

**Supplementary Table 1:** Search strategy for each database

Database	Search Strategy
<b>PubMed</b>	("antenatal education"[Title/Abstract] OR "prenatal education"[Title/Abstract] OR "pregnancy education"[Title/Abstract] OR "maternal education"[Title/Abstract] OR "childbirth preparation course"[Title/Abstract] OR "childbirth education"[Title/Abstract] OR "antenatal training session"[Title/Abstract] OR "antenatal health education services"[Title/Abstract] OR "educational intervention"[Title/Abstract] OR "birth preparation course"[Title/Abstract] OR "educational booklet"[Title/Abstract] OR "Self efficacy"[Title/Abstract]) AND (("maternal health"[Title/Abstract] OR "maternal outcomes"[Title/Abstract] OR "maternal wellbeing"[Title/Abstract] OR "maternal mortality"[Title/Abstract] OR "pregnancy complications"[Title/Abstract]) OR ("neonatal health"[Title/Abstract] OR "neonatal outcomes"[Title/Abstract] OR "neonatal morbidity"[Title/Abstract] OR "neonatal mortality"[Title/Abstract] OR "birth outcomes"[Title/Abstract]))
<b>Scopus</b>	TITLE-ABS-KEY("antenatal education" OR "prenatal education" OR "pregnancy education" OR "maternal education" OR "childbirth preparation course" OR "childbirth education" OR "antenatal training session" OR "antenatal health education services" OR "educational intervention" OR "birth preparation course" OR "educational booklet" OR "Self efficacy") AND (TITLE-ABS-KEY("maternal health" OR "maternal outcomes" OR "maternal wellbeing" OR "maternal mortality" OR "pregnancy complications") OR TITLE-ABS-KEY("neonatal health" OR "neonatal outcomes" OR "neonatal morbidity" OR "neonatal mortality" OR "birth outcomes"))
<b>Web of Science (WoS)</b>	TS=("antenatal education" OR "prenatal education" OR "pregnancy education" OR "maternal education" OR "childbirth preparation course" OR "childbirth education" OR "antenatal training session" OR "antenatal health education services" OR "educational intervention" OR "birth preparation course" OR "educational booklet" OR "Self efficacy") AND ((TS=("maternal health" OR "maternal outcomes" OR "maternal wellbeing" OR "maternal mortality" OR "pregnancy complications")) OR (TS=("neonatal health" OR "neonatal outcomes" OR "neonatal morbidity" OR "neonatal mortality" OR "birth outcomes")))
<b>Cochrane Library</b>	("antenatal education" OR "prenatal education" OR "pregnancy education" OR "maternal education" OR "childbirth preparation course" OR "childbirth education" OR "antenatal training session" OR "antenatal health education services" OR "educational intervention" OR "birth preparation course" OR "educational booklet" OR "Self efficacy") AND (("maternal health" OR "maternal outcomes" OR "maternal wellbeing" OR "maternal mortality" OR "pregnancy complications") OR ("neonatal health" OR "neonatal outcomes" OR "neonatal morbidity" OR "neonatal mortality" OR "birth outcomes"))

**Supplementary Table 2: GRADE assessment**

Certainty assessment							№ of patients		Effect		Certainty
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Efficacy	placebo	Relative (95% CI)	Absolute (95% CI)	

**Self-efficacy on childbirth**

12	randomised trials	not serious	not serious	not serious	not serious	publication bias strongly suspected	573	543	-	SMD <b>2 higher</b> (1.06 higher to 2.95 higher)	⊕⊕⊕○ Moderate
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**Fear of childbirth**

12	randomised trials	not serious	not serious	not serious	not serious	publication bias strongly suspected	430	449	-	SMD <b>1.26 lower</b> (1.79 lower to 0.74 lower)	⊕⊕⊕○ Moderate
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**Frequency of vaginal delivery**

Certainty assessment							№ of patients		Effect		Certainty
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Efficacy	placebo	Relative (95% CI)	Absolute (95% CI)	
17	randomised trials	not serious	not serious	not serious	not serious	publication bias strongly suspected	6040/9037 (66.8%)	5917/9544 (62.0%)	<b>RR 1.06</b> (1.03 to 1.10)	<b>37 more per 1,000</b> (from 19 more to 62 more)	⊕⊕⊕○ Moderate

