

The Impact of Social Determinants of Health on Maternal Health Outcomes of Primigravida

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Abstract: Maternal health outcomes remain a major public health concern in developing countries, including the Philippines. Social determinants of health (SDOH) such as socioeconomic status, education, access to healthcare services, housing conditions, food security, and social support significantly influence maternal and neonatal outcomes. This study examined the impact of social determinants of health on maternal health outcomes among primigravida women in Region IV-A (CALABARZON), Philippines.

A mixed-methods research design was employed involving a cross-sectional survey and semi-structured interviews. A total of 150 primigravida women receiving prenatal care from selected government hospitals and rural health units in CALABARZON participated in the quantitative component, while 18 participants were purposively selected for qualitative interviews. Quantitative data were analyzed using descriptive statistics, Pearson correlation, and multiple regression analysis, while qualitative data were analyzed through thematic analysis.

Results revealed that socioeconomic status ($\beta = 0.41$, $p < 0.01$), access to prenatal healthcare services ($\beta = 0.36$, $p < 0.01$), and social support ($\beta = 0.29$, $p < 0.05$) were significant predictors of positive maternal health outcomes. Women with stable income, regular prenatal checkups, and strong family support experienced fewer complications such as gestational hypertension, preterm birth, and low birth weight. Qualitative findings further revealed themes including barriers to healthcare access, financial constraints during pregnancy, and the importance of family and community support.

The findings highlight the critical role of social determinants in shaping maternal health outcomes among primigravida women. Strengthening community-based maternal health programs, improving access to prenatal services, and integrating SDOH screening in maternal healthcare are recommended to reduce maternal health disparities in the region.

Keywords: Social Determinants of Health, Maternal Health Outcomes, Primigravida, Prenatal Care, CALABARZON.

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I. INTRODUCTION

Maternal health remains a critical component of public health and sustainable development. Globally, approximately 287,000 women die annually due to pregnancy-related complications, with the majority occurring in low- and middle-income countries (World Health Organization, 2023). In the Philippines, maternal mortality continues to pose significant challenges despite improvements in maternal healthcare services. According to the Philippine Statistics Authority, maternal mortality was estimated at 121 deaths per 100,000 live births in recent years, highlighting persistent inequalities in maternal health access and outcomes.

Region IV-A (CALABARZON), one of the most densely populated regions in the Philippines, experiences diverse socioeconomic conditions that influence maternal health. While the region has relatively advanced healthcare infrastructure compared with other regions, disparities in healthcare access, economic stability, and social support remain evident across urban and rural communities.

The concept of Social Determinants of Health (SDOH) has become increasingly important in understanding maternal health outcomes. The World Health Organization defines SDOH as the conditions in which individuals are born, grow, live, work, and age, including factors such as income, education, employment, healthcare access, and

social support systems. These determinants significantly influence pregnancy experiences, healthcare utilization, and birth outcomes.

Primigravida women, or women experiencing their first pregnancy, are particularly vulnerable to the influence of social determinants. Without prior pregnancy experience, first-time mothers often face challenges related to limited knowledge about pregnancy care, financial preparedness, and access to healthcare services. Studies have shown that low socioeconomic status, limited educational attainment, and inadequate prenatal care are strongly associated with adverse maternal outcomes including preeclampsia, preterm birth, and low birth weight.

In the Philippine context, maternal health outcomes are further influenced by factors such as transportation barriers to healthcare facilities, availability of skilled birth attendants, and household economic capacity. These social conditions can affect women's ability to access prenatal care and adopt healthy behaviors during pregnancy.

Despite growing recognition of the role of SDOH in maternal health, limited empirical studies have specifically examined their impact on primigravida women in Region IV-A (CALABARZON). Understanding these factors is essential for designing targeted interventions that address both clinical and social aspects of maternal care.

Therefore, this study aimed to assess the influence of social determinants of health on maternal health outcomes among primigravida women in CALABARZON. Specifically, the study examined how socioeconomic status, access to healthcare services, housing conditions, food security, and social support influence pregnancy outcomes among first-time mothers.

II. METHODOLOGY

➤ *Research Design*

This study utilized a mixed-methods research design, combining quantitative and qualitative approaches to comprehensively examine the relationship between social determinants of health and maternal health outcomes among primigravida women in Region IV-A (CALABARZON). The quantitative component employed a cross-sectional correlational design, while the qualitative component explored participants' lived experiences during pregnancy.

➤ *Study Setting*

The study was conducted in selected government hospitals, maternity clinics, and rural health units in CALABARZON (Region IV-A), including facilities located in Laguna, Batangas, Cavite, Rizal, and Quezon Province.

