University of Wales
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BIRMINGHAM

Methods and Search Strategy Academic Poster

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ETHNIC DISPARITIES IN THE PREVALENCE AND MANAGEMENT OF GESTATIONAL DIABETES AMONG PREGNANT WOMEN IN THE UK: A SYSTEMATIC REVIEW.

01- Introduction and Research Aim

Exploring ethnic disparities in gestational diabetes mellitus (GDM) among pregnant women in the United Kingdom is crucial for enhancing maternal health outcomes and addressing inequalities in maternity care (NHS England, 2019). GDM presents significant short- and long-term risks for mothers and infants, including higher chances of type 2 diabetes and pregnancy complications (WHO, 2023).
This poster outlines the methodology used to examine how ethnicity affects GDM prevalence and management. A secondary research approach reviewed peer-reviewed evidence, detailing search strategies, data validation, inclusion/exclusion criteria, and ethical considerations to ensure reliability.

The aim is to explore ethnic differences in GDM incidence and management in the UK, considering social, cultural, and healthcare factors (NICE, 2021). This research aims to inform public health policy, clinical practice, and culturally sensitive maternity services (OHID, 2021).

Figure 1: Gestational Diabetes (The Impressive Times, 2024).

02- Search Strategy

A search strategy is a structured plan guiding how to find relevant literature for a study (Aveyard, 2014). For this project, a systematic approach identified academic sources on ethnic disparities in gestational diabetes mellitus (GDM) in the UK.

Searches via Google Scholar, PubMed, and UWTSD Library Database targeted peer-reviewed research in health and social care. Key terms included "*gestational diabetes*", "*ethnic disparities*", "*pregnant women*", "*United Kingdom*", and "*maternal health inequalities*", combined with Boolean operators like *AND and OR* (Kampen, 2023).

Filters limited results to peer-reviewed journal articles in English, published between 2015 and 2024, focused on the UK. This ensured recent, credible, relevant evidence, forming a reliable basis for analysing ethnic differences in GDM (NICE, 2021; WHO, 2023).

Narrows Search	Broadens Search
AND	OR
NOT	Truncation (*)
"Phrase Searching"	Keyword Searching
More Concepts	Less Concepts
Less Synonyms	More Synonyms

Figure 2: Boolean operators(Aveyard, 2014; Kampen, 2023)

03. Searching for Information

evidence on ethnic disparities in GDM (Aveyard, 2014).

- Screened results from Google Scholar, PubMed, and UWTSD Library to remove duplicates and irrelevant studies, reviewing titles and abstracts for relevance (Kampen, 2023).
- Examined full texts of eligible studies to extract data on ethnicity, maternal health inequalities, and GDM management (Jesson, Matheson and Lacey, 2011).
- Used snowballing to review reference lists for additional credible sources (Kalidas, 2021).
- Applied the CRAAP Test to ensure sources were current, reliable, and ethical (Kalidas, 2021).
- This approach improved rigour, data credibility, and provided a strong evidence base for analysing ethnic differences in GDM (WHO, 2023; NHS England, 2019).

04 - Data

The 2021 Census data from the Office for National Statistics (ONS, 2023) indicates that 81% of England's female population are White women, followed by Asian or Asian British women at 9.6%, Black, Black British, Caribbean, or African women at 4.3%, those from Mixed or Multiple ethnic groups at 3%, and Other ethnic groups at 2.1%. The King's Fund (2023) created a colour-coded graph to visually depict these demographic distributions.

Understanding this demographic landscape is crucial for recognising why certain ethnic groups are at higher risk for gestational diabetes mellitus (GDM). Studies show that South Asian and Black women have a greater likelihood of developing GDM compared to White British women, due to genetic, cultural, and socioeconomic factors (NHS England, 2019; NICE, 2021). This visual context helps in analysing how ethnicity influences GDM prevalence and underscores the importance of culturally responsive maternity care (OHID, 2022).