**Frequency of CS delivery**

18	randomised trials	not serious	not serious	not serious	not serious	publication bias strongly suspected	3024/9187 (32.9%)	3696/9688 (38.2%)	<b>RR 0.80</b> (0.70 to 0.92)	<b>76 fewer per 1,000</b> (from 114 fewer to 31 fewer)	⊕⊕⊕○ Moderate
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**Frequency of episiotomy**

6	randomised trials	not serious	not serious	not serious	serious	none	189/449 (42.1%)	182/643 (28.3%)	<b>RR 1.16</b> (1.00 to 1.34)	<b>45 more per 1,000</b> (from 0 fewer to 96 more)	⊕⊕⊕○ Moderate
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Certainty assessment							№ of patients		Effect		Certainty
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Efficacy	placebo	Relative (95% CI)	Absolute (95% CI)	

**Apgar score - 1 Minute**

3	randomised trials	serious	not serious	not serious	serious	none	240	244	-	MD <b>0.05 higher</b> (0.04 lower to 0.14 higher)	⊕⊕○○ Low
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**Apgar score - 5 Minute**

3	randomised trials	serious	not serious	not serious	serious	none	240	244	-	MD <b>0.03 higher</b> (0.03 lower to 0.1 higher)	⊕⊕○○ Low
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**Infant's birth weight (g)**

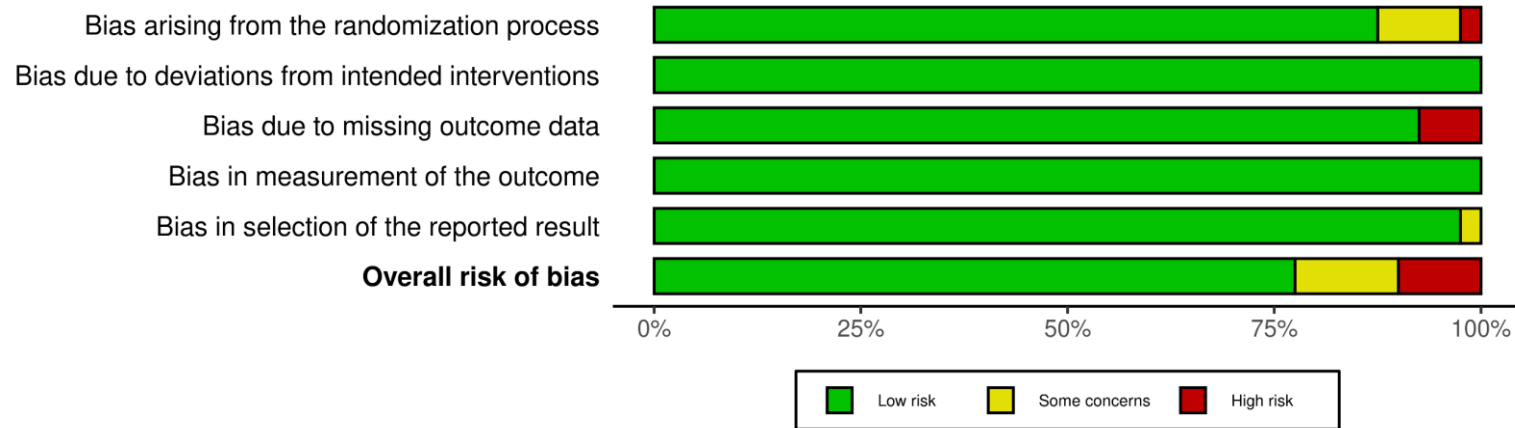
Certainty assessment							№ of patients		Effect		Certainty
№ of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Efficacy	placebo	Relative (95% CI)	Absolute (95% CI)	
5	randomised trials	not serious	not serious	not serious	serious	none	907	894	-	MD <b>36.12 lower</b> (99.16 lower to 26.92 higher)	⊕⊕⊕○ Moderate

