Table. S1 Searching strategies for PubMed, Cochrane library, Google Scholar and ScienceDirect
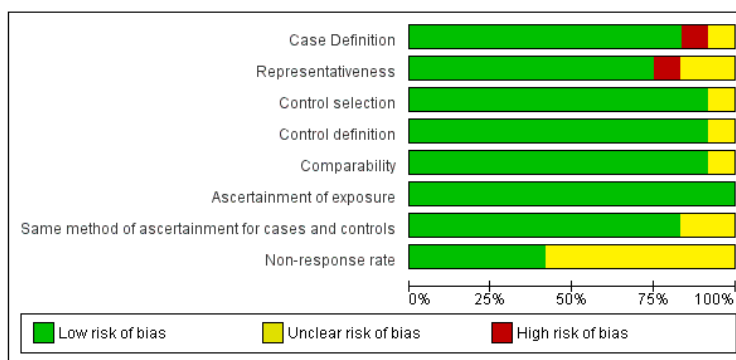
PubMed	Search strategy
#1	Pregnant women [MeSH]
#2	Gestation [MeSH]
#3	#1 OR #2
#4	Selenium [MeSH]
#5	Selenate
#6	Se
#7	#4 OR #5 OR #6
#8	Pregnancy-Induced Diabetes [MeSH]
#9	Gestational Diabetes [MeSH]
#10	Gestational Diabetes Mellitus [MeSH]
#11	Gestational hyperglycaemia
#12	GDM
#13	#8 OR #9 OR #10 OR #11 OR #12
#14	Normal pregnancy
#15	Healthy pregnant
#16	Normoglycemic
#17	#14 OR #15 OR #16
#18	#3 AND #7 AND #13 AND #17
Cochrane library	**Search strategy**
#1	Pregnancy-Induced Diabetes [ti, ab, kw]
#2	Gestational Diabetes [ti, ab, kw]
#3	Gestational Diabetes Mellitus [ti, ab, kw]
#4	Gestational hyperglycaemia [ti, ab, kw]
#5	GDM [ti, ab, kw]
#6	#1 OR #2 OR #3 OR #4 OR #5
#7	Pregnant women [ti, ab, kw]
#8	Gestation [ti, ab, kw]
#9	#7 OR #8
#10	Selenium [ti, ab, kw]
#11	Selenate [ti, ab, kw]
#12	Se [ti, ab, kw]
#13	#10 OR #11 OR #12
#14	Normal pregnant [ti, ab, kw]
#15	Healthy pregnant[ti, ab, kw]
#16	Normoglycemic [ti, ab, kw]
#17	#14 OR #15 OR #16
#18	#6 AND #9 AND #13 AND #17
Google Scholar	
#1	allintitle: selenium "Gestational Diabetes Mellitus" OR "GDM" OR "Gestational hyperglycaemia" OR "Pregnancy-Induced Diabetes"
ScienceDirect	
#1	(("Gestational Diabetes Mellitus" OR "GDM" OR "Gestational hyperglycaemia" OR "Pregnancy-Induced Diabetes") AND "selenium")

Table S2. The Modified Newcastle-Ottawa Scale rating for included studies: (*, OR *** means criteria fulfilled/maximum score =9)**

Studies	Selection	Comparability	Outcome	Total number of stars
Al-Saleh et al., 2004 [22]	**	***	**	7
Al-Saleh et al., 2007 [24]	**	***	**	7
Bo et al., 2005 [23]	***	***	**	8
Hamdan et al., 2014 [25]	****	***	**	9
Kilinc et al., 2008 [21]	**	***	**	7
Lewandowska et al., 2020 [31]	***	***	**	8
Liu et al., 2020 [29]	***	***	**	8
Molnar et al., 2008 [26]	****	***	**	9
Moshfeghy et al., 2020 [41]	****	***	**	9
Onat et al., 2020 [42]	****	***	**	9
Tan et al., 2001a [20]	**	***	**	7
Tan et al., 2001b [20]	**	***	**	7
Zhu et al., 2021 [38]	****	***	**	9

Table S3. Sensitivity analysis of the meta-analysis

Study omitted	SMD	95% CI	*P*-value	I^2
None	**-0.657**	**[-1.03; -0.279]**	**<0.0001**	**93.6%**
Al-Saleh *et al.,* 2004 [22]	-0.499	[-0.836; -0.162]	0.003	92.3%
Al-Saleh *et al.,* 2007 [24]	-0.654	[-1.047; -0.262]	0.001	94.1%
Bo *et al.,* 2005 [23]	-0.722	[-1.161; -0.284]	0.001	94.1%
Hamdan *et al.,* 2014 [25]	-0.705	[-1.107; -0.303]	<0.001	94.1%
Kilinc *et al.,* 2008 [21]	-0.547	[-0.912; -0.181]	0.003	92.7%
Lewandowska *et al.,* 2020 [31]	-0.751	[-1.166; -0.336]	<0.001	93.4%
Liu *et al.,* 2020 [29]	-0.749	[-1.157; -0.341]	<0.001	93.6%
Molnar *et al.,* 2008 [26]	-0.782	[-1.163; -0.401]	<0.001	93.6%
Moshfeghy *et al.,* 2020 [41]	-0.503	[-0.858; -0.148]	0.005	92.4%
Onat *et al.,* 2020 [42]	-0.647	[-1.048; -0.246]	0.001	93.9%
Tan *et al.,* 2001*a* [20]	-0.643	[-1.042; -0.244]	0.001	93.9%
Tan *et al.,* 2001*b* [20]	-0.665	[-1.071; -0.259]	0.001	94.0%
Zhu *et al.,* 2021 [38]	-0.746	[-1.206; -0.286]	0.001	94.1%