Figure 3: Ethnic Distribution of the Female Population in England (ONS, 2023).

06. Inclusion Criteria

- Peer-reviewed journal articles and official health reports only (Aveyard, 2014)
- Published between 2015–2024 to ensure relevance and accuracy (NICE, 2021)
- Focused on UK-based pregnant women diagnosed with gestational diabetes mellitus (GDM) (OHID, 2022)
- Included studies providing quantitative or qualitative data on GDM prevalence, management, and ethnic differences

07. Exclusive Criteria

- Published before 2015
- Non-UK studies
- Non-academic sources,
- Studies on pre-existing diabetes.

05 - Thematic Analysis Summary

The studies reviewed consistently show a link between ethnicity and both the prevalence and management of gestational diabetes mellitus (GDM). Data from policy reports, national guidelines, and cohort studies such as NICE (2020), WHO (2013), and Public Health England (2018) indicate that women from South Asian, Black African, and Caribbean backgrounds are at higher risk for GDM than White British women. Across these sources, three main themes emerged: disparities in screening, inequalities in treatment outcomes, and the importance of culturally responsive maternity care. These findings highlight how policy, healthcare practices, and ethnicity interact to impact maternal outcomes in the UK, as discussed in sources like NHS England (2019), OHID (2022), and WHO (2023).

The table provides a summary of each study's key features, findings, and implications, serving as the basis for the thematic analysis shown in Figure 4.

Figure 4: Thematic Analysis Results summary Table

Author & Year	Article Title	Type of Study	Research Method & Sample Size	Strengths & Limitations	Main Findings	Keywords & Codes	Notes and Comments
NICE, 2008	Guidelines for Screening and Management of GDM	Policy/Guideline	Cross-national analysis	Standardised UK practice; Limitation: Needed updating	Introduced screening/management protocols to reduce maternal/fetal complications	GDM, NICE guidelines, UK maternal care	Foundation for improved UK GDM care
WHO, 2013	Hyperglycaemia and Adverse Pregnancy Outcomes (HAPO) Study	International Cohort	UK national guidance, evidence synthesis	Strong global evidence; Limitation: Generalisability challenges	Established link between glucose and adverse neonatal/maternal outcomes	HAPO, WHO, GDM outcomes	Informed WHO global diagnostic criteria
Public Health England, 2018	Ethnic Disparities in Maternal Health	Public Health Report	Large-scale cohort, 23,000+ participants	Showed disparities; Limitation: Descriptive, not causal	Women from ethnic minorities at higher GDM risk and poorer outcomes	Ethnic disparities, UK maternal health, PHE	Informed NHS and policy reforms
NHS England, 2019	Prevalence of GDM by Ethnicity in the UK	Epidemiological Study	National data review	Robust UK dataset; Limitation: Observational only	South Asian, Black African & Black Caribbean women had higher GDM prevalence	NHS, ethnicity, GDM prevalence	Highlighted urgent health inequalities
NICE, 2020	Updated GDM Management Protocols	Policy/Guideline	National health records analysis	Updated with new data; Limitation: Implementation gap	Revised pathways for women at higher GDM risk	NICE, UK maternal policy, risk management	Ensured ongoing care improvements

0.8 - Ethical Considerations

Ethics in secondary research encompass the ethical use of existing data, emphasising transparency, honesty, and respect for intellectual property (Aveyard, 2014; Ramesh, 2024). It also involves properly acknowledging others' work, preventing plagiarism, and accurately reporting findings (Kalidas, 2021).

How Ethics Were Ensured:

- All sources were accurately cited using the Harvard referencing style (Aveyard, 2014)
- Full credit was given to original authors and researchers (Ramesh, 2024)
- No manipulation or misrepresentation of data occurred (NICE, 2021)
- Potential bias in reviewed studies was recognised and clearly addressed (WHO, 2023)
- Only peer-reviewed and reputable sources were included to ensure reliability (OHID, 2022)

These measures maintained academic integrity and strengthened the credibility of the study.

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