

Supplementary File S2

S2(A). Certainty analysis of the evidence from all meta-analyses performed in this study.

Assessment	Certainty assessment							№ of patients		Effect		Certainty	Importance
	№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	With depression	Without depression	Relative (95% CI)	Absolute (95% CI)		
Post-natal depression - Vitamin D measured in the postnatal	4	Non-RCT	Serious ^a	Not Serious	Not Serious	Not Serious	None	531	444	-	MD 2.36 ng/ml lower (4.59 lower to 0.14 lower)	⊕○○○ Very low	CRITICAL
Antenatal depression - Vitamin D measured during pregnancy	5	Non-RCT	Not Serious	Very Serious ^b	Not Serious	Serious ^c	None	1510	4135	-	MD 4.63 ng/ml lower (8.88 lower to 0.34 lower)	⊕○○○ Very low	CRITICAL

CI: confidence interval; MD: mean difference
a. Two studies presented a moderate/fair risk of bias (weighted as 67.1% for the whole analysis). Two other studies showed no risk of bias.
b. Very high heterogeneity was detected (I²=91%).
c. A very high 95% confidence interval was detected.

Supplementary File 2

S2(B). Certainty analysis of the evidence from all meta-analyses performed in this study by status of Vitamin D (With deficient/insufficient vs. Without deficient/insufficient).

Assessment Outcome / exposure	Certainty assessment							№ of patients		Effect		Certainty	Importance
	№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	With deficient / insufficient Vitamin D	Without deficient / insufficient Vitamin D	Relative (95% CI)	Absolute (95% CI)		
Postnatal depression - Vitamin D measured postnatal (Vitamin D <30 ng/ml) – Crude analysis	3	Non- RCT	Serious ^a	Serious ^b	Not Serious	Very Serious ^c	None	336/622 (54.0%)	85/223 (38.1%)	OR 1.70 (0.76 to 3.82)	130 more per 1.000 (from 62 fewer to 321 more)	⊕○○○ Very low	CRITICAL
Postnatal depression - Vitamin D measured postnatal (vitamin D <20 ng/ml) - Crude analysis	3	Non- RCT	Serious ^d	Serious ^e	Not Serious	Serious ^f	None	185/347 (53.3%)	236/508 (46.5%)	OR 1.60 (0.63 to 4.08)	117 more per 1.000 (from 111 fewer to 315 more)	⊕○○○ Very low	CRITICAL
Postnatal depression - Vitamin D measured postnatal (Vitamin D <20 ng/ml) - Crude analysis	2	Non- RCT	Very Serious ^g	Not Serious	Not Serious	Not Serious	Strong association all plausible residual confounding would reduce			OR 2.13 (1.16 to 3.90)	2 fewer per 1.000 (from 4 fewer to 1 fewer)	⊕⊕○○ Low	CRITICAL

ng/ml) - Adjusted analysis							the demonstrated effect.						
Postnatal depression - Vitamin D measured during pregnacy (Vitamin D <30 ng/ml)	2	Non- RCT	Very Serious _g	Not Serious	Not Serious	Very Serious ^h	None	44/260 (16.9%)	8/26 (30.8%)	OR 0.48 (0.20 to 1.17)	132 fewer per 1.000 (from 226 fewer to 34 more)	⊕○○○ Very low	CRITICAL
Depression during pregnancy - Vitamin D measured during pregnacy (Vitamin D <30 ng/ml)	3	Non- RCT	Not Serious	Not Serious	Not Serious	Very Serious ⁱ	None	283/1112 (25.4%)	51/312 (16.3%)	OR 1.51 (0.98 to 2.30)	64 more per 1.000 (from 3 fewer to 147 more)	⊕○○○ Very low	CRITICAL
Depression during pregnancy - Vitamin D measured during pregnacy (Vitamin D <20 ng/ml)	4	Non- RCT	Serious ^j	Very Serious ^k	Not Serious	Very Serious ^l	None	225/859 (26.2%)	129/718 (18.0%)	OR 2.16 (0.74 to 6.37)	141 more per 1.000 (from 40 fewer to 403 more)	⊕○○○ Very low	CRITICAL

Legend: **CI**: confidence interval; **OR**: odds ratio; **non-RCT**: non-randomized clinical trials
a. Two studies presented moderate/fair risk of bias (weighted as 48.8% for the whole analysis).

b. Heterogeneity was high ($I^2=60\%$).

c. No statistically significant association between groups. The outcome was detected in only 421 women.

-
- d. Two studies presented moderate/fair risk of bias (weighted as 53.8% for the whole analysis).
 - e. Heterogeneity was high ($I^2=75\%$).
 - f. No statistically significant association between groups.
 - g. All studies included in this analysis presented risk of bias.
 - h. No statistically significant association between groups. The outcome was detected in only 52 women.
 - i. No statistically significant association between groups. The outcome was detected in only 332 women.
 - j. One study presented moderate/fair risk of bias (weighted as 10.4% for the whole analysis).
 - k. Heterogeneity was very high ($I^2=78\%$).
 - l. No statistically significant association between groups. The outcome was detected in only 354 women.