Figure S1: Cochrane collaboration tool for risk of bias assessment[20–26,29,31,38,43–44].

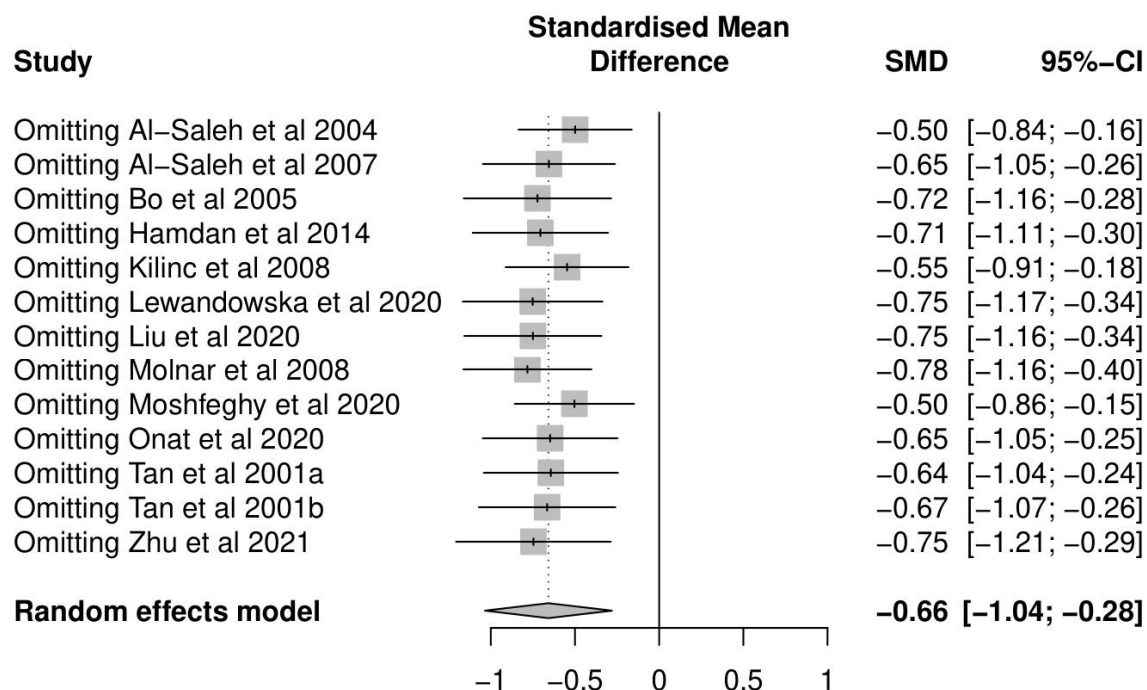| Study	Standardised Mean Difference	SMD	95%–CI
Omitting Al–Saleh et al 2004		−0.50	[−0.84; −0.16]
Omitting Al–Saleh et al 2007		−0.65	[−1.05; −0.26]
Omitting Bo et al 2005		−0.72	[−1.16; −0.28]
Omitting Hamdan et al 2014		−0.71	[−1.11; −0.30]
Omitting Kilinc et al 2008		−0.55	[−0.91; −0.18]
Omitting Lewandowska et al 2020		−0.75	[−1.17; −0.34]
Omitting Liu et al 2020		−0.75	[−1.16; −0.34]
Omitting Molnar et al 2008		−0.78	[−1.16; −0.40]
Omitting Moshfeghy et al 2020		−0.50	[−0.86; −0.15]
Omitting Onat et al 2020		−0.65	[−1.05; −0.25]
Omitting Tan et al 2001a		−0.64	[−1.04; −0.24]
Omitting Tan et al 2001b		−0.67	[−1.07; −0.26]
Omitting Zhu et al 2021		−0.75	[−1.21; −0.29]
Random effects model		**−0.66**	**[−1.04; −0.28]**

