Knowledge, Attitudes, and Perceptions of Preeclampsia Among First-Generation Nigerian Women in the United States

Christine Okpomeshine PhD, RN, WHNP
Introduction

- Background
- Problem, Purpose, Questions & Hypotheses
- Study Population
- Methods & Statistical Analyses
- Results
- Conclusions & Implications
- Summary
Background

- Preeclampsia affects 5–7% of pregnancies in the United States and 10% in Nigeria

- Worldwide accounts for 5–14% of all pregnancies; in developing countries it ranges from 4–18%

- Preeclampsia occurs after the first trimester and disappears within 6 weeks of delivery

- Second highest obstetric cause of preterm labor, preterm birth, and neonatal death

- Preeclampsia is a public health issue and preventive steps should be taken
Problem

- Research shows the extent of preeclampsia, but not for first-generation Nigerian women diagnosed with preeclampsia living in the United States
- Early recognition and prompt treatment of preeclampsia are essential during prenatal care
- Pregnant women with preeclampsia should be educated about complications and follow-up care
- Not all healthcare facilities are equipped with skilled professionals and technology to assess and address preeclampsia
- Preeclampsia impacts the social and economic life of pregnant women
Study Purpose

Assess the knowledge, attitudes, and perceptions of preeclampsia among first-generation Nigerian women living in the United States from their perspective, and review their understanding of early recognition of preeclampsia
Research Questions

- Among first-generation Nigerian women with a history of preeclampsia living in the United States
- Is there a relationship between demographic characteristics, cultural beliefs, socioeconomic status, acculturation, and access to health care; and

1. Knowledge of preeclampsia?
2. Attitudes about preeclampsia?
3. Perceptions of preeclampsia?
Hypotheses, Question 1

- Ha: Demographic characteristics, cultural beliefs, socioeconomic status, acculturation, and access to health care will be significantly related to knowledge of preeclampsia among first-generation Nigerian women with a history of preeclampsia living in the United States.

- H0: There is no relationship between demographic characteristics, cultural beliefs, socioeconomic status, acculturation, and access to health care and knowledge of preeclampsia among first-generation Nigerian women with a history of preeclampsia living in the United States.
Hypotheses, Question 2

- Ha: Demographic characteristics, cultural beliefs, socioeconomic status, acculturation, and access to health care will be significantly related to attitudes about preeclampsia among first-generation Nigerian women with a history of preeclampsia living in the United States.

- H0: There is no relationship between demographic characteristics, cultural beliefs, socioeconomic status, acculturation, and access to health care and attitudes about preeclampsia among first-generation Nigerian women with a history of preeclampsia living in the United States.
Hypotheses, Question 3

- **Ha**: Demographic characteristics, cultural beliefs, socioeconomic status, acculturation, and access to health care will be significantly related to perceptions of preeclampsia among first-generation Nigerian women with a history of preeclampsia living in the United States.

- **H0**: There is no relationship between demographic characteristics, cultural beliefs, socioeconomic status, acculturation, and access to health care and perceptions of preeclampsia among first-generation Nigerian women with a history of preeclampsia living in the United States.
## Study Population

- **Purposeful Sample Size:** 180 First-generation Nigerian Women

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
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<tbody>
<tr>
<td>➤ Born in the United States</td>
<td>➤ Pregnant women from other African countries</td>
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<td>➤ 18 and older</td>
<td>➤ Nonpregnant women</td>
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<td>➤ Parents migrated from Nigeria</td>
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<td>➤ Must have been pregnant or presently pregnant</td>
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Methods

- Quantitative, Cross Sectional Study
- Ordinal and Binary Logistic Regressions
- Independent Variables:
  - Demographic characteristics
  - Cultural beliefs
  - Socioeconomic status
  - Acculturation
  - Access to health care
- Dependent Variables: Knowledge, attitudes, and perceptions of preeclampsia
- Online Survey: Participant demographic data and attitude questionnaire from East et al. (2011)
Statistical Analysis