➤ *Participants and Sampling*

A total of 150 primigravida women receiving prenatal care services were selected through stratified random

sampling to ensure representation across different socioeconomic groups. Inclusion criteria included:

- First pregnancy
- Currently receiving prenatal care
- Age 18–40 years
- Resident of CALABARZON

For the qualitative component, 18 participants were selected through purposive sampling for in-depth interviews until data saturation was reached.

➤ *Research Instrument*

Data were collected using a structured questionnaire consisting of four sections:

- Demographic Profile
- Socioeconomic Status Indicators
- Access to Healthcare Services
- Maternal Health Outcomes

The instrument was validated by maternal health experts and achieved a Cronbach's alpha reliability coefficient of 0.89, indicating high reliability.

Semi-structured interview guides were used to explore participants' experiences related to pregnancy challenges and social determinants affecting maternal health.

➤ *Data Collection Procedure*

Data collection was conducted from January to March 2026. Participants completed the survey during prenatal clinic visits. Qualitative interviews were conducted in private consultation rooms within healthcare facilities and lasted approximately 30–45 minutes.

➤ *Data Analysis*

Quantitative data were analyzed using SPSS version 26. Statistical analyses included:

- Frequency and percentage distribution
- Mean and standard deviation
- Pearson correlation analysis
- Multiple regression analysis

Qualitative data were analyzed using thematic analysis, following coding, categorization, and theme development procedures.

➤ *Ethical Considerations*

Ethical approval was obtained from the institutional research ethics committee. Participants provided written informed consent, and confidentiality and anonymity were strictly maintained. Participation was voluntary, and respondents were allowed to withdraw from the study at any time.

III. RESULTS AND DISCUSSION

Table 1 Demographic Profile of Primigravida Respondents (n = 150)

Variable	Frequency	Percentage
Age (18–25)	82	54.7%
Age (26–30)	41	27.3%
Age (31–35)	20	13.3%
Age (36–40)	7	4.7%
Married	96	64%
Living with partner	44	29.3%
Single	10	6.7%

The majority of respondents were between 18–25 years old, reflecting the common reproductive age among first-time mothers in the Philippines.

Table 2 Correlation Between Social Determinants and Maternal Health Outcomes

Variable	r-value	p-value	Interpretation
Socioeconomic Status	0.51	<0.01	Significant
Access to Healthcare	0.47	<0.01	Significant
Housing Stability	0.33	<0.05	Significant
Food Security	0.38	<0.05	Significant
Social Support	0.44	<0.01	Significant

The results indicated that socioeconomic status showed the strongest relationship with maternal health outcomes. Women with stable financial resources were more likely to attend regular prenatal visits and maintain adequate nutrition during pregnancy.

Table 3 Multiple Regression Analysis of Predictors of Maternal Health Outcomes

Predictor	Beta	p-value
Socioeconomic Status	0.41	<0.01
Healthcare Access	0.36	<0.01
Social Support	0.29	<0.05

The regression model explained 48% of the variance in maternal health outcomes ($R^2 = 0.48$), indicating that social determinants significantly influence pregnancy outcomes among primigravida women.

➤ *Qualitative Findings*

Three major themes emerged from the interviews:

- *Barriers to Healthcare Access*

Several participants reported challenges related to transportation costs and long travel distances to healthcare facilities, which affected their ability to attend prenatal consultations regularly.

- *Financial Constraints During Pregnancy*

Many respondents highlighted the financial burden associated with prenatal vitamins, laboratory tests, and transportation expenses.

- *Importance of Family and Community Support*

Participants emphasized that emotional and financial support from family members significantly improved their pregnancy experiences and reduced stress levels.

➤ *Discussion*

The findings of this study confirm that social determinants of health significantly influence maternal health outcomes among primigravida women in

CALABARZON. Socioeconomic status, healthcare accessibility, and social support were identified as key predictors of pregnancy outcomes.

These findings are consistent with global studies demonstrating that financial stability and healthcare accessibility reduce the risk of maternal complications. Women who attended regular prenatal visits were more likely to receive early detection of pregnancy complications such as gestational hypertension and anemia.

Furthermore, the qualitative findings emphasize the importance of social support systems in maternal health. Strong family networks contributed to improved psychological well-being among pregnant women, which has been linked to better pregnancy outcomes.

The study highlights the need for integrated maternal health programs that address both clinical care and social determinants of health. Strengthening community-based maternal healthcare services and expanding health education programs can help reduce maternal health disparities in CALABARZON.

IV. CONCLUSION

This study demonstrated that social determinants of health significantly affect maternal health outcomes among

primigravida women in Region IV-A (CALABARZON). Socioeconomic status, access to healthcare services, and social support were identified as significant predictors of positive pregnancy outcomes.

Addressing these determinants through targeted maternal health policies, improved healthcare accessibility, and strengthened community support systems is essential to improving maternal health outcomes in the Philippines.

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