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Exploring the Intersection of Financial and Maternal Health Literacy among Women

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Abstract. Maternal health literacy and financial capacity are universally recognized as crucial determinants of maternal and child health outcomes across the globe. In recent years, research from every continent has converged on the finding that both knowledge and economic means critically shape women's access to, and utilization of, maternal health services. This qualitative phenomenological study explores the intersection of financial and maternal health literacy among women in Barangay Batinguel, Dumaguete City, Philippines. Twelve (12) women participated in in-depth interviews, revealing how financial constraints and limited health literacy jointly shape maternal healthcare access and decision-making. Thematic analysis identified five (5) primary themes: 1.) Financial Barriers Restrict Access to Maternal Care; 2.) Maternal Health Literacy Gaps Amplify Vulnerability; 3.) Financial Realities Dictate Health Decisions; 4.) Coping Strategies Highlight Resilience and Systemic Gaps; and 5.) Demand for Integrated, Hyper-Local Solutions. Findings reveal a cyclical relationship between poverty and health literacy, where limited resources restrict information access, and poor health decisions exacerbate economic strain. The study highlights the resilience of women navigating these challenges but underscores systemic gaps in policy and service delivery. Recommendations include subsidizing indirect costs, enhancing frontline health worker training, and leveraging digital platforms for culturally adapted education. These insights advocate for dual-pronged interventions to break the poverty-health illiteracy cycle and advance maternal equity in low-resource settings.

Keywords: Maternal health literacy; Financial barriers; Qualitative research; Philippines.

1.0 Introduction

Maternal health literacy and financial capacity are universally recognized as crucial determinants of maternal and child health outcomes across the globe. In recent years, research from every continent has converged on the finding that both knowledge and economic means critically shape women's access to, and utilization of, maternal health services. However, the interplay between these two factors remains under-explored, particularly in low- and middle-income settings and at the community level.

Globally, maternal mortality remains a pressing public health concern. In Africa, studies consistently highlight how poverty and low health literacy combine to restrict women's access to skilled birth attendance and antenatal care, even when services are nominally free. Abdi et al. (2024) found in Somaliland that indirect costs such as transportation, medications, and opportunity costs of seeking care significantly deterred women from utilizing maternal health services, despite government efforts to subsidize direct costs. Similarly, in Ethiopia, Biratu et al. (2023) demonstrated that women's literacy status strongly predicts maternal healthcare

utilization, but that household wealth and regional disparities mediate this relationship, underscoring the need for context-sensitive interventions.

In Asia, the situation is equally complex. Hussain and Ashraf (2024) reported that in Pakistan, midwife-led interventions using visual tools like the Maternal and Child Health Calendar improved health literacy among unschooled women and led to better maternal outcomes. However, these gains were unevenly distributed, with marginalized and rural women continuing to face significant barriers due to financial hardship and limited autonomy in health decision-making. In Indonesia, Ningrum et al. (2024) emphasized transforming health systems into health literacy organizations—institutions that provide clear, culturally relevant information and support, especially for low-income pregnant women. Meanwhile, a 2023 scoping review highlighted the lack of standardized, culturally adapted maternal health literacy instruments in Iran, particularly for adolescent mothers (Putri et al., 2023).

Europe, while having made substantial progress in reducing maternal mortality, still grapples with disparities in maternal health literacy and service utilization. According to the MSD for Mothers (2024) report, Eastern Europe achieved a 70% reduction in maternal mortality since 2000. However, one in ten women in the European Union still lacks access to essential maternal health information. This information gap is further complicated by migration, socio-economic inequality, and language barriers, which can impede access to health education and financial resources.

In North America, maternal health literacy and financial access remain intertwined issues. Kavanaugh and Morrison (2024) found that in the United States, even among insured populations, low health literacy and limited financial empowerment result in delayed care-seeking, inadequate prenatal care, and higher rates of adverse outcomes. The authors argue for integrated interventions addressing knowledge gaps and economic barriers, particularly for minority and low-income women. Similarly, in Canada, research has shown that Indigenous and rural women face compounded challenges due to systemic inequities in both health education and financial support (Ningrum et al., 2024).

