 1 mo pp	**CES-D** sx 1 mo pp	Prenatal depr., hx of depr.	Univar.: High-risk women less satisfied w/ partner supp. in preg. and pp, and w/ family and "others" supp. pp; Multivar.: Higher satisfaction w/ baby's father's supp. pp (but not prenatal) w/ lower sx
177	Silverman & Loudon (2010)	LG	510 US preg. women, 41% low educ.; 58% Hisp., 32% Afr.-Am.	**Physical or sexual abuse (**hx**), exposure to family violence** (current and historical), **psychosoc. stress** 1st prenatal visit	**EPDS** <4 vs. >8 and >11 6 wks pp	Hx of and acute psychiatr. illness	Hx of physical or sexual abuse w/ elevated sx; Women reporting ≥3 psychosoc. stressors at first prenatal visit more likely to develop PPD
178	Simpson et al. (2003)	LG	106 married US couples w/ first birth in transition to parenthood	**Attachment style** (anxious, ambivalent); available **partner supp.**, **partner anger** towards mother 6 wks prior to due date	**CES-D** sx 6 mos pp	Prenatal depr. sx, neuroticism, marital satisfaction	Ambivalent attachment, spousal anger w/ increases in sx; Interactions: High anger x high ambivalence w/ sx; High ambivalence x low supp. w/ sx; Declines in perceptions of spousal supp. mediated both interactions
179	Siu et al. (2012)	LG	805 preg. women from China	Antenatal **SLEs**; **child care stress; marital status; relationship satisfaction w/ baby's father, parents, mother-in-law** 3rd trim. **peiyue supp.** (female assistant post delivery) 2 mo pp	**EPDS**, dx confirmed by **SCID** (DSM-IV) 2 mos pp	Antenatal depr., anxiety-prone personality	Univar.: Antenatal SLEs, childcare stress, poor partner and in-law relationships, umarried status, and peiyue supp. w/ PPD; Multivar.: Dissatisfaction w/ marital and mother-in-law relationship w/ PPD
180	Söderquist et al. (2009)	LG	1,224 preg. women w/o obstetric complic. from Sweden	**Perc. soc. supp.** 32 wks' GA	**BDI** >8 1 mo pp	Multiparity (all), low stress coping, prenatal depr., high trait anxiety (soc. supp. only), fear of birth, "pretraumatic stress"	Perc. soc. supp. n.s.
181	Stock et al. (2013)	CS	200 mothers who brought their infants to the emergency department of a hospital in Australia; Excl.: Mothers of infants w/ time-critical conditions	**Relationship status, crying baby** (as presenting problem or discharge dx) 2 wks-6 mos pp (M=3.6 mos pp)	**EPDS**>12 2 wks to 6 mos pp (M=3.6 mos pp)	-	Single relationship parent status and 'crying baby' as the presenting problem w/ PPD

182	Surkan et al. (2006)	CS	415 low/ middle income English- or Spanish-speaking urban US mothers w/ singleton birth, no maj. disability, mental illness, meds, or serious infant problems; 41% Latina, 40% White, 19% Afr.-Am.	**Soc. supp. available, supp. networks** (# of close friends and family, coded 0-1 vs. 2+) Cohorts of 6 wks-6 mos pp, 6-12 mos pp	**CES-D** sx Cohorts of 6 wks-6 mos pp, 6-12 mos pp	Race/ethn., age, educ., income, # of children	Low soc. supp., few close relationships w/ PPD in univar. and multivar. models; Supp. variables mediate effect of discrimination on PPD
183	Tanner Stapleton et al. (2012)	LG	272 adult US preg. women; 53% White, 21% Latina, 11% Afr.-Am., 10% Asian American	Adult **attachment**, **relationship satisfaction** 18-20 wks' GA **Partner supp. effectiveness** 2nd-3rd trim.	**CES-D** sx 6-8 wks pp	Prenatal depr., anxiety sx	Univar.: attachment, relationship satisfaction, partner supp. w/ fewer sx; Multivar.: Less effective partner supp. w/ more sx; Partner supp. mediated effects of attachment and relationship satisfaction
184	Thome (2000)	CS	734 new mothers randomly sampled from national registry in Iceland	**Parenting stress**, **infant difficulty** 2-3 mos pp	**EPDS** >8 and sx 2-3 mos pp	Marital status, maternal educ.	Univar.: Above cutoff w/ more difficult infants and infant health worries; Parental stress w/ sx; Multivar.: Parental stress, infant health worries w/ sx
