ABSTRAK

Latar Belakang: Diabetes melitus memiliki prevalensi 10,5% di seluruh dunia dan diperkirakan terus meningkat hingga 2045. Penyandang diabetes melitus tipe 2 (DMT2) menunjukkan kelainan pada HbA1c, metabolisme lipid, dan indeks massa tubuh (IMT). Diet indeks glikemik (IG) rendah dapat mengontrol HbA1c, lipid darah, dan IMT. Namun diet IG rendah memiliki hasil yang kontradiksi dari beberapa penelitian.
Tujuan: Mengkaji pengaruh diet IG rendah terhadap HbA1c pada penyandang DMT2 di Benua Asia.
Metode: Pencarian dilakukan pada database *PubMed, Science Direct,* dan *Scopus*. Kriteria inklusi berupa DMT2 ≥18 tahun, desain penelitian berupa RCT, publikasi berbahasa Inggris pada tahun 2014-2024, menerima diet IG rendah di Benua Asia. Wanita hamil/menyusui dieksklusi. Analisis yang dilakukan berupa meta analisis, subgrup, dan meta regresi. Penilaian kualitas studi menggunakan ROB-2 dan GRADE.
Hasil: Didapatkan 16 artikel *eligible* dari identifikasi 1485 artikel dari tiga *database*. IG rendah menurunkan HbA1c, LDL, dan IMT; meningkatkan HDL dan trigliserida meskipun trigliserida dan IMT gagal dalam kebermaknaan. Terdapat perbedaan hasil pemberian IG rendah terhadap HbA1c pada subgrup jenis intervensi dan kelompok kontrol. Persentase wanita dan pemberian bentuk suplementasi menjadi moderator potensial.
Kesimpulan: IG rendah dapat menurunkan HbA1c dengan tingkat kepercayaan rendah sehingga perlu penelitian lanjutan dengan memperhatikan besar sampel, proporsi wanita, jenis intervensi yang diberikan, cara randomisasi, alokasi randomisasi, dan penjelasan cara pengukuran *outcome*.

Kata Kunci: sistematik *review*, meta analisis, diabetes melitus tipe 2, indeks glikemik rendah, HbA1c.

ABSTRACT

Background: *Diabetes mellitus has a prevalence of 10.5% worldwide and is expected to continue to increase until 2045. People with type 2 diabetes mellitus (T2DM) show abnormalities in HbA1c, lipid metabolism, and body mass index (BMI). A low glycemic index (GI) diet can control HbA1c, blood lipids, and BMI. However, low-GI diets have contradictory results from several studies.*
Objective: *To assess the effect of low GI diet on HbA1c in people with T2DM in Asia.*
Methods: *PubMed, Science Direct, and Scopus databases were searched. Inclusion criteria were T2DM ≥18 years old, RCT study design, English language publications in 2014-2024, receiving low GI diet in Asia. Pregnant/breastfeeding women were excluded. The analyses were meta-analysis, subgroup, and meta-regression. Study quality assessment using ROB-2 and GRADE.*
Results: *16 eligible articles were identified from 1485 articles from three databases. Low GI decreased HbA1c, LDL, and BMI; increased HDL and triglycerides although triglycerides and BMI failed in meaningfulness. There were differences in the results of low GI administration on HbA1c in the intervention and control group subgroups. Percentage of women and form of supplementation were potential moderators.*
Conclusion: *Low GI can reduce HbA1c with a low level of confidence so that further research is needed by paying attention to the sample size, the proportion of women, the type of intervention in the control group.*

Keywords: *systematic review, meta-analysis, diabetes mellitus type 2, low glycemic index, HbA1c.*