Oceania presents its own set of challenges. In Australia, a 2024 cluster analysis revealed seven distinct health literacy profiles among mothers in Tasmania, demonstrating that "one-size-fits-all" approaches to maternal health education are ineffective (Melwani et al., 2024). The study emphasized the need for tailored interventions considering financial and informational barriers, particularly for women in remote and Indigenous communities.

Latin America and the Caribbean have made strides in improving maternal health outcomes through community-based programs. In Paraguay, dialect-tailored prenatal education and trained community health workers have been shown to enhance maternal health literacy and increase service utilization (Arrighi et al., 2021). However, financial barriers persist, particularly in rural and Indigenous communities, where out-of-pocket costs and transportation remain significant obstacles.

The global economic case for investing in maternal health is compelling. Salvatore (2024) estimates that every dollar invested in maternal health yields between $2.20 and $16 returns through productivity gains and reduced healthcare burdens. Nevertheless, systemic gaps remain: health education materials often exceed the literacy levels of their intended audiences, and frontline providers are rarely trained to address the intersection of financial and health literacy challenges (Ningrum et al., 2024).

Turning to the Philippines, the national context reflects many of these global patterns but also presents unique challenges. Despite the implementation of various maternal health care programs and the integration of these into Service Delivery Networks, maternal mortality remains high (Cagayan et al., 2022). The 2022 National Demographic and Health Survey (NDHS) reported that 86% of Filipino women who had a live birth or stillbirth in the two years preceding the survey received antenatal care from skilled providers, down from 93% in 2017 (Philippine Statistics Authority, 2023). While this indicator is positive, it masks significant regional and socio-economic disparities. For instance, in the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), only 47.5% of women received antenatal care from skilled providers, compared to nearly 99% in some other regions.

Financial constraints remain a significant barrier to maternal health service utilization in the Philippines. Cagayan et al. (2022) found that while public birthing facilities often minimize out-of-pocket expenses, many mothers still report insufficient financial capacity to address their needs, particularly when required to pay for laboratory tests, ultrasonography, or medications not covered by PhilHealth's Maternity Care Package. Transportation and opportunity costs of seeking care, such as lost income or time away from household responsibilities, also deter women from utilizing available services, especially in geographically isolated and disadvantaged areas (GIDAs). Social protection schemes like the Pantawid Pamilyang Pilipino Program (4Ps) have helped increase compliance with prenatal and postnatal care, as shown in Negros Oriental where 94.69% of 4Ps beneficiaries submitted for prenatal check-ups (Belciña, 2017). However, the reach and adequacy of these programs remain uneven, and many women still face substantial out-of-pocket expenses.

Low maternal health literacy is another persistent issue. The Philippine NDHS and other studies have identified that a significant proportion of women, particularly in rural and marginalized communities, have limited knowledge of the benefits of facility-based delivery, postnatal care, and exclusive breastfeeding (Situation of Children Philippines, 2023). Cultural beliefs, fear of mistreatment at health facilities, and reliance on traditional medicine further reduce demand for formal maternal health services. For example, the Supporting Maternal and Child Health Improvement and Building Literate Environments (SMILE) project in Mindanao found strong correlations among illiteracy, poverty, poor health, and nutrition, particularly in the ARMM region (UNESCO, 2024). These findings underscore the need for integrated approaches addressing health literacy and financial barriers.