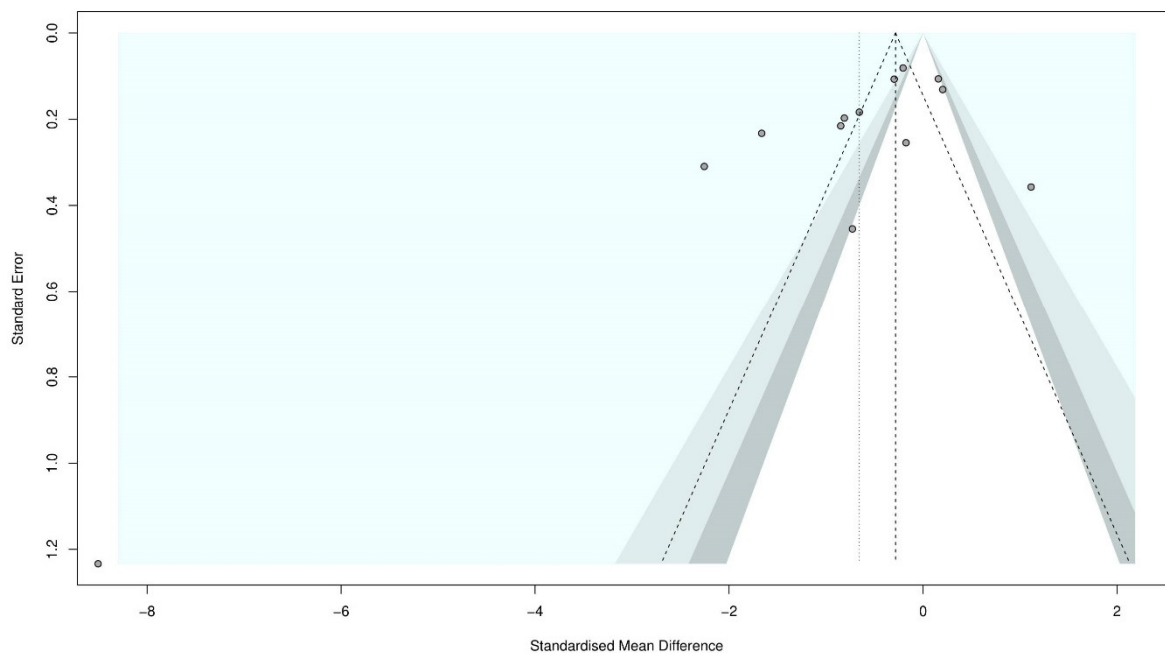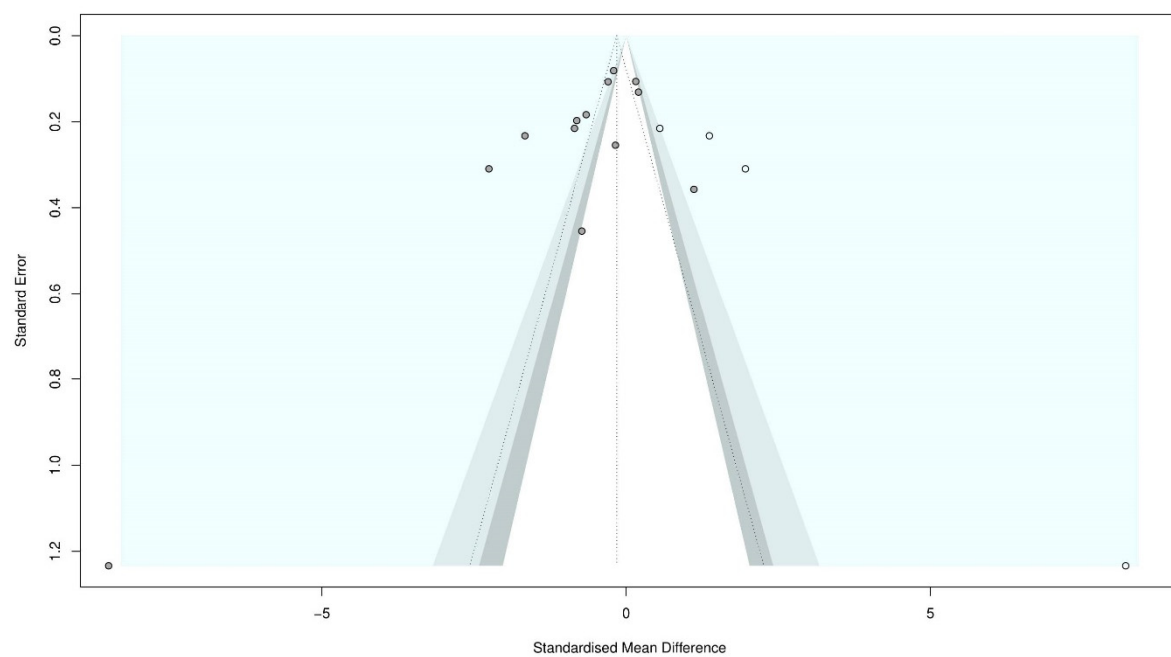Figure S2: Sensitivity analysis[20–26,29,31,38,43–44].

Figure S3: Funnel plot of the reporting bias.

Figure S4: Trim-and-fill graph.