**Incidence of low birth weight (< 2,500)**

4	randomised trials	not serious	not serious	not serious	serious	none	236/7497 (3.1%)	272/8028 (3.4%)	<b>RR 0.98</b> (0.83 to 1.17)	<b>1 fewer per 1,000</b> (from 6 fewer to 6 more)	⊕⊕⊕○ Moderate
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CI: confidence interval; MD: mean difference; RR: risk ratio; SMD: standardised mean difference

**Supplementary Figure 1:** Risk of Bias Summary for Included Studies of the systematic review for the role of antenatal education on maternal self-efficacy, fear of childbirth, and birth outcomes



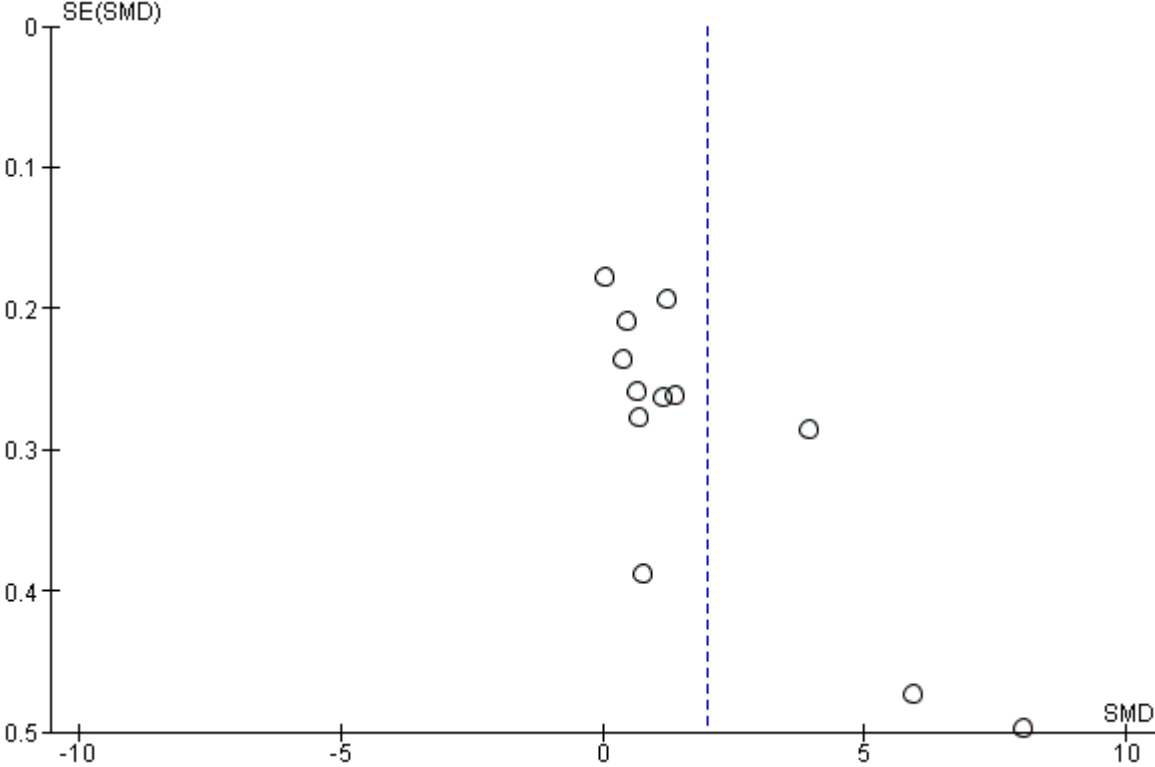
**Supplementary Figure 2:** Risk of Bias by Domain for Included Studies of the systematic review for the role of antenatal education on maternal self-efficacy, fear of childbirth, and birth outcomes

