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Research Article

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Knowledge and Perception of Gestational Diabetes Mellitus Among Pregnant Women Attending a Maternity Center in Dhaka, Bangladesh: A Cross-Sectional Study

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ABSTRACT

Background: Gestational diabetes mellitus (GDM) is an important maternal health concern, and pregnant women's knowledge and perceptions may influence engagement with screening and recommended care. Evidence from individual maternity-care settings in Bangladesh can help identify educational needs

Objective: To assess knowledge and perception regarding GDM among pregnant women attending Matuail Maternity Center, Dhaka, Bangladesh, and to examine associations with selected socio-demographic characteristics and between knowledge and perception.

Methods: A cross-sectional study was conducted among 118 pregnant women attending antenatal care at Matuail Maternity Center. Data were collected using a structured interviewer-administered questionnaire covering socio-demographic characteristics, GDM knowledge, and perception. Data were analyzed using SPSS version 26. Frequencies, percentages, and chi-square tests were used; $p < .05$ was considered statistically significant.

Results: Of 118 participants, 84.7% were classified in the higher knowledge category and 15.3% in the next-lower category in the Chapter IV results table; however, the abstract and conclusion of the source thesis report different category labels. This discrepancy must be resolved against the original scoring data before submission. Positive perception was reported for 78.0% of participants and neutral perception for 22.0%; none were classified as having negative perception. The association between knowledge category and perception was not statistically significant (reported $p = .523$). Associations between perception and age ($p = .069$), education ($p = .188$), occupation ($p = .708$), residence ($p = .809$), previous diabetes in pregnancy ($p = .901$), and family history of diabetes ($p = .355$) were also reported as non-significant.

Conclusion: Participants were predominantly classified as having positive perceptions of GDM, while the knowledge-category findings require verification because the thesis contains conflicting labels. Antenatal services may use structured, understandable education to reinforce knowledge of GDM risk factors, screening, complications, and management.

Keywords: Gestational Diabetes Mellitus, Knowledge, Perception, Pregnant Women, Antenatal Care, Bangladesh

Introduction

Gestational diabetes mellitus (GDM) is a form of hyperglycaemia first recognized during pregnancy. It is an important concern in maternal health because inadequate detection and management can be associated with adverse maternal and neonatal outcomes. Antenatal care provides an opportunity to communicate information about GDM, encourage appropriate screening, and support recommended lifestyle and clinical management.

Women's understanding of GDM may include awareness of its risk factors, screening, possible complications, and approaches to management. Perceptions of the seriousness and preventability of the condition may also influence how women respond to health information and recommendations. Prior studies cited in the thesis have examined GDM awareness among antenatal

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populations in different settings, including Ethiopia, Uganda, India, Pakistan, Saudi Arabia, and Vietnam [1-6]. Their findings provide a rationale for assessing awareness in local maternity-care contexts.

The source thesis identifies limited context-specific evidence on knowledge and perception of GDM among pregnant women in Bangladesh. Understanding the knowledge and perception profile of women attending Matuail Maternity Center may help identify areas for strengthening antenatal counselling. This study therefore assessed knowledge and perception regarding GDM and examined selected associations in this population.

Methods

Study Design and Setting

A cross-sectional study was conducted among pregnant women attending antenatal care at Matuail Maternity Center in Dhaka, Bangladesh. The thesis describes the study as taking place over a six-month period; the exact dates should be added before journal submission.

Participants and Sampling

The study included 118 pregnant women attending antenatal care who met the study's eligibility criteria and agreed to participate. The thesis describes consecutive recruitment of eligible women. The final manuscript should state the exact inclusion and exclusion criteria applied during the completed study and clarify the discrepancy between the planned sample size (120) and the final analyzed sample (118).

Data Collection Instrument

Data were collected using a structured interviewer-administered questionnaire with sections on socio-demographic and family characteristics, knowledge of GDM, and perception of GDM. The thesis describes 12 knowledge items with Yes/No/Don't Know response options and 10 perception items with Yes/No/Not Sure response options. The final manuscript should provide the exact scoring key used in the analysis and report evidence of validity and reliability based on completed procedures and actual coefficients, where available.

Data Collection and Analysis

The thesis reports that permission was obtained from the maternity-center authority and written informed consent was obtained from participants. Data were entered and analyzed using SPSS version 26. Descriptive statistics were used to summarize participant characteristics and outcome categories. Chi-square tests were used to examine associations, with statistical significance set at $p < .05$. The journal version should specify how missing data and any small expected cell counts were handled and provide test statistics, degrees of freedom, and confidence intervals where appropriate.

Ethical Considerations

The thesis states that ethical approval was obtained from the Institutional Ethical Review Board of Enam Medical College and that written informed consent, voluntary participation, confidentiality, and the right to withdraw were respected. Before submission, insert the ethics approval/reference number and approval date if available.

Results

A total of 118 pregnant women were included in the reported analysis. The thesis describes the largest age group as 36–40 years (44.1%); 39.8% had secondary education, 71.2% were housewives, and 72.9% lived in nuclear families. More than half (56.8%) reported monthly family income below BDT 20,000. A family history of diabetes was reported by 50.8% of participants, while 5.1% reported previous diabetes in pregnancy and 16.9% were unsure.