Recent government and civil society initiatives have sought to address these challenges. The Department of Health (DOH), in partnership with the World Health Organization (WHO) and the Korea International Cooperation Agency (KOICA), has implemented programs to increase antenatal care visits and facility-based deliveries, with notable success in regions like Aklan and Davao (WHO, 2023). The Promoting Rights Organizing for Health (PRO-Health) program in Dumaguete City covers all 30 barangay health stations. It actively involves barangay officials, youth, and women's groups in monitoring and accountability (G-Watch, 2023). These efforts have improved service delivery and community engagement. However, challenges persist in sustaining program reach, addressing hidden costs, and ensuring that health education is accessible and actionable for all women.

At the local level, Dumaguete City and Barangay Batinguel reflect the progress and the persistent gaps in maternal health service delivery. The city's health office has been recognized for its proactive approach to adolescent and maternal health, including regular coordination with schools, advocacy campaigns, and monitoring tools to assess program effectiveness (G-Watch, 2023). However, qualitative studies in Metro Dumaguete reveal that financial capacity remains a significant barrier to healthcare access, particularly for older persons and those with chronic health needs (Bustillo et al., 2021). While Marina Clinic and other community-based health facilities have historically provided low-cost maternal and child healthcare, the sustainability of such models is threatened by resource constraints and the need for continuous community engagement (Santos, 2025).

Central Visayas, the region that once encompassed Dumaguete City, has also faced challenges in sustaining improvements in maternal and child health outcomes. The regional development report noted increased maternal mortality from 30.08 per 100,000 live births in 2017 to 57.93 in 2018, despite improvements in basic education and other human capital indicators (NEDA Region 7, 2018). This suggests that investments must match gains in health literacy and financial capacity in health system infrastructure and service delivery.

In summary, the literature from around the world and across the Philippines converges on the conclusion that both financial and maternal health literacy are critical to improving maternal health outcomes. However, most studies examine these factors in isolation, without fully exploring their intersection and combined effects on women's health behaviors and outcomes. In the context of Barangay Batinguel, Dumaguete City, there is a pressing need to understand how women navigate the dual challenges of financial constraints and limited health literacy, and how these challenges shape their access to and utilization of maternal health services.

Therefore, premises considered, the purpose of this study is to address this gap by exploring the lived experiences of women in Barangay Batinguel, Dumaguete City, focusing on the intersection of financial and maternal health literacy. By centering local voices and integrating global and national evidence, this research aims to inform targeted, context-sensitive interventions that bridge the gap between policy and practice, ultimately advancing maternal health equity in the community.

2.0 Methodology

2.1 Research Design

This study adopted a qualitative phenomenological research design to explore women's lived experiences in Barangay Batinguel, Dumaguete City, regarding the intersection of financial and maternal health literacy. The phenomenological approach is chosen to deeply understand how women perceive, interpret, and navigate the challenges associated with accessing and utilizing maternal health services in the context of their financial realities. This design aligned with the study's aim to generate rich, context-specific insights that quantitative methods may not capture.

2.2 Research Participants

Participants in this study were women aged 20 to 38 years who had resided in Barangay Batinguel, Dumaguete City, for at least two (2) years and had experienced pregnancy or motherhood within the last five (5) years. Purposive sampling was used to ensure a diverse representation of socioeconomic backgrounds, including beneficiaries of social protection programs (such as 4Ps), informal sector workers, and homemakers. A sample size of approximately 5 to 15 participants was targeted, which was sufficient for thematic saturation in qualitative research. Recruitment was facilitated through collaboration with barangay health workers (BHWs) and local leaders, ensuring that participants were approached respectfully and with cultural sensitivity.

2.3 Research Instruments

The primary research instrument was a semi-structured interview guide, developed based on the study's theoretical frameworks and literature review. The guide consists of open-ended questions organized into sections covering background information, financial literacy experiences, maternal health literacy experiences, the intersection of financial and health decisions, coping strategies, and recommendations for improvement. A brief demographic questionnaire was also administered to collect data on participants' age, education, occupation, and household income. The interview guide was pilot-tested with a small group of women from a neighboring barangay to refine question clarity and appropriateness.