Study	Risk of bias domains					Overall
	D1	D2	D3	D4	D5	
Aba et al. 2017	+	+	+	+	-	+
Abbasi et al. 2017	+	+	+	+	+	+
Abuidhail et al. 2019	+	+	+	+	+	+
Akinwaare et al. 2023	+	+	+	+	+	+
Aksoy Derya et al. 2021	+	+	+	+	+	+
AlSomali et al. 2019	+	+	+	+	+	+
Aslantekin Özpoban et al. 2022	+	+	×	+	+	×
Bilgin et al. 2019	+	+	+	+	+	+
Brixval et al. 2016	+	+	+	+	+	+
Calpbinici et al. 2022	+	+	+	+	+	+
Çankaya et al. 2020	+	+	+	+	+	+
Dai et al. 2021	+	+	×	+	+	×
Desmawati et al. 2019	+	+	+	+	+	+
Duncan et al. 2017	+	+	+	+	+	+
Escott et al. 2005	-	+	+	+	+	-
Firouzan et al. 2020	+	+	+	+	+	+
Franzon et al. 2019	+	+	+	+	+	+
Gandomi et al. 2022	-	+	+	+	+	-
Gao et al. 2012	+	+	+	+	+	+
Hatamieh et al. 2019	+	+	+	+	+	+
Hatamieh et al. 2023	+	+	+	+	+	+
Ip et al. 2009	+	+	×	+	+	×
Khademioore et al. 2023	+	+	+	+	+	+
Kronborg et al. 2012	+	+	+	+	+	+
Madhavanprabhakaran et al. 2017	+	+	+	+	+	+
Maimburg et al. 2010	+	+	+	+	+	+
Maimburg et al. 2013	+	+	+	+	+	+
Mehdzadeh et al. 2005	+	+	+	+	+	+
Mohaghegh et al. 2023	+	+	+	+	+	+
Mullany et al. 2006	+	+	+	+	+	+
Noel-Weiss et al. 2006	+	+	+	+	+	+
Öztürk et al. 2022	-	+	+	+	+	-
Rahimparvar et al. 2012	+	+	+	+	+	+
Sabri Piro et al. 2020	+	+	+	+	+	+
Serpekuş et al. 2016	×	+	+	+	+	×
Turkstra et al. 2017	+	+	+	+	+	+
Uludağ et al. 2022	+	+	+	+	+	+
Xie et al. 2018	-	+	+	+	+	-
Yesildag et al. 2024	+	+	+	+	+	+
Zafman et al. 2023	+	+	+	+	+	+

Domains:  
D1: Bias arising from the randomization process.  
D2: Bias due to deviations from intended intervention.  
D3: Bias due to missing outcome data.  
D4: Bias in measurement of the outcome.  
D5: Bias in selection of the reported result.