Knowledge category: The Chapter IV table reports 100 participants (84.7%) in the 'good knowledge' category and 18 (15.3%) in the 'moderate knowledge' category, with none classified as having poor knowledge. However, the abstract and conclusion instead state that 84.7% had moderate knowledge and 15.3% had poor knowledge. These are incompatible results and must be checked against the raw dataset, scoring rules, and SPSS output. Do not submit the manuscript until the correct categories are confirmed.

Perception: The results table reports positive perception among 92 participants (78.0%) and neutral perception among 26 (22.0%); no participants were classified as having negative perception.

Associations: The thesis reports no statistically significant association between perception and age ($p = .069$), education ($p = .188$), occupation ($p = .708$), residence ($p = .809$), previous diabetes in pregnancy ($p = .901$), or family history of diabetes ($p = .355$). The association between knowledge category and perception was also reported as non-significant (χ^2 reported as approximately 0.406–0.408; $p = .523$). The exact chi-square values and degrees of freedom should be checked against the final statistical output.

Discussion

This study assessed knowledge and perception of GDM among pregnant women attending a maternity center in Dhaka. The most consistent finding across the thesis sections is that perception was predominantly positive: 78.0% of participants were categorized as having positive perception and 22.0% as neutral. This suggests that many participants expressed generally favorable views about GDM, although a positive perception score should not be interpreted as proof that participants consistently understand screening recommendations or can apply preventive and management advice.

The interpretation of the knowledge findings is currently uncertain because the thesis reports conflicting category labels for the same percentages. The Chapter IV table and discussion label 84.7% as good knowledge, whereas the abstract and conclusion label the same proportion as moderate knowledge. This inconsistency affects the central message of the paper and must be resolved before drawing comparisons with other studies or making claims about the adequacy of knowledge.

The thesis reports no statistically significant association between perception and the selected socio-demographic characteristics examined, or between knowledge category and perception. These findings should be interpreted cautiously. A non-significant result does not establish that no relationship exists;

the sample size, category definitions, distribution of responses, and assumptions of the statistical tests may affect the ability to detect associations. The final analysis should verify expected cell counts and consider an appropriate alternative or category consolidation if assumptions are not met, with decisions justified transparently.

The findings support the practical value of clear antenatal education about GDM, including risk factors, screening, possible complications, and management. Education should be tailored to women's language and information needs and reinforced during routine antenatal visits. Because this was a single-center cross-sectional study using a structured questionnaire, results should not be generalized to all pregnant women in Bangladesh without further evidence.

Strengths and Limitations

A strength of the study is its focus on both knowledge and perception within a maternity-care setting, with direct relevance to antenatal nursing education. Limitations include the single-center setting, a relatively small sample, non-probability/consecutive sampling as described in the thesis, and the cross-sectional design, which does not establish causality. Self-reported questionnaire responses may be affected by recall or social-desirability bias. The inconsistent reporting of knowledge categories and differences in reported chi-square statistics must be resolved before submission; until then, they limit confidence in the interpretation.

Conclusion

Among 118 pregnant women attending Matuail Maternity Center, 78.0% were reported to have positive perception of GDM and 22.0% neutral perception. The thesis reports no statistically significant association between perception and the selected socio-demographic variables or knowledge category. The knowledge-level distribution cannot be stated conclusively until the conflicting category labels in the source thesis are reconciled with the original dataset and scoring procedure. Antenatal teams should continue to provide accessible education on GDM screening, risk factors, complications, and management.

Implications for Nursing Practice

Nurses and midwives can use routine antenatal visits to assess what pregnant women know about GDM, correct misconceptions, explain screening and follow-up, and reinforce evidence-based lifestyle and clinical advice. Educational materials should be understandable, culturally appropriate, and available in Bangla.

References

1. Alzahrani AF. Evaluation of awareness and knowledge of gestational diabetes mellitus among antenatal women in a secondary care hospital: A cross-sectional study. South Eastern European Journal of Public Health. 2025. 3769–3772.
2. Byakwaga E, Sekikubo M, Nakimuli A, Nakabuye BV. Level of and factors associated with awareness of gestational diabetes mellitus among pregnant women attending antenatal care at a national referral hospital in Uganda. BMC Pregnancy and Childbirth. 2021. 21: 470.
3. Dissassa HD, Tufa DG, Geleta LA. Knowledge of gestational diabetes mellitus and associated factors among pregnant women attending antenatal clinics in North Shewa Zone, Ethiopia. BMJ Open. 2023. 13: e073339.
4. Prabhu J K, Deepthi Kondamuri S, Samal S. Knowledge of gestational diabetes mellitus among pregnant women in a semi-urban hospital: A cross-sectional study. Journal of Family Medicine and Primary Care. 2021. 12: 1825–1830.
5. Nguyen CT, Pham NM, Do VV. Pregnant women's knowledge and perceptions of gestational diabetes mellitus in Vietnam. BMC Public Health. 2022. 22: 1345.
6. Wafa MH, Alharbi MA, Alshammari NA, Alotaibi RS. Knowledge and attitude regarding gestational diabetes mellitus among pregnant women in Tabuk City, Saudi Arabia. Cureus. 2023. 15: e48012.

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