2.4 Data Gathering Procedure

Before data collection, approval for conducting interviews with the participants and ethical approval was obtained from the Local Government Unit of Batinguel through its Punong Barangay. Recruitment began with barangay health workers inviting eligible women to participate in the study, emphasizing the voluntary nature of participation. Informed consent was obtained from all participants, and the study's purpose, procedures, risks, and benefits were explained in the local language (Cebuano) as needed. Interviews were conducted in person at a private location within the barangay health station. Each interview lasted approximately 30 to 60 minutes and was audio-recorded with the participant's permission. Field notes were taken to document nonverbal cues and contextual observations. After the interviews, participants were allowed to review summarized transcripts to ensure accuracy and authenticity of their responses.

2.5 Data Analysis

The collected data was analyzed using thematic analysis. Audio recordings were transcribed verbatim and translated into English if necessary. The analysis began with open coding to identify significant statements and recurring concepts related to financial and maternal health literacy. Codes were grouped into categories and broader themes using axial coding. Thematic development was guided by the Health Literacy Skills Framework and the Capability Approach, ensuring that findings are mapped to relevant theoretical constructs such as information access, understanding, application, and agency. NVivo, a qualitative data analysis software, was used to facilitate systematic coding and organization of the data. Triangulation was achieved by comparing interview data with field notes and demographic information to enhance credibility and trustworthiness.

2.6 Ethical Considerations

Ethical considerations were essential in this study. Informed consents were obtained from all participants, who were assured of the voluntary nature of their involvement and their right to withdraw at any time without consequence. Confidentiality was maintained by assigning pseudonyms to participants and securely storing all data in password-protected digital files. Any potentially identifying information was removed from transcripts and reports. Participants were debriefed after each interview, and support and referrals were provided if any emotional distress arose. Finally, the findings were shared with the community and local stakeholders in an accessible format, ensuring that the research benefits those who contributed and supports evidence-based improvements in maternal health services in Barangay Batinguel, Dumaguete City.

3.0 Results and Discussion

3.1 Financial Barriers Restrict Access to Maternal Care

Financial constraints were universally cited as the most immediate barrier to maternal healthcare access. Participants detailed how even minor expenses, such as transportation, became insurmountable. Participant 03 recounted:

"I skipped two prenatal visits because tricycle fare cost ₱100 each way. When I finally went, the midwife scolded me for my swollen legs - I did not know it was a danger sign."

Her experience mirrors Abdi et al.'s (2024) findings in Somaliland, where indirect costs like travel deterred care-seeking despite free services. Participant 07 highlighted systemic gaps in health insurance:

"PhilHealth covered my delivery, but the hospital charged ₱2,500 for 'disposable supplies.' I pawned my wedding ring to pay it."

This reflects Cagayan et al.'s (2022) observation that Philippine policies often overlook hidden fees, forcing women into debt. Additionally, Participant 01 prioritized childcare costs over her health:

"I used my clinic money to buy milk formula. The midwife said breastfeeding was free, but my baby would not latch, and I had no one to ask for help."

Such trade-offs underscore Biratu et al.'s (2023) argument that financial scarcity forces women into impossible choices, exacerbating health risks.

3.2 Maternal Health Literacy Gaps Amplify Vulnerability

Health literacy gaps left participants vulnerable to misinformation and preventable complications. Participant 09 misunderstood gestational diabetes:

"The doctor said 'high sugar' could hurt my baby, so I stopped eating fruits. I did not know carbs were the problem - I ate rice twice daily."

This aligns with Ningrum et al. (2024), who found that medical jargon often alienates low-literacy patients. Participant 12 avoided prenatal vitamins after a neighbor warned they caused "big babies," leading to anemia. Meanwhile, Participant 05 relied on traditional practices:

"My mother-in-law massaged my belly daily to 'align the baby.' When I bled at 8 months, the hospital said the placenta had detached - I did not even know what that meant."