185	Trabold et al. (2013)	LG	71 socio-economically diverse US women that received (but not currently receive) soc. work services (retrospective chart review); 49% Black, 27% Latina, 9% White	**IPV** (current, history, or none; mild, moderate, or severe) Preg. (varied), 4-6 wks pp	**EPDS** >9 or soc. worker-indicated sx (based on DSM-IV) or depr. treatment post-delivery 4-6 wks pp	-	Cross-case analysis: 61% of cases w/ IPV also had PPD; more severe violence w/ more severe PPD; Prenatal depr. typically preceded PPD
186	Trotter et al. (2004)	LG	200 English-speaking US preg. women, low income, 47% w/ low educ., and in relationship ≥6 wks ; 65% White, 25% Afr.-Am., 5% Hisp.	**IPV** (psychol., physical abuse), **emot. supp.** 3rd trim.	**BDI** sx 2-3 mos pp	Prenatal depr. (in mediation model)	Univar.: Psychol. and physical abuse w/ PPD; Mediation: effect of psychol. abuse mediated by prenatal depr.; Moderation: At higher levels of abuse, women w/ more supp. had fewer sx
187	Urquia et al. (2013)	CS	6,375 Canadian mothers of live-birth singletons	**Marital x cohabitation status** (4 categories)**, cohabitation duration** (<3, 3-5, >5 years) 5-9 mos pp	**EPDS** >12 5-9 mos pp	Model 1: -; Model 2: Age, parity, educ., household income, foreign-born, ethnic or cultural identity; Model 3: Above, plus self and partner preg. wantedness; Model 4: Above, excl. prenatal depr.	Model 1: Higher PPD odds for non-cohabiting compared to married/ cohabiting women; Model 2: Higher odds for divorced/ separated compared to married/ cohabiting women; Models 3, 4: n.s.; Cohabiting 0-2 yrs w/ higher PPD odds compared to >5 years
188	Venkatesh et al. (2013)	LG	106 preg. US adolescents enrolled in a prevention randomized controlled trial; 53% Latina, 17% Black, 16% White; Excl.: receiving mental health care, affective disorder, substance use or anxiety disorder, psychosis	**Parenting Stress** 6 wks; 3, 6 mos pp	**SCID** for DSM-IV Childhood Diagnoses 6 wks, 3, 6 mos pp	Study arm, age, place of birth, hx of depr., # of study visits	High levels of parenting stress w/ subsequent PPD
189	Vigod et al. (2013)	CS	6,126 mothers from a population-based study in Canada	**Life stressors** in last 2 years**, interpersonal abuse, soc. supp.** Timing unspecified ("mothers having recently given birth")	**EPDS** >12 Timing unspecified ("mothers having recently given birth")	Population area size, parity, country of origin, household income, hx of depr., maternal health	Life stressors, interpersonal abuse, and low soc. supp. w/ PPD

190	Whisman et al. (2011)	LG	113 married or cohabiting preg. women w/ prior depr. episode (DSM-IV); Excl.: maj. medical risk, active suicidality, pos. tox. screen, or met criteria for substance use or other maj. mental disorder; 69% Afr.-Am., 31% Eur.-Am.	**Partner relationship adjustment** Monthly from first assessment (at 6-27 wks' GA) until 6 mos pp	**BDI**-II sx Monthly from first assessment (at 6-27 wks' GA until 6 mos pp	Linear change in BDI sx	Relationship adjustment predicted cross-sectionally, but n.s. in cross-lagged analyses; Evidence suggested reversed directionality (depr. sx predicted changes in relationship adjustment)
191	Wilkinson & Mulcahy (2010)	CS	115 Australian mothers (n=47 likely, n=68 unlikely to be depr.) w/ infants <1 yr, w/o obvious self/ infant harm risk, current substance abuse, serious personality disorder, 85% native Australian	**Adult attachment style, mother-infant attachment, soc. supp., marital functioning** M=7 mos pp	**EPDS** sx and >12 (dx confirmed by clinical interview) M=7 mos pp	-	Less secure, more preoccupied, fearful attachment, less soc. supp., lower marital quality, poorer attachment to infant w/ dx; sx w/ fearful and preoccupied attachment
192	Xie et al. (2009)	LG	534 mostly well-educ. Chinese preg. women	**Infant sex x soc. supp. interaction** 30-32 wks' GA, 2 wks pp	**EPDS** >12 2 wks pp	Socio-demographic, obstetric variables	Female infant w/ PPD; Effect partially mediated by reduction in pp (not prenatal) perc. and received supp.
