Prevalence of Gestational Diabetes Mellitus in Brazil: Systematic review and metanalysis

Objectives: We systematically reviewed the literature to provide estimates of the prevalence of Gestational diabetes mellitus (GDM) in Brazil according to different diagnostic criteria.

Eligibility criteria: Studies in humans, without the restriction of publication idiom or year, from the oldest records available until November 2021, that provided data regarding the prevalence of diabetes in pregnant women living in Brazil.

Sources: The databases searched were Pubmed, LILACS, Scielo, Embase, Web of Science, and Cochrane Library.

Risk of bias: Joanna Briggs Institute (JBI) appraisal tool was used for risk of bias.

Analysis: We grouped studies by the source of information assessing GDM, age, and diagnostic criteria. All analyses were made using R language. Data were reported accordingly to PRISMA 2020 recommendations. The study protocol was registered in PROSPERO.

Results: We identified 1,328 registries and selected 21 studies, involving 122,635 pregnant women. Studies with primary data and laboratory measurements on adults only and using the International Association of the Diabetes and Pregnancy Study Groups (IADPSG) criteria (n = 3) had a prevalence of 18.0% (95%CI: 16.0-20.1%), comprehending 6,243 participants, while self-reported GDM (n = 3; 10,136 participants of all ages) had a pooled prevalence of 2.1% (95%CI: 1.5-5.2), with high heterogeneity ($I2$= 85.0%; $p<0.01$). Studies including adolescents had consistently lower prevalences.

Conclusion: The prevalence of GDM in Brazil varied, being greater when using the IADPSG criteria and depending on the methods used to obtain the information and the age structure of the sample.

Authors:
Pinto Moehlecke Iser, Betine; Universidade do Sul de Santa Catarina (UNISUL)
Rojas Espinoza, Sergio ; Universidade Federal do Rio Grande do Sul (UFRGS)
Lourenço de Souza Carvalho, Morgana ; Universidade Federal do Rio Grande do Sul (UFRGS)
Stein, Caroline ; Universidade Federal do Rio Grande do Sul (UFRGS)
Feichas Alves , Luisia ; Universidade Federal do Rio Grande do Sul (UFRGS)
Schmidt, Maria Ines; Universidade Federal do Rio Grande do Sul (UFRGS)

Corresponding author: **Betine Pinto Moehlecke Iser**
E-mail address: betinee@gmail.com