

Supplemental Table S1: Locations of included studies

Region	N	Country	n
Americas	34	Brazil	4
		Canada	3
		United States	27
Asia	7	Israel	2
		Japan*	2
		Russia	2
		Thailand*	1
Europe	28	Belgium	1
		Croatia	1
		France	4
		Germany	5
		Ireland	2
		Italy	2
		Norway	1
		Spain	4
		Sweden	2
		Switzerland	1
		United Kingdom	5
Oceania	5	Australia	5
Total	74		
*Japan and Thailand were included for biomarker studies only			

SUPPLEMENTAL FILE

OSF search protocol registration:

https://osf.io/t5pv7/?view_only=d16279c74d814975a44ac70eef3af2ad

Ovid MEDLINE(R) ALL

1	[CONCEPT ONE: experiences/exposures/trauma/mistreatment/stress/disadvantage]
2	["obstetric violence" interpreted here as being caused by medical personnel]
3	exp maternal health services/
4	exp labor, obstetric/
5	exp delivery, obstetric/
6	3 or 4 or 5
7	exp violence/or violen\$.ti.
8	6 and 7
9	(obstetric* adj3 violen*).tw,kf.
10	8 or 9
11	[end of obstetric violence. this term is used more away from USA, and with disadvantaged and immigrants, etc.]
12	[begin respectful maternity care]
13	"respectful matern* care".tw,kf.
14	exp Maternal Health Services/or exp Delivery, Obstetric/or exp Parturition/
15	14 and (respectful\$ or polite\$ or considerate or dignified or gracious or thoughtful or attentive or mindful).ti,kf.
16	13 or 15
17	[end respectful. this cd be broadened by finding other words for respectful]
18	[perinatal stress is an "unfortunate" term because we don't know to whom it applies, mom or baby. the phrase is not used much. but I even saw "paternal perinatal stress" - and then: "stress" is "psychological" for the mom, and metabolic for the baby, says me; very squishy topic]
19	perinatal stress*.tw. or perinatal stress*.kf.
20	[end of perinatal stress until we define it better; get a brainstorm; etc.]
21	[traumatic birth, another phrase not used much. do we mean birth injuries, obstetric complications, or something more psychological?]
22	exp Delivery, Obstetric/or exp Obstetric Labor Complications/
23	22 and traumatic.ti.
24	(birth adj3 trauma\$).tw,kf.
25	23 or 24
26	[end of traumatic birth; this could, of course, be broadened, if "traumatic" were to get all fleshed-out]
27	[pregnancy mistreatment. ouch, another!]
28	((mistreat* or cruel\$ or oppression or harassment or exploitation or neglect* or discrimination or brutality or bully* or inequity or malpractice) adj3 pregnan*).tw,kf.
29	pregnancy mistreatment.af.
30	[right. "pregnancy mistreatment" is not a thing (in the published medical literature sense of the word)]
31	[end of pregnancy mistreatment]
32	[pregnancy marginalization; it's "not a thing" as a phrase; see next set. Of course, as a concept, it's searchable...]
33	(marginaliz* adj3 pregnan*).tw,kf.

34	exp maternal health services/or exp pregnant women/or exp prenatal care/
35	exp Social Marginalization/or marginali*.ti.
36	34 and 35
37	33 or 36
38	[end of marginalization. of course this idea of "marginalizing" could be broadened if defined in more medical-scientific terms...]
39	[pregnancy & socioeconomic disadvantage or socio... deprivation]
40	[... and we'll add in "childbirth" (aka parturition)]
41	exp Socioeconomic Factors/
42	(socioeconomic adj2 (factor* or disadvantage* or depriv*)).tw,kf.
43	41 or 42
44	exp pregnancy/
45	exp parturition/
46	(pregnancy or childbirth).tw,kf.
47	44 or 45 or 46
48	43 and 47
49	[end of pregnancy (or childbirth) and socioeconomic factors]
50	10 or 16 or 19 or 25 or 37 or 48
51	[END OF CONCEPT ONE, WHICH IS EXPERIENCES & EXPOSURES]
52	[CONCEPT TWO -- BIOMARKERS]
53	[begin epigenetic age]
54	(exp Epigenesis, Genetic/or exp epigenomics/) and age.ti.
55	epigenetic age.tw,kf.
56	54 or 55
57	[end of epigenetic age]
58	[begin weathering & allostatic load]
59	weathering.ti.
60	"wear and tear".tw,kf.
61	"deteriorat* health".tw,kf.
62	(exp allostasis/and load.ti.) or "allostatic load".tw,kf.
63	59 or 60 or 61 or 62
64	63 and (exp *pregnancy/or exp *pregnancy complications/or exp *pregnancy outcome/)
65	[end weathering & allostatic load]
66	[begin hair cortisol]
67	(hair adj5 cortisol).af.
68	exp *Hydrocortisone/and exp *Hair/
69	67 or 68
70	[end hair cortisol]
71	[begin microbiome]
72	exp Microbiota/
73	(microbiota or microbiome).tw,kf.
74	72 or 73
75	[end microbiome]