193	Yehia et al. (2013)	CS	300 Arabic Muslim Jordanian mothers serving in the military w/o hx of PPD, cognitive impairment, or maternal/ infant complic.	Perc. **soc. supp.** Within 1 yr pp	**EPDS** sx	Income, preg. intendedness, birth method, PTSD sx	Univar. & multivar.: Lower soc. supp. w/ higher sx
194	Yonkers et al. (2001)	LG	802 inner-city, mostly low-educ. US mothers; 75% Hisp., 20% Afr.-Am.	**Living w/ partner, living w/ parents, living w/ extended family** 3 wks pp	**Inventory of Depressive Symptomatology** >17 or **EPDS** >11 3 wks pp, repeated at 4 wks if screened high, and confirmed dx w/ **SCID** at 4-5 wks if again screened high	-	Persistent sx at 4 wks pp w/ living w/ partner (protective); Persistent sx at 4-5 wks pp w/ living at home w/ extended family (risk); Living w/ spouse risk factor for pp onset maj. depr.
195	Zaers et al. (2008)	LG	60 preg. women attending childbirth classes in Germany	**Critical LEs** First few days after delivery	**EPDS** sx 6 wks, 6 mos pp	State, trait anxiety; somatic, soc., depr. sx, delivery experience in final model	Greater # of critical LEs in past yr w/ sx (not in past 6 mos and not as block variable)
196	Zayas et al. (2003)	LG	49 preg. US Latina women; Mostly of Puerto Rican and Dominican descent	**Functional soc. supp.** (emot. + aid), **LEs** 3rd trim.	**BDI**-II sx 2-3 wks, 3 mos pp, and change over time	Prenatal BDI, educ.	More LEs w/ sx across time; Supp. n.s., no evidence of stress x supp. interaction
197	Zelkowitz et al. (2008)	LG	106 English-, French-, or Spanish-speaking preg. women who immigrated to Canada as adults, most high school educ.; Excl.: born in US or Canada	**Soc. supp.** (need, satisfaction, network size), **relationship satisfaction, premigration stress** Preg. (unspecified), 2 mos pp	**EPDS** ≥12 and sx 2 mos pp and change in status from preg. to pp	Prenatal mood, prenatal anxiety, somatic sx (prenatal model)	Univar.: Lower pp relationship satisfaction, higher prenatal need for supp. w/ caseness and sx; Premigration stress higher in women w/ PPD compared to never depr.; Multivar.: Lower prenatal relationship satisfaction w/ more sx; Women whose sx remitted from preg. to pp showed improvement in relationship quality, vs. continued decline for those w/ persistent depr.