- Demographic description and findings
- Data used for Proportional Odds Ratios and Wald $X^2$ Analyses
- Summary of the Results
  - Tests of hypotheses
Knowledge of Preeclampsia

- Independent variable: Demographic characteristics

- Tests:
  - Ordered Logistic Regression
  - Ordered log-odds
  - Proportional odds
  - Likelihood Ratio Test
  - Wald $X^2$

- Result: $p = 0.76$
  - The lowest knowledge of preeclampsia was 1.15 times more common (OR = 1.15, 95% CI = 0.45–2.98) than greater knowledge of preeclampsia
Attitudes about Preeclampsia

- **Independent variable:** Acculturation
- **Tests:**
  - Ordered Logistic Regression
  - Ordered log-odds
  - Proportional odds
  - Wald $X^2$
- **Results: $p = 0.27$**
  - The odd of reporting the lowest versus higher categories of attitudes was 0.55 times lower (OR = 0.55, 95% CI = 0.19–1.60)

- **Independent variable:** Socioeconomic status
- **Tests:**
  - Ordered Logistic Regression
  - Ordered log-odds
  - Proportional odds
  - Likelihood Ratio Test
  - Wald $X^2$
- **Results: $p = 0.76$**
  - The odds of reporting agreement that PE could not affect them was
    - 1.26 times higher (OR = 1.26, 95% CI = 0.50–3.12) for women who were part-time employed vs. full-time employed,
    - 1.27 times higher (OR = 1.27, 95% CI = 0.55–2.97) for women who were unemployed vs. full-time employed
    - 0.94 times lower (OR = 0.94, 95% CI = 0.26–3.43) for women who reported other employment vs. full-time employment
Perceptions about Preeclampsia

- Independent variable: Access to healthcare
- Tests:
  - Ordered Logistic Regression
  - Ordered log-odds
  - Proportional odds
  - Likelihood Ratio Test
  - Wald $X^2$
- Results: $p = 0.77$
  - The odds of women not realizing how sick they were was
    - 0.55 times lower (OR = 0.55, 95% CI = 0.19–1.60) for women collecting WIC vs. not on WIC
    - 1.21 times higher (OR = 1.21, 95% CI = 0.33–4.41) for women with health insurance vs. without health insurance
Significance of Study

**Beneficiary**
- This study is important because no previous study focused on this population
- Healthcare Providers
- Nigerian Community
- Public Health Organizations

**Social Change**
- Raised awareness of early recognition and treatment to minimize disability
- Supported Institute of Medicine in promoting a Public Health goal
- Encouraged health promotion and education
Study Limitations

- Purposeful Small Sample Size
- Recall bias due to self-reported survey data
- Quantitative study and the survey questions do not permit in-depth questioning about personal life with pregnancy
- A cross-sectional study that demonstrates relationships but does not prove cause and effect
- Geographically specific population
Future Research Studies

- Compare first-generation Nigerian women living in the United States to Nigerian women living in Nigeria
- How diet influences Nigerian women in the United States and Nigerian women in Nigeria
- Use qualitative, mixed methods with longitudinal studies (random samples)
Recommendations

- Public health departments need to
  - Produce a booklet on preeclampsia
  - Distribute it to all healthcare providers

- Worldwide educational campaign to teach women about preeclampsia: grandmothers, mothers, mothers-in-law, and daughters

- Disseminate findings through
  - Publication in relevant scientific journals
  - Health & public health departments and healthcare providers
  - Nigerian community in New York and communities in other states
Social-Change Significance

- Awareness of early detection of preeclampsia and of treatment to decrease disability
- Help public health and Institute of Medicine minimize complications of preeclampsia
- Use the study to educate healthcare providers and the public about cultural beliefs, attitudes, and perceptions about preeclampsia among women of different cultures
- Help women better understand how to make positive healthcare decisions
Summary—Closing Remarks

“Death caused by preeclampsia is avoided with early detection and effective treatment of women with preeclampsia” WHO, 2011

“Therefore, there is a need for cultural respect for healthcare-seeking behaviors of first-generation Nigerian women living in the United States to be incorporated into health-assessment programs.” Okpom, 2013
Thank You