76	[begin inflammation]
77	exp Inflammation Mediators/or exp Inflammation/
78	inflammat*.ti. or exp allostasis/or exp dna methylation/or exp epigenesis, genetic/or exp epigenomics/or exp hematopoietic stem cells/or exp telomere shortening/or exp gene-environment interaction/or intergenerational transmission.tw,kf.
79	77 or 78
80	[end of inflammation]
81	56 or 64 or 69 or 74 or 79
82	[END OF CONCEPT TWO, WHICH IS (selected) BIOMARKERS]
83	[CONCEPT THREE: BIRTH OUTCOMES FOR MOM AND BABY]
84	[begin preterm birth]
85	exp Premature Birth/
86	((premature or preterm) adj2 birth).tw,kf.
87	85 or 86
88	[end preterm birth]
89	[begin low birth weight]
90	exp Infant, Low Birth Weight/
91	low birth weight.tw,kf.
92	90 or 91
93	[end low birth weight]
94	[begin postpartum depression]
95	exp Depression, Postpartum/
96	postpartum depression.tw,kf.
97	95 or 96
98	[end postpartum depression]
99	[begin postpartum anxiety]
100	(exp Depression, Postpartum/or exp Postpartum Period/) and (exp Anxiety Disorders/or exp Anxiety/)
101	postpartum anxiety.ti,kf.
102	100 or 101
103	[end of postpartum anxiety]
104	[begin PTSD]
105	exp Stress Disorders, Post-Traumatic/
106	ptsd.ti,kf.
107	post traumatic stress.tw,kf.
108	105 or 106 or 107
109	[end of PTSD]
110	[begin severe maternal morbidity]
111	"severe maternal morbidity".af.
112	[end severe maternal morbidity]
113	[begin maternal mortality]
114	exp maternal mortality/or exp Obstetric Labor Complications/mo [Mortality]
115	maternal mortality.tw,kf.
116	114 or 115

117	[end of maternal mortality]
118	[begin infant mortality]
119	exp Infant Mortality/
120	infant mortality.tw,kf. or exp pregnancy outcome/
121	119 or 120
122	[end infant mortality]
123	87 or 92 or 97 or 102 or 108 or 111 or 116 or 121
124	[END OF CONCEPT THREE: BIRTH OUTCOMES FOR MOM & BABY]
125	[COMBINATION OF THREE CONCEPTS]
126	50 and 81 and 123
127	[NOW, just 2 concepts: experiences/exposures AND Biomarkers]
128	50 and 81
129	[NOW, just 2 concepts: Biomarkers and Outcomes]
130	81 and 123
131	[NOW, just 2 concepts: experiences/exposure AND outcomes]
132	50 and 123
133	126 or 128 or 130 or 132
134	133 not ((exp animal/or exp invertebrate/or animal experiment/or animal model/or exp plant/or exp fungus/) not exp human/)
135	limit 134 to english language
136	[CONCEPT FOUR: MATERNAL MENTAL HEALTH]
137	exp *Mothers/
138	exp *pregnancy/or exp *pregnancy complications/
139	exp *Anxiety/
140	exp *Stress Disorders, Post-Traumatic/
141	exp *depression, postpartum/
142	exp *Postpartum Period/and (exp *Anxiety Disorders/or exp *Anxiety/)
143	(mother\$ adj2 "mental health").tw,kf.
144	maternal mental health.tw,kf.
145	137 or 138
146	139 or 140 or 141 or 142 or 143 or 144
147	145 and 146
148	135 and 147