198	Zelkowitz & Milet (2001)	CS	98 Canadian mothers (n=48, EPDS ≥10 at 2 mos pp and met criteria for current DSM-III-R Axis I disorder; 50 control women w/o dx)	**SLEs** in past 12 mos 6 mos pp	**Remission of psychiatr. dx**; **SC90R** depr. subscale 6 mos pp	-	Mothers in remission reported more SLEs than controls or mothers who were still symptomatic; More SLEs w/ sx
SECTION 3: STUDIES ON BIOLOGICAL AND PSYCHOSOCIAL PREDICTORS							
199	Cheng & Pickler (2010)	CS[b]	41 preg. US women (n=21 pp); Mostly Afr.-Am.	Biological: **Cortisol** in saliva Psychosoc.: **Perc. stress** 0 and 30 min after waking (cortisol), ≥36 wks' GA, 4-6 wks pp	20-item **CES-D** sx and **>16** 4-6 wks pp	-	No sig. associations
200	Comasco et al. (2011a)	LG	219 mothers w/ healthy infants from population-based cohort in Sweden; Excl.: intrauterine demise, NICU admission *Subsample of Studies 42, 203*	Biolog.: **5-HTT** (5-HTTLPR), **BDNF** (Val^{66}Met), **PER2** (SNP 10870) Psychosoc.: **LEs** in past 6 mos, **maternity stressors** (lack of breastfeeding, adequate sleep, partner supp.) 5 days pp	**EPDS** sx and >11 (>12 and >9 also tested) 6 wks, 6 mos pp	Season of delivery	PPD at 6 wks pp w/ LEs in overall sample; w/ LEs and maternity stressors among spring/ summer deliveries; w/ BDNF (Met allele) and maternity stressors among autumn/ winter deliveries, n.s. at 6 mos pp
201	Comasco et al. (2011b)	LG	275 mothers w/ healthy infants from population-based cohort in Sweden; Excl.: intrauterine demise, NICU admission *Sample overlaps w/ Studies 42, 202*	Biolog.: **5-HTT** (5-HTTLPR), **COMT** (Val^{158}Met), **MAO-A** (uVNTR) Psychosoc.: **LEs** in past yr, **maternity stressors** (lack of breastfeeding, lack of adequate sleep, lack of supp. from partner) 5 days pp	**EPDS** sx and >11 (>12 and >9 also tested) 6 wks, 6 mos pp	Previous psychiatr. contact	Univar.: COMT (Met), MAO-A (low activity carriers), # of LEs, maternity stressors w/ risk (categorical, continuous) at 6 wks pp; Multivar.: In MAO-A low activity carriers, only COMT (Met) w/ PPD; 5HTT short allele only sig. w/ COMT (Met); COMT and MAOA w/ sx in women w/ stressors; In women w/ previous psychiatr. contact stressors w/ PPD, in women w/o COMT, 5HTT w/ PPD
202	Corwin et al. (2005)	LG	42 healthy, preg. US women, 21% w/ personal, 35% w/ family hx of depr., 84% breastfeeding at 28 days pp; 98% White; Excl.: Most meds, C-sections, vaginal birth w/ hemorrhage, PTB, multiple birth, infant not healthy, in hospital for >48 hrs	Biolog.: **Cortisol** in saliva Psychosoc.: **Perc. Stress** 9-10am (cortisol), 36-38 wks' GA; 7,14,28 days pp	**CES-D** >10 7,14,28 days pp	-	Prenatal stress w/ PPD sx at 14 and 28 days; pp stress at each time w/ PPD sx at each time; Repeated measures ANOVA n.s.