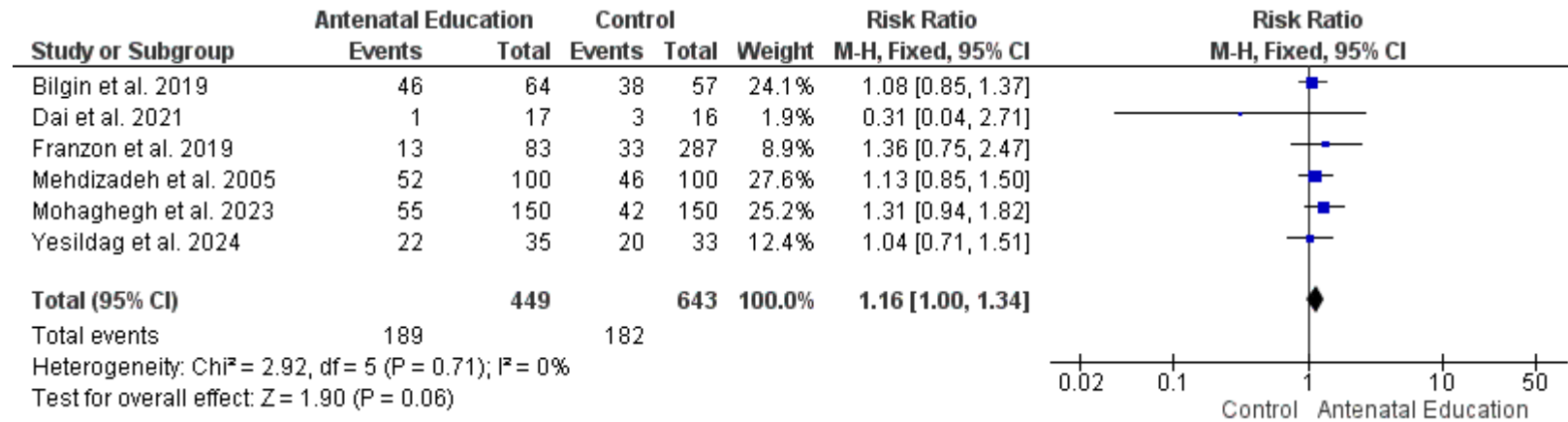
Judgement  
High  
Some concerns  
Low

**Supplementary Figure 3:** Funnel Plot for Publication Bias in Childbirth Self-Efficacy Outcomes of the systematic review for the role of antenatal education on maternal self-efficacy, fear of childbirth, and birth outcomes

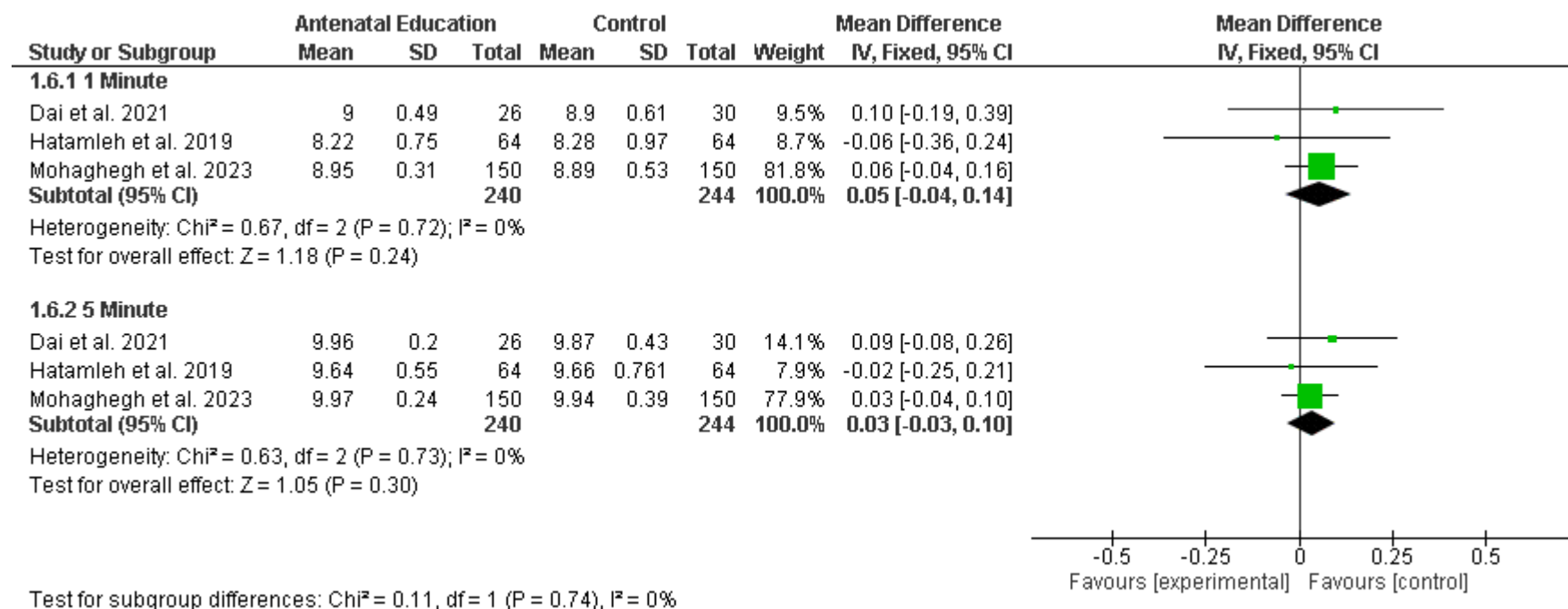




**Supplementary Figure 5:** Forest Plot of the Effect of Antenatal Education on Rate of Episiotomy of the systematic review for the role of antenatal education on maternal self-efficacy, fear of childbirth, and birth outcomes