OVID Embase

1	[CONCEPT ONE: experiences/exposures/trauma/mistreatment/stress/disadvantage]
2	["obstetric violence" interpreted here as being caused by medical personnel]
3	exp maternal health services/
4	exp labor, obstetric/
5	exp delivery, obstetric/
6	3 or 4 or 5
7	exp violence/or violen\$.ti.
8	6 and 7
9	(obstetric* adj3 violen*).tw,kf.
10	8 or 9
11	[end of obstetric violence. this term is used more away from USA, and with disadvantaged and immigrants, etc.]
12	[begin respectful maternity care]
13	"respectful matern* care".tw,kf.
14	exp Maternal Health Services/or exp Delivery, Obstetric/or exp Parturition/
15	14 and (respectful\$ or polite\$ or considerate or dignified or gracious or thoughtful or attentive or mindful).ti,kf.
16	13 or 15
17	[end respectful. this cd be broadened by finding other words for respectful]
18	[perinatal stress is an "unfortunate" term because we don't know to whom it applies, mom or baby. the phrase is not used much. but I even saw "paternal perinatal stress" - and then: "stress" is "psychological" for the mom, and metabolic for the baby, says me; very squishy topic]
19	perinatal stress*.tw. or perinatal stress*.kf.
20	[end of perinatal stress until we define it better; get a brainstorm; etc.]
21	[traumatic birth, another phrase not used much. do we mean birth injuries, obstetric complications, or something more psychological?]
22	exp Delivery, Obstetric/or exp Obstetric Labor Complications/
23	22 and traumatic.ti.
24	(birth adj3 trauma\$).tw,kf.
25	23 or 24
26	[end of traumatic birth; this could, of course, be broadened, if "traumatic" were to get all fleshed-out]
27	[pregnancy mistreatment. ouch, another!]
28	((mistreat* or cruel\$ or oppression or harassment or exploitation or neglect* or discrimination or brutality or bully* or inequity or malpractice) adj3 pregnan*).tw,kf.
29	pregnancy mistreatment.af.
30	[right. "pregnancy mistreatment" is not a thing (in the published medical literature sense of the word)]
31	[end of pregnancy mistreatment]
32	[pregnancy marginalization; it's "not a thing" as a phrase; see next set. Of course, as a concept, it's searchable...]
33	(marginaliz* adj3 pregnan*).tw,kf.
34	exp maternal health services/or exp pregnant women/or exp prenatal care/
35	exp Social Marginalization/or marginali*.ti.
36	34 and 35
37	33 or 36

38	[end of marginalization. of course this idea of "marginalizing" could be broadened if defined in more medical-scientific terms...]
39	[pregnancy & socioeconomic disadvantage or socio... deprivation]
40	[... and we'll add in "childbirth" (aka parturition)]
41	exp Socioeconomic Factors/
42	(socioeconomic adj2 (factor* or disadvantage* or depriv*)).tw,kf.
43	41 or 42
44	exp pregnancy/
45	exp parturition/
46	(pregnancy or childbirth).tw,kf.
47	44 or 45 or 46
48	43 and 47
49	[end of pregnancy (or childbirth) and socioeconomic factors]
50	10 or 16 or 19 or 25 or 37 or 48
51	[END OF CONCEPT ONE, WHICH IS EXPERIENCES & EXPOSURES]
52	[CONCEPT TWO -- BIOMARKERS]
53	[begin epigenetic age]
54	(exp Epigenesis, Genetic/or exp epigenomics/) and age.ti.
55	epigenetic age.tw,kf.
56	54 or 55
57	[end of epigenetic age]
58	[begin weathering & allostatic load]
59	weathering.ti.
60	"wear and tear".tw,kf.
61	"deteriorat* health".tw,kf.
62	(exp allostasis/and load.ti.) or "allostatic load".tw,kf.
63	59 or 60 or 61 or 62
64	63 and (exp *pregnancy/or exp *pregnancy complications/or exp *pregnancy outcome/)
65	[end weathering & allostatic load]
66	[begin hair cortisol]
67	(hair adj5 cortisol).af.
68	exp *Hydrocortisone/and exp *Hair/
69	67 or 68
70	[end hair cortisol]
71	[begin microbiome]
72	exp Microbiota/
73	(microbiota or microbiome).tw,kf.
74	72 or 73
75	[end microbiome]
76	[begin inflammation]
77	exp Inflammation Mediators/or exp Inflammation/
78	inflammat*.ti. or exp allostasis/or exp dna methylation/or exp epigenesis, genetic/or exp epigenomics/or exp hematopoietic stem cells/or exp telomere shortening/or exp gene-environment interaction/or intergenerational transmission.tw,kf.