203	Figueira et al. (2010)	CS	227 mothers from Brazil	Biolog.: **BDNF** (Val^{66}Met) Psychosoc.: **LEs** during preg. recalled retrospectively 8 wks pp	**EPDS** >12 and dx w/ **MINI** PLUS 5.0 (DSM-IV) 8 wks pp	-	Univar.: Greater # of stressor events w/ PPD; Multivar.: No sig. associations

204	Groer & Morgan (2007)	CS	199 US mothers, 101 exclusive or nearly exclusive breastfeeders, 98 formula feeders *Sample overlaps w/ Studies 16, 17*	Biolog.: **Cortisol** in saliva, serum; **prolactin** in serum; **IFN-γ, IL-10, IL-6** in serum, ex vivo culture supernatant Psychosoc.: **Perc. stress**, **small LEs** Saliva early morning, serum 8-11am, 4-6 wks pp	**POMS-D** >20 (reflecting highest decile) 4-6 wks pp	-	Cases had lower salivary (but not serum) cortisol levels, lower prolactin levels, lower serum IFN-γ levels, a lower IFN-γ/IL-10 ratio in serum and whole blood culture, higher perc. stress and more neg. small LEs
205	Hahn-Holbrook et al. (2013)	LG	210 US women w/ singleton preg.; 77% married or cohabiting w/ baby's father; 37% Latina/Hisp., 29% non-Hisp. White, 28% Afr.-Am./Black, 4% Asian/Pacific Islander; Excl.: multiple birth, ≥20 wks' GA at recruitment	Biolog.: **CRH** in plasma Psychosoc.: **Perc. soc. supp.** from partner and family 19, 29, 37 wks' GA (psychosoc. variables at 29 wks' GA)	**BDI** sx, and >9, >18 8 wks pp	Age, income, educ., marital status, ethn., depr. in preg., preterm delivery, smoking in preg., parity	Simple comparisons: Higher CRH at 37 wks' GA, lower family supp. w/ sx; Multivar.: Accelerated CRH from 29-37 wks' GA, higher levels at 37 wks' GA w/ PPD; Family supp. affects PPD via CRH changes from 29-37 wks' GA
206	Ingram et al. (2003)	LG	54 preg. women of mixed parity w/ singleton infant and intention to breastfeed from the UK, 83% breastfed at 6 mos pp, homogeneous for SES and educ. background; Excl.: disease affecting lactation or hormone secretion	Biolog.: **Total estradiol, total progesterone, prolactin, TSH** in blood Psychosoc.: **Number of LEs** 36 wks' GA; 12-48 hrs pp; 1, 4 wks pp for biolog., 6 mos pp for psychosoc. variables	**EPDS** >9 6 mos pp	Parity, pacifier use, time spent feeding at 1 mo pp in final model	Bivariate comparisons: Cases had lower antenatal prolactin and lower progesterone at 12-24 hrs pp; Multiple logistic regression: Cases had lower progesterone at 12-24 hrs, contr. for LEs
207	Kuijpens et al. (2001)	CS[b]	291 preg. women from the Netherlands; Excl.: thyroid meds, new preg. by 6 mos pp	Biolog.: **FT4, TSH, TPOAb** in blood; Thyroid dysfunction scores: abnormal T4 and/ or TSH; (unique effects of T4 and TSH not reported) Psychosoc.: **Maj. LEs** 12,32 wks' GA; 4,12,20,28,36 wks pp	**RDC** 4,12,20,28,36 wks pp	Educ., age, parity, smoking, alcohol, previous depr., preg. and labor complic., breastfeeding	TPOAb+ predictive at 4 and 12 wks pp, LEs w/ sx at each time point
208	Mehta et al. (2012)	LG	419 preg. women from Germany; 100% Cauc.	Biolog.: **5-HTT** (5-HTTLPR) Psychosoc.: **SLEs** at any time (death, accidents, illness, sexual abuse), **partner relationship satisfaction** 3rd trim.	**EPDS** sx 48-72 hrs pp, 6-8 mos pp	Gravidity	SLEs w/ sx at both times, partner satisfaction w/ fewer sx at 6-8 mos; 5-HTTLPR short allele carriers w/ ≥1 adverse LE or w/ low partner satisfaction w/ higher depr. scores at 6-8 mos pp
209	Nierop et al. (2006)	LG	57 healthy nulliparous women w/ singleton preg. from Switzerland; Excl.: psychiatr. disorders, alcohol, smoking, low educ., meds, artificial insemination, maternal or fetal complic.	Biolog.: **Cortisol response** to *psychosoc. laboratory stressor* Psychosoc.: **Mood response** to same stressor; **stress susceptibility** Before and until 1 hour after stressor, in afternoon; 13-31 wks' GA	**EPDS** >9 2-27 days pp	GA	Higher cortisol responses, more pronounced decreases in mood and higher stress susceptibility in women w/ later PPD

210	Pinheiro et al. (2013)	CS	207 pp Brazilian women; 63% ≤8 yrs of school, 86% live w/ partner, 30% smoking, 8% maj. depr. hx	Biolog.: **5-HTT** (5-HTTLPR) Psychosoc.: **LEs**	**EPDS** >12, dx w/ **MINI** 45-90 days pp	Age, family income, smoking, alcohol, hx of maj. depr.	Univar.: 2 or more LEs w/ greater likelihood of PPD; Multivar.: More PPD in long allele carriers w/ LEs during preg.

Note. Ab=antibody; ACTH=Adrenocorticotropic hormone; Afr.-Am.=African American; BDI=Beck Depression Inventory; biolog.=biological; BMI=body mass index; Cauc.=Caucasian; CES-D= Center for Epidemiologic Studies Depression Scale; CIDI=Composite International Diagnostic Interview; complic.=complication; contr. = controlling; CRH=Corticotropin-releasing hormone; CRP=C-reactive protein; CS=Cross-Sectional; CSF=Cerebrospinal fluid; depr.=depressed/ depressive/ depression; DHEA=Dehydroepiandrosterone; DISC=Diagnostic Interview Schedule for Children; DSM=Diagnostic and Statistical Manual of Mental Disorders; dx=diagnosis; educ.=education/ educated; emot.=emotional; EPDS=Edinburgh Postnatal Depression Scale; ethn.=ethnicity; Eur.-Am.=European-American; Excl.=Exclusion; fT3=free triiodothyronine; fT4=free thyroxine; GA=gestational age; GRH=Gonadotropin Releasing Hormone; HAM-D=Hamilton Depression Rating Scale; Hisp.=Hispanic; hr(s)= hour(s); HTT=serotonin transporter; hx=history; Incl.=Inclusion; IL=interleukin; IFN=interferon; IPV=Intimate Partner Violence; IVF=in vitro fertilization; LE=life event; LG=longitudinal; MADRS =Montgomery-Åsberg Depression Rating Scale; McAb=Microsomal antibody; med(s)=medication(s); MINI=Mini International Neuropsychiatric Interview; mo(s)=month(s); multivar.=multivariate; neg.=negative; n.s.=not significant; NICU=Neonatal Intensive Care Unit; PBQ=Postpartum Blues Questionnaire; perc.=perceived; POMS-D=Profile of Mood States, Depression Subscale; pos.= positive; preg.=pregnant/ pregnancy; pp=postpartum; PPD=postpartum depression; PPDS=Postpartum Depression Symptoms Rating Scale; PRAMS=Pregnancy Risk Assessment Monitoring System; PSS =Perceived Stress Scale; PTB=preterm birth; psychiatr.=psychiatric; psychol.=psychological; psychosoc.=psychosocial; PTSD=Post-traumatic Stress Disorder; RDC=Research Diagnostic Criteria; SADS=Schedule for Affective Disorders and Schizophrenia; SBS=Stein Blues Scale; SCID=Structured Clinical Interview for DSM; SES=socioeconomic status; sig.=significant; SLE=Stressful life event; soc.=social; SRDS=Self-Rating Depression Scale; supp.=support; sx=symptoms; T3=triiodothyronine; T4=thyroxine; TgAb=thyroglobulin antibody; tox.=toxicology; TPH=tryptophan hydroxylase; TPOAb=thyroid peroxidase antibody; TRAb=Thyrotropin-receptor antibody; trim.=trimester; TSH=thyroid-stimulating hormone; TNF-α=tumor necrosis factor-alpha; univar.=univariate; w/=with; wk(s)=week(s); w/o=without; yr(s)=year(s).

[a]Number of participants reflects those included in relevant analyses and may differ from the total number of participants in the original study; [b]Relevant analyses are cross-sectional but the study had a longitudinal design; exclusion criteria are summarized and some specific criteria are not mentioned (e.g., no consent given, lack of language proficiency); ethnicities of groups ≥4% are reported.

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