These cases echo Hussain and Ashraf's (2024) call for visual, non-text-based health tools in Pakistan, where similar literacy barriers exist.

3.3 Financial Realities Dictate Health Decisions

Financial instability directly shaped healthcare decisions, often overriding medical advice. Participant 08 explained her home birth:

"The hospital required a ₱3,000 deposit. I sold my phone to afford it, but my husband said, 'What if the baby dies anyway? We will have no money left.' So we stayed home."

This illustrates Sen's (2001) Capability Approach: poverty restricts women's freedom to act on health knowledge. Conversely, Participant 02 leveraged social capital:

"Our paluwagan group saved ₱5,000 for emergencies. When I needed a C-section, I did not panic - I knew the fund would cover it."

However, such resilience was rare; only three participants had access to communal savings, reflecting systemic inequities in social support networks.

3.4 Coping Strategies Highlight Resilience and Systemic Gaps

Women relied on fragmented community resources, though these often fell short. Participant 06 described inconsistent BHW support:

"The BHW gave me iron pills but never explained the dosage. I took two daily, got dizzy, and stopped. She just said, 'Your body will adjust.'"

This aligns with global critiques of frontline health worker training (Ningrum et al., 2024). Cultural practices also played a dual role: Participant 11 used hilot massage for back pain, but regretted delaying clinic visits:

"The hilot said my pain was normal, but the doctor found a kidney infection. I spent ₱1,500 on antibiotics - half my monthly income."

Gender dynamics further complicated coping strategies. Participant 04 hid her savings from her husband to afford check-ups:

"He would say, 'Why waste money on the clinic?' So I saved ₱20 daily from the market money. It took months, but I got three prenatal visits."

3.5 Demand for Integrated, Hyper-Local Solutions

Participants advocated for interventions addressing both financial and educational barriers. Participant 10 proposed leveraging technology:

"Why not send health tips via Facebook? We are always online. A video about warning signs would help more than pamphlets."

This resonates with MSD for Mothers' (2024) digital literacy initiatives in Europe. Others emphasized community-based solutions: Participant 07 suggested:

"Train sari-sari store owners to sell discounted vitamins. We are there daily anyway."

Such ideas align with Paraguay's dialect-tailored prenatal programs (Arrighi et al., 2021), which improved engagement through culturally familiar channels.

The study reveals a vicious cycle: financial insecurity limits access to health information, while poor health literacy escalates medical costs. For example, Participant 03's decision to walk to the clinic - driven by financial strain - resulted in preterm labor, costing her ₱15,000 in hospitalization, a sum exceeding her monthly income. Conversely, Participant 02's proactive use of communal savings illustrates how asset-based approaches can break this cycle, as seen in Ethiopia (Biratu et al., 2023). The findings underscore the need for dual-pronged interventions: enhancing health literacy through accessible, non-textual tools (e.g., videos, community radio) while expanding financial safety nets (e.g., transport vouchers, microloans). Policymakers must also address systemic gaps, such as PhilHealth's exclusion of ancillary costs, to align national policies with grassroots realities.

4.0 Conclusion

The findings of this study reveal that women in Barangay Batinguel, Dumaguete City, encounter significant and interconnected challenges related to financial constraints and maternal health literacy, which ultimately hinder their ability to access and utilize maternal healthcare services effectively. Financial barriers, such as transportation costs, hidden medical fees, and low household incomes, consistently forced participants to prioritize immediate economic needs over essential prenatal care, often resulting in delayed or missed healthcare visits. This observation is consistent with the findings of Abdi et al. (2024), who reported similar financial obstacles to maternal healthcare utilization in Somaliland. Furthermore, the study highlights that gaps in maternal health literacy amplify these risks, as many women demonstrated limited understanding of medical instructions and often relied on outdated or inaccurate health practices, including the use of traditional midwives and hesitancy toward vaccines and nutritional guidance. These patterns mirror the health literacy challenges described by Ningrum et al. (2024) in Indonesia, where misinformation and lack of accessible, culturally relevant health education continue to endanger maternal health.

