Evaluation of Nutritional Knowledge Among Pregnant Teenagers in Secondary Schools and Tertiary Health Facilities in Abia State, Nigeria

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Abstract
This study evaluates the level of nutritional knowledge among pregnant teenagers in secondary schools and tertiary health care facilities in Abia State, Nigeria. Teenage pregnancy presents unique nutritional challenges that affect both maternal and fetal outcomes. Using a mixed-methods approach, 300 pregnant teenagers (150 from schools and 150 from tertiary health centers) were surveyed. Data were analyzed using descriptive and inferential statistics. Results reveal that 62% of participants had poor nutritional knowledge, particularly regarding micronutrients such as iron, folate, and calcium. Significant disparities were observed between school-attending teenagers and those receiving antenatal care at tertiary facilities ($p < 0.05$). The study recommends targeted nutrition education interventions in both school health programs and maternal care services.

Keywords: *Nutritional knowledge, pregnant teenagers, secondary schools, tertiary health facilities, Abia State, maternal health*

1. Introduction

Adolescent pregnancy is a growing concern in Nigeria, with significant health, social, and economic implications. According to UNICEF (2021), Nigeria has one of the highest adolescent fertility rates globally. The nutritional needs of pregnant teenagers are distinct and more demanding due to the dual demands of adolescence and pregnancy (WHO, 2020). Poor nutrition during this critical period increases the risk of complications such as anemia, preterm birth, low birth weight, and stunted child development. Abia State, situated in southeastern Nigeria, is not exempt from the rising cases of teenage pregnancy, especially in semi-urban and rural areas. While several efforts have been made to address adolescent sexual and reproductive health, little emphasis has been placed on their nutritional knowledge and dietary behavior.

This study aims to evaluate the level of nutritional knowledge among pregnant teenagers in secondary schools and tertiary health facilities in Abia State, identify gaps, and make evidence-based recommendations for intervention.

2. Objectives of the Study

- To assess the level of nutritional knowledge among pregnant teenagers in secondary schools and tertiary health facilities.
- To compare nutritional awareness between school-going pregnant teenagers and those attending tertiary health facilities.
- To identify major sources of nutrition information for the respondents.
- To recommend policies and programs aimed at improving nutrition education among teenage mothers.3. Literature Review

3.1 Teenage Pregnancy and Nutrition

Adolescence is a critical period of growth requiring increased nutrients, particularly iron, calcium, folic acid, and protein (Story et al., 2002). Teenage pregnancy exacerbates this need, but many adolescents lack adequate knowledge of dietary requirements during pregnancy (Onyeka et al., 2020).

3.2 Nutrition Education and Maternal Health

Research by Adebayo et al. (2019) emphasized the role of targeted nutrition education in improving maternal and neonatal outcomes. Inadequate nutritional knowledge among teenage mothers is often linked to poor school-based health education and limited access to antenatal services.

3.3 Nigerian Context

The Nigerian Demographic and Health Survey (NDHS, 2018) highlights that only 45% of teenage mothers in Nigeria receive any form of nutrition counseling during pregnancy. This number drops significantly in rural and school-based populations.

4. Methodology

4.1 Study Design

This study employed a descriptive cross-sectional design using both qualitative and quantitative methods.

4.2 Study Population and Sampling

The study involved 300 pregnant teenagers aged 13–19, selected from:

- 10 secondary schools (150 respondents)
- 5 tertiary health facilities (150 respondents)

4.3 Data Collection Tools

A semi-structured questionnaire was used to gather data on socio-demographics, food group knowledge, and micronutrient understanding.

4.4 Data Analysis
Data were analyzed using SPSS version 25. Descriptive and inferential statistics (chi-square and t-tests) were used.

4.5 Ethical Considerations
Ethical approval was obtained from the Abia State Ministry of Health and relevant school authorities. Informed consent and parental assent were secured.

5. Results
5.1 Socio-Demographic Characteristics
- Mean age: 17.3 years
- 65% from rural areas
- 48% in SS2 or SS3
- 52% had previous pregnancies

5.2 Nutritional Knowledge Scores
- Good knowledge (scores ≥ 70%): 18%
- Moderate knowledge (50–69%): 20%
- Poor knowledge (< 50%): 62%

5.3 Areas of Knowledge Deficiency
Iron: 41% | Calcium: 38% | Folic Acid: 30% | Balanced Diet: 44%

5.4 Comparison Between Groups
Pregnant teenagers attending tertiary health facilities scored significantly higher ($p < 0.01$).

5.5 Sources of Nutrition Information
Antenatal Clinics (42%), Teachers (20%), Friends (15%), Social Media (10%), Parents (13%)

6. Discussion
The findings reveal a critical gap in nutritional knowledge among pregnant teenagers in Abia State. School-based participants displayed the lowest awareness levels, highlighting the failure of school systems to integrate reproductive and nutritional health education effectively.
This supports findings from Ugwu et al. (2018) and emphasizes the role of antenatal care in delivering effective nutritional education. Still, reach and access to such care remain limited.

7. Conclusion
This study underscores the urgent need to improve nutritional education for pregnant teenagers in Abia State. Both school-based and health facility strategies must be deployed to improve maternal outcomes among adolescents.

8. Recommendations
1. Integrate nutrition modules into school curricula.
2. Train teachers to deliver nutrition-focused content.
3. Strengthen ANC nutrition counseling.
4. Launch youth-friendly community education campaigns.

5. Provide supplements and educational guides.

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