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Awareness on Prenatal Care Among Mothers

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Abstract

This study assessed awareness of prenatal care among mothers in Barangay Sangali, Divisoria, and Zambowood in Zamboanga City, focusing on perceived susceptibility, perceived benefits, perceived barriers, and self-efficacy. Anchored in Nola J. Pender's Health Promotion Model, the study employed a quantitative-descriptive survey design involving 300 purposively selected primiparous and multiparous mothers aged 18–45 years, with 100 respondents from each barangay. Data were collected using a researcher-made five-point Likert-scale questionnaire that underwent expert validation and pilot testing and demonstrated high internal consistency with a Cronbach's alpha of 0.87. Frequency, percentage, weighted mean, and One-way ANOVA were used for data analysis. Mothers demonstrated very high perceived susceptibility (4.90), perceived benefits (4.82), and self-efficacy (4.80), while perceived barriers were low (1.97), resulting in an overall high prenatal-care awareness score of 4.12. Financial constraints represented the highest perceived barrier, although still rated low. The analysis reported no significant differences in overall awareness according to age, civil status, and religion, while differences were identified according to ethnicity and educational attainment. The study concludes that mothers generally understand the risks and benefits associated with prenatal care and possess strong confidence in engaging with prenatal services. It recommends regular prenatal check-ups, credible maternal-health information, family involvement, continued community health education and advocacy by healthcare workers, and broader future research. The study aligns with SDG 3: Good Health and Well-being by supporting maternal and infant health and SDG 5: Gender Equality by emphasizing women's knowledge, self-efficacy, and informed maternal-health decision-making. Its sustainability contribution encompasses public health, socio-economic, educational, community, and institutional sustainability by providing community-specific evidence for strengthening prenatal-care awareness, accessibility, health education, and maternal and child health.

Keywords: Health Promotion Model, Maternal Health, Perceived Barriers, Perceived Benefits, Perceived Susceptibility, Prenatal Care, Self-Efficacy, Zamboanga City

1. Introduction

Prenatal care is fundamental to maternal and child health because it supports the early identification and management of pregnancy-related risks, promotes healthy fetal development, and provides mothers with health education and preparation for childbirth. The World Health Organization (2023) recognized adequate prenatal care as important in reducing maternal and infant mortality and improving pregnancy outcomes. However, access to appropriate prenatal services remains uneven, including in the Philippines, where concerns persist regarding antenatal care received from qualified health professionals. International and Philippine evidence indicates that prenatal-care utilization is influenced not only by the availability of services but also by mothers' knowledge,

perceptions of pregnancy risks and benefits, confidence in seeking care, socioeconomic circumstances, cultural influences, family support, transportation, and health-system capacity (Gagnon et al., 2020; Garcia, 2020). These concerns are particularly relevant to underserved communities where awareness may coexist with practical barriers to obtaining care. Accordingly, this study examined awareness of prenatal care among mothers in Barangay Sangali, Divisoria, and Zambowood in Zamboanga City through four constructs: perceived susceptibility, perceived benefits, perceived barriers, and self-efficacy.

Prenatal care provides routine check-ups, screening, counseling, and other services that enable health professionals to monitor pregnancy, detect complications, and promote maternal and fetal well-being. Its importance is supported internationally. Research has associated prenatal care with improved birth outcomes and reductions in adverse outcomes such as preterm birth and low birthweight (Corman & Dave, 2020; Abate et al., 2020). Similarly, a study conducted in Amman, Jordan, found that the number of prenatal visits was negatively associated with low birthweight, supporting the importance of adequate prenatal-care attendance for favorable birth outcomes. Awareness is important because mothers must recognize pregnancy risks, understand the benefits of prenatal services, overcome perceived obstacles, and have confidence in their ability to seek appropriate care. In the present study, these dimensions are represented by perceived susceptibility, perceived benefits, perceived barriers, and self-efficacy. Together, they provide a multidimensional understanding of maternal awareness rather than limiting prenatal care to the number of clinical visits completed. The relevance of health knowledge is supported by Guler et al. (2021), who found that health literacy influenced pregnant women's understanding of antenatal care and pregnancy-related problems. Their findings emphasized the importance of health education for maternal and fetal health. At the same time, the meaning of adequate prenatal care extends beyond service frequency. Michel and Fontenot (2023) noted differences among patients, healthcare providers, researchers, and guidelines in defining adequate and quality prenatal care, while commonly used measures tend to emphasize the number of visits rather than access and quality. Variations among prenatal-care guidelines further demonstrate that recommendations concerning the organization and frequency of prenatal care are not necessarily uniform across healthcare settings (McCarthy et al., 2020). More recent work has also examined prenatal-care visit frequency as an important core outcome in evaluating prenatal-care schedules (Turrentine et al., 2024). Understanding prenatal-care quality also requires attention to patients' needs, preferences, and experiences with the care they receive (Fryer et al., 2023). This further supports considering mothers' perspectives alongside conventional measures of prenatal-care utilization.

Perceived susceptibility concerns a mother's belief about her likelihood of experiencing pregnancy-related complications. Recognition of vulnerability may encourage timely and consistent prenatal-care utilization. Pregnancy may involve complications that require appropriate monitoring and timely healthcare intervention (NICHD, 2020). Acharya et al. (2022) reported that adolescents who perceived themselves as susceptible to pregnancy complications or had previously experienced adverse complications demonstrated greater prenatal-care compliance. Conversely, those who did not perceive themselves as vulnerable were more likely to delay or forgo care (Acharya et al., 2022). Perceived benefits concern mothers