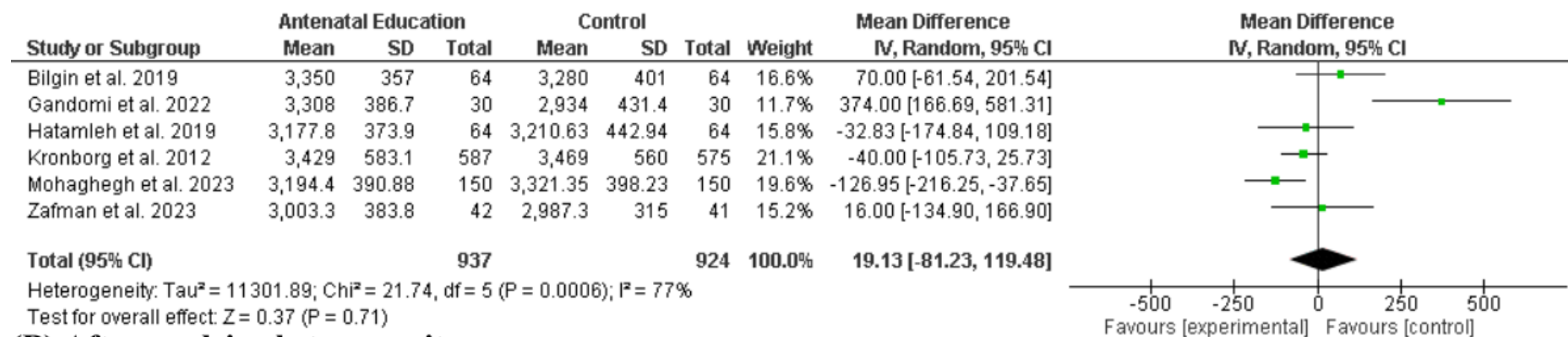


**Supplementary Figure 6:** Forest Plot of the Effect of Antenatal Education on Neonatal Apgar Score at 1 and 5 Minutes of the systematic review for the role of antenatal education on maternal self-efficacy, fear of childbirth, and birth outcomes

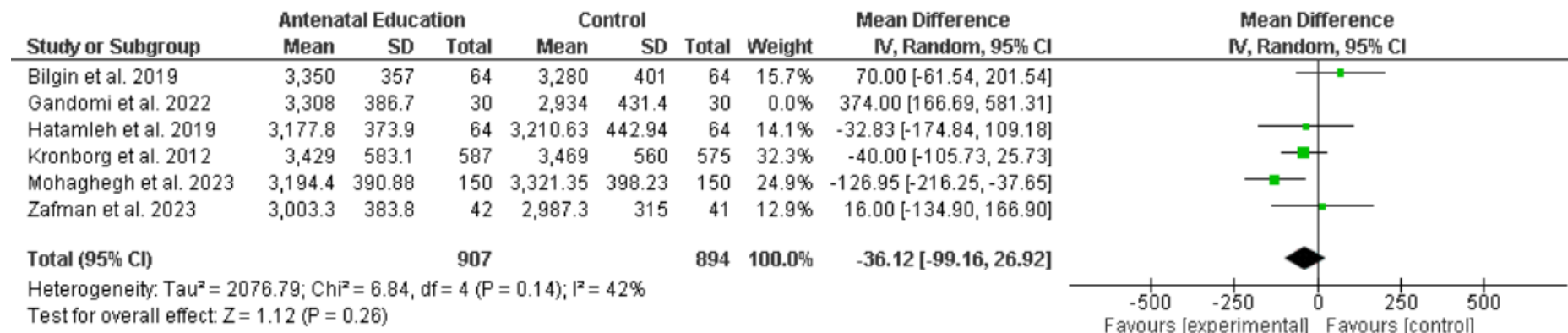


**Supplementary Figure 7:** Forest Plot of the Effect of Antenatal Education on Infant Birth Weight of the systematic review for the role of antenatal education on maternal self-efficacy, fear of childbirth, and birth outcomes

**(A) Before resolving heterogeneity**



**(B) After resolving heterogeneity**



**Supplementary Figure 8:** Forest Plot of the Effect of Antenatal Education on Incidence of Low Birth Weight of the systematic review for the role of antenatal education on maternal self-efficacy, fear of childbirth, and birth outcomes

