

Ginger for pregnancy: A GRADE-assessed systematic review and meta-analysis of clinical trials



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BACKGROUND & OBECTIVE

Ginger (*Zingiber officinale*) is a flowering plant; its root is widely used as a food spice and is believed to have many therapeutic effects. Our objective is to evaluate the therapeutic benefits of ginger in alleviating symptoms of nausea and vomiting of pregnancy, reducing postpartum pain and improving glycemic control in gestational diabetes mellitus (GDM).

METHODOLOGY

This review was conducted according to the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines. PubMed, Scopus, Cochrane Library and Google Scholar were searched for clinical trials evaluating the efficacy of ginger in nausea and vomiting of pregnancy, postpartum pain and GDM. Nausea score, vomiting score, combined nausea and vomiting score, fasting blood sugar, blood sugar 2 hours post-prandial, insulin reduction and pain score were used in meta-analysis and represented by forest plots. Outcomes not suitable for meta-analysis were qualitatively analyzed and summarized.

CONCLUSION

Results are consistent with the possibility of ginger being used as a mono-therapy in nausea and vomiting of pregnancy. There is potential for the use of ginger as an adjuvant therapy for better glycemic control in patients with GDM. Finally, data did not show enough evidence for ginger to be used for postpartum pain reduction.

RESULTS

At the end of the search 25 clinical trials made it through screening, 17 of which were included in the meta-analysis. Overall, 1889 patients were included in studies evaluating ginger use for nausea and vomiting of pregnancy, 356 patients included in postpartum pain studies and 146 patients in GDM studies.

Ginger was superior than placebo in improving nausea score (SMD = -0.68, 95% CI [-0.89, -0.47], $p < 0.00001$), vomiting score (SMD = -0.70, 95% CI [-0.89, -0.50], $p < 0.00001$) and their combined score (SMD = -0.99, 95% CI [-1.28, -0.71], $p < 0.00001$).

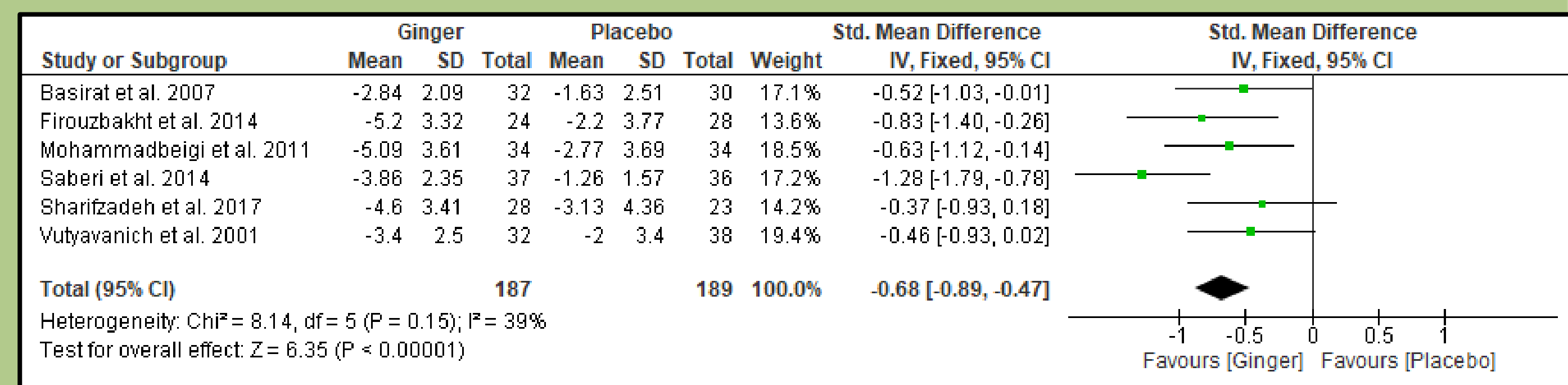


Figure 1: Meta-analysis of nausea score (Ginger vs Placebo).