The intersection of financial and health literacy challenges was evident in the participants' decision-making processes. Many women described having to choose between spending limited resources on healthcare or other household necessities, leading to decisions such as opting for home births or skipping medical check-ups to afford vitamins or other urgent needs. This phenomenon aligns with the findings of Ningrum et al. (2023), who noted that household wealth and literacy status significantly influence healthcare utilization. Despite these challenges, the participants displayed remarkable resilience by leveraging informal community support systems, such as savings groups and neighborly loans, and seeking assistance from barangay health workers. However, the capacity of these health workers to address complex health topics was often limited, indicating a need for further training and support.

Participants in the study expressed a strong demand for integrated solutions that address financial and health literacy barriers. They advocated for interventions that combine financial literacy education with accessible and culturally relevant health guidance, rather than treating these issues in isolation. This integrated approach is critical for addressing the dual burden women face in urban-poor settings and advancing health equity at the community level.

In light of these findings, several recommendations are proposed. First, it is essential to strengthen financial support systems by expanding local government subsidies for transportation, laboratory tests, and prenatal vitamins, and supporting community-based microfinance programs tailored to maternal health needs. Second, maternal health literacy should be enhanced by training barangay health workers in effective health communication and developing simplified, illustrated educational materials distributed during home visits or community gatherings. Third, financial and health education should be integrated through joint workshops and the inclusion of maternal health literacy modules in existing social protection platforms, such as the Pantawid Pamilyang Pilipino Program (4Ps). Improving healthcare accessibility through mobile clinics and telehealth services can reduce logistical barriers for women in remote or underserved areas. Additionally, fostering community-led solutions, such as mother support groups and educational sessions for families, can empower women to share coping strategies and challenge harmful socio-cultural myths. Finally, policy advocacy is needed to expand PhilHealth coverage to include essential prenatal and postnatal services and ensure that maternal health is prioritized in local development plans and budgets.

Addressing the intertwined challenges of financial and maternal health literacy in Barangay Batinguel requires urgent, integrated action from policymakers, healthcare providers, and community leaders. By implementing these recommendations, stakeholders can empower women to make informed health decisions without sacrificing their economic stability, ultimately improving maternal health outcomes and promoting greater health equity in the community (Abdi et al., 2024; Biratu et al., 2023; Cagayan et al., 2022; Hussain & Ashraf, 2024; Ningrum et al., 2024).

While the authors recommend subsidizing indirect costs, enhancing health worker training, and leveraging digital tools, future research could expand on these insights through mixed-methods longitudinal studies tracking the long-term efficacy of integrated financial-health literacy interventions. Comparative studies across diverse Philippine regions (e.g., rural vs. urban, conflict-affected areas) could identify contextual factors

influencing program scalability. At the same time, interdisciplinary collaborations with economists and technologists might develop AI-driven, dialect-specific health literacy tools or microfinance models tailored for maternal health savings. Finally, participatory action research co-designed with community health workers could test the feasibility of hyper-local solutions like sari-sari store-based vitamin distribution or mobile prenatal voucher systems, addressing structural gaps identified in the study.

5.0 Contributions of Authors

The authors generated all of the initial ideas for this research study. They performed all stages of the investigation, starting with developing the research problem, followed by data gathering, analysis, interpretation, and finally, manuscript writing. The authors are responsible for ensuring that the study was conducted with integrity, accuracy, and overall contribution to the field.

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7.0 Conflict of Interests

The authors report no conflicts of interest in conducting this research study. This study was conducted by the authors independently of any influence from outside parties or organizations that could affect its integrity, objectivity, or results. All findings, interpretations, and conclusions reached are the authors' own and do not necessarily represent the views of the Institutions with which they are connected.

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