



INTRODUCTION

Today, there is an increasing prevalence of migrant women across the world, particularly in Europe, which poses significant challenges to healthcare systems. The aim of this systematic review and meta-analysis was to investigate the risk of gestational diabetes among immigrant women compared to women native to the host country.

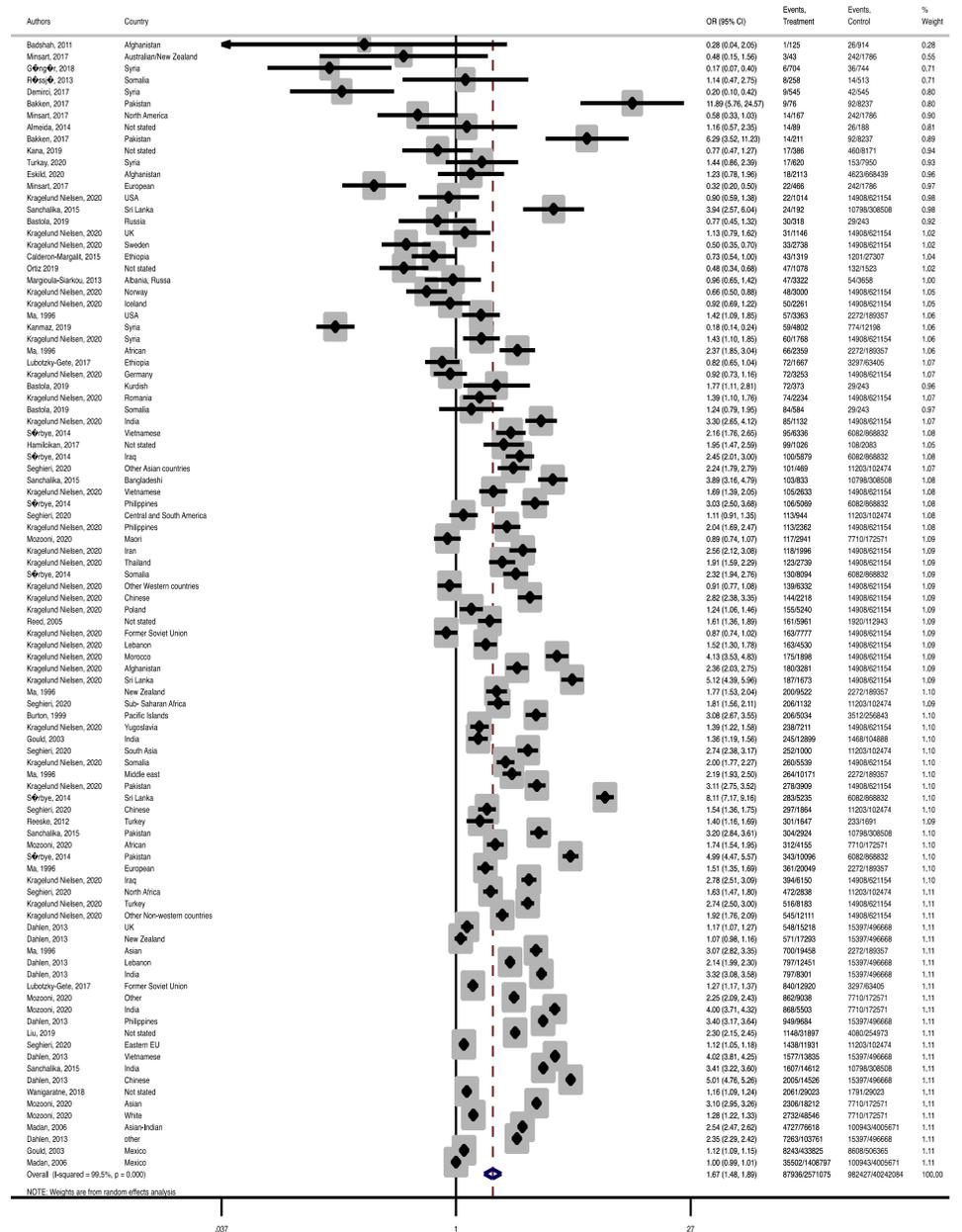
MeTHODS

We conducted a literature search on PubMed (including MEDLINE), Scopus, and Web of Science up to September 2020. We included all observational studies that examined the prevalence or risk of gestational diabetes among immigrants who crossed international borders, comparing them to native-origin populations.

We used the meta-prop method for pooled prevalence estimation and applied a random-effects model, following the DerSimonian and Laird model, to estimate the association between immigration status and gestational diabetes. We assessed heterogeneity using the I² statistic and evaluated publication bias using the Harbord test.

Additionally, we performed meta-regression to explore the impact of geographical regions as a potential source of heterogeneity

GDM



RESULTS AND CONCLUSION

This review analyzed data from 83 articles including 2,587,779 pregnant women with an immigration background and 8,839,865 pregnant women from native-origin populations. The quality assessment of the included studies deemed them to be of high or moderate quality, with none categorized as low quality. Furthermore, no publication bias was observed in the included studies.

The risk of gestational diabetes mellitus (Pooled-OR=1.4, 95% CI=1.2-1.6) was significantly higher among immigrant women compared to those with a native-origin background. Meta-regression analyses indicated that the reported odds ratios (ORs) were not influenced by the country of origin. Sensitivity analysis revealed that no single study had an influential effect.

In summary, immigrant women exhibited a higher risk of GDM when compared to native-origin mothers. These results serve as a cautionary message to healthcare providers and policymakers, underscoring the need to improve maternal and neonatal healthcare provision for the immigrant population

Figure: Forest plot of the pooled odds ratio of gestational diabetes mellitus comparing immigrant and native origin women, GDM: gestational diabetes mellitus

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CONTACT

Samira Behboudi-Gandevani, RM, PhD
Associate professor, NORD university
Faculty of Nursing and Health Sciences
8049 Bodø, Norway, +4775517670, www.nord.no
Samira.Behboudi-Gandevani@nord.no