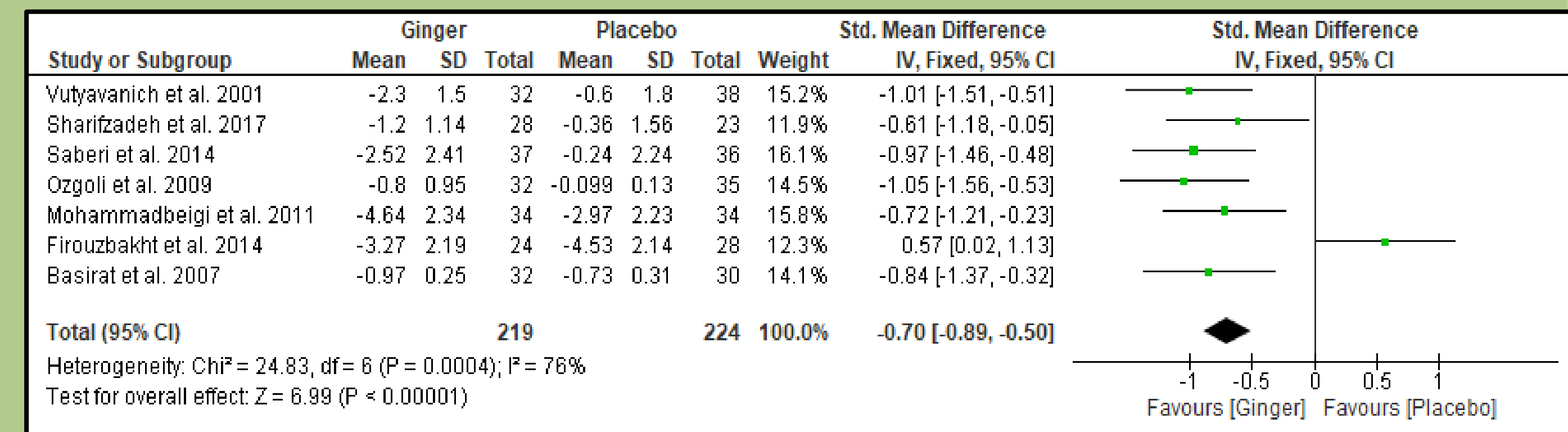


Figure 2: Meta-analysis of vomiting score (Ginger vs Placebo).

There was no statistically significant difference in the mean reduction of pain score when ginger was compared to placebo ($p = 0.49$), and when it was compared to analgesics ($p = 0.53$).

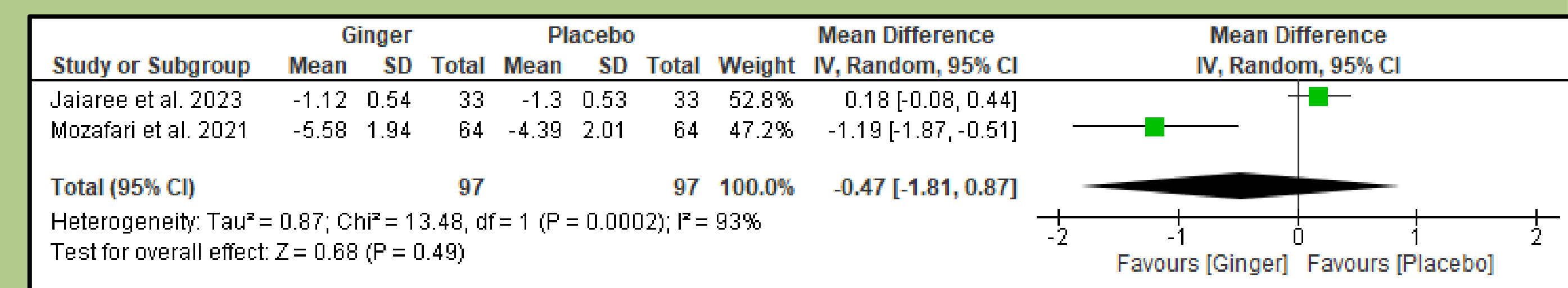


Figure 3: Meta-analysis of postpartum pain score (Ginger vs Placebo).

There was no statistically significant difference between ginger and vitamin B6 in terms of reduction of nausea score ($p = 0.65$), vomiting score ($p = 0.86$) and their combined score ($p = 0.38$).

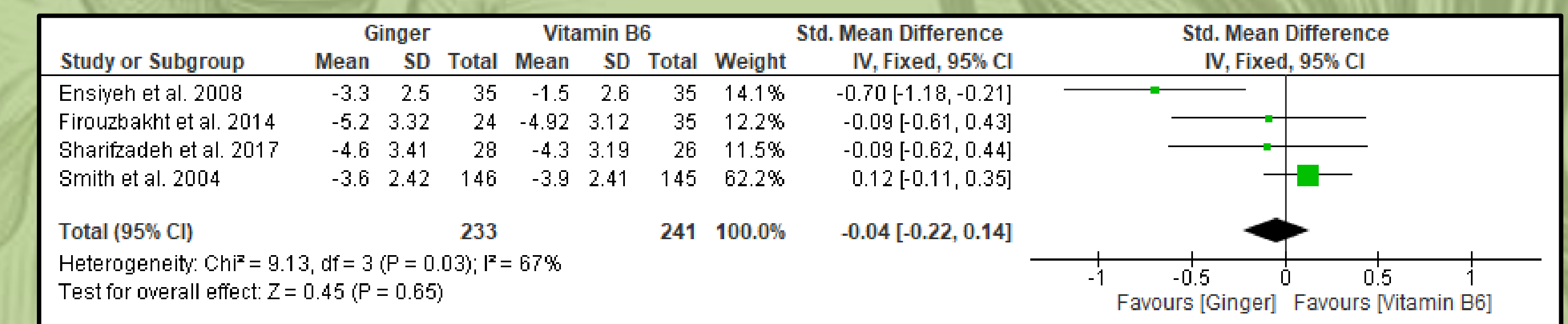


Figure 4: Meta-analysis of nausea score (Ginger vs Vitamin B6).

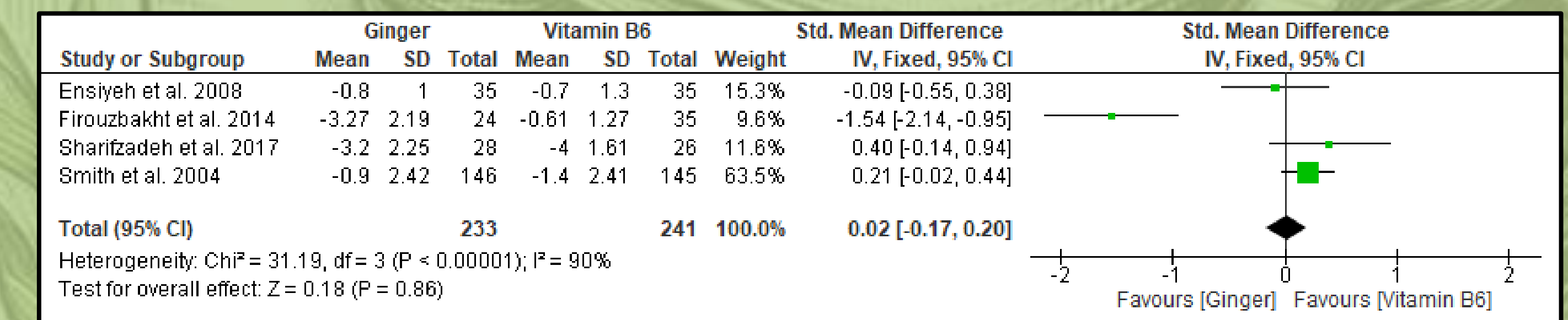


Figure 5: Meta-analysis of vomiting score (Ginger vs Vitamin B6).

The differences in reduction of mean fasting blood sugar level ($p = 0.89$) and mean blood sugar level 2 hours post-prandial ($p = 0.16$) were not statistically significant when comparing ginger to placebo, but ginger had higher insulin reduction (SMD = -0.33, 95% CI [-0.65, 0.00], $p = 0.05$).

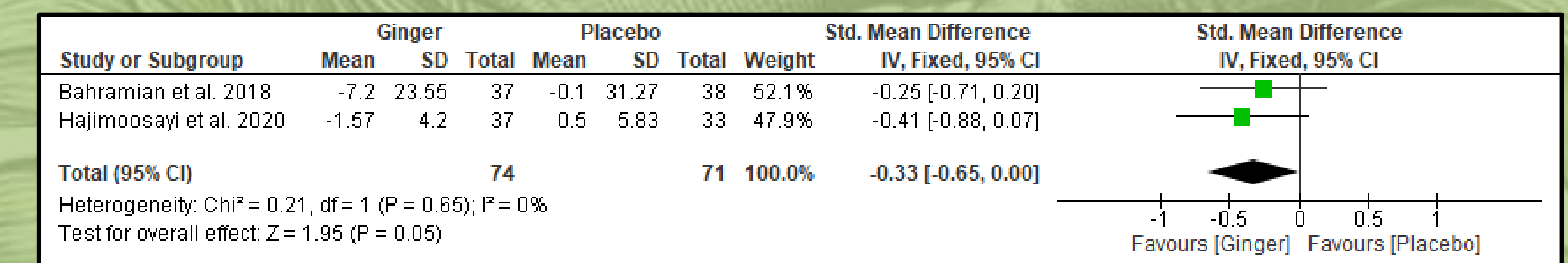


Figure 6: Meta-analysis of reduction in Insulin (Ginger vs Placebo).