Inequalities in Gastrointestinal Infections between UK Ethnic Groups: A Systematic Review and Narrative Synthesis

Authors : Iram Zahair, Tanith Rose, Oyinlola Oyebode, Stephen Clayton, Iman Ghosh, Michelle Maden, Ben Barr

Abstract : Background: Gastrointestinal infections exert a significant public health burden on UK healthcare services and the community. However, there are conflicting findings on where ethnic inequalities are likely to persist. This systematic review aimed to identify studies that ascertain differences in the incidence and prevalence of gastrointestinal infections within and between UK ethnic groups and explore possible explanations for heterogeneity observed within the literature. Methods: Following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidance, a systematic review methodology was used. Medline, Web of Science, CINAHL Plus, and grey literature were searched from 1980 to 2021 for studies reporting an association between ethnicity and gastrointestinal infections in UK population samples. Two reviewers independently screened the articles and conducted quality appraisals; data extraction was undertaken by one reviewer and verified by two reviewers (PROSPERO CRD 42021240714). A narrative synthesis was undertaken to synthesise the study findings. Results: The searches identified 8134 studies; 13 met the inclusion criteria. 12 out of 13 studies found a difference in the prevalence of gastrointestinal infections between different ethnic groups. UK ethnic minorities, predominantly men and children of Asian ethnicity, had an increased risk of infection than the white British majority in 12 studies; the Pakistani ethnic group had a higher risk of infection in three out of 13 studies. Studies reported that age and sex confounded the relationship between ethnicity and gastrointestinal infections. At the same time, the country of birth, socioeconomic status, and geographical location of ethnic groups mediated this association and significantly explained the heterogeneity observed across the studies. Harvest plots supported the textual synthesis. Conclusion: This systematic review elucidates the lack of extensive UK quantitative evidence examining the association between ethnicity and gastrointestinal infections. Insights into gastrointestinal infections and ethnicity's association can help address policy actions to mitigate the inequalities identified within and between UK ethnic groups.

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