79	77 or 78
80	[end of inflammation]
81	56 or 64 or 69 or 74 or 79
82	[END OF CONCEPT TWO, WHICH IS (selected) BIOMARKERS]
83	[CONCEPT THREE: BIRTH OUTCOMES FOR MOM AND BABY]
84	[begin preterm birth]
85	exp Premature Birth/
86	((premature or preterm) adj2 birth).tw,kf.
87	85 or 86
88	[end preterm birth]
89	[begin low birth weight]
90	exp Infant, Low Birth Weight/
91	low birth weight.tw,kf.
92	90 or 91
93	[end low birth weight]
94	[begin postpartum depression]
95	exp Depression, Postpartum/
96	postpartum depression.tw,kf.
97	95 or 96
98	[end postpartum depression]
99	[begin postpartum anxiety]
100	(exp Depression, Postpartum/or exp Postpartum Period/) and (exp Anxiety Disorders/or exp Anxiety/)
101	postpartum anxiety.ti,kf.
102	100 or 101
103	[end of postpartum anxiety]
104	[begin PTSD]
105	exp Stress Disorders, Post-Traumatic/
106	ptsd.ti,kf.
107	post traumatic stress.tw,kf.
108	105 or 106 or 107
109	[end of PTSD]
110	[begin severe maternal morbidity]
111	"severe maternal morbidity".af.
112	[end severe maternal morbidity]
113	[begin maternal mortality]
114	exp maternal mortality/
115	maternal mortality.tw,kf.
116	114 or 115
117	[end of maternal mortality]
118	[begin infant mortality]
119	exp Infant Mortality/
120	infant mortality.tw,kf. or exp pregnancy outcome/

121	119 or 120
122	[end infant mortality]
123	87 or 92 or 97 or 102 or 108 or 111 or 116 or 121
124	[END OF CONCEPT THREE: BIRTH OUTCOMES FOR MOM & BABY]
125	[COMBINATION OF THREE CONCEPTS]
126	50 and 81 and 123
127	[NOW, just 2 concepts: experiences/exposures AND Biomarkers]
128	50 and 81
129	[NOW, just 2 concepts: Biomarkers and Outcomes]
130	81 and 123
131	[NOW, just 2 concepts: experiences/exposure AND outcomes]
132	50 and 123
133	126 or 128 or 130 or 132
134	133 not ((exp animal/or exp invertebrate/or animal experiment/or animal model/or exp plant/or exp fungus/) not exp human/)
135	limit 134 to english language
136	[CONCEPT FOUR: MATERNAL MENTAL HEALTH]
137	exp *Mothers/
138	exp *pregnancy/or exp *pregnancy complications/
139	exp *Anxiety/
140	exp *Stress Disorders, Post-Traumatic/
141	exp *depression, postpartum/
142	exp *Postpartum Period/and (exp *Anxiety Disorders/or exp *Anxiety/)
143	(mother\$ adj2 "mental health").tw,kf.
144	maternal mental health.tw,kf.
145	137 or 138
146	139 or 140 or 141 or 142 or 143 or 144
147	145 and 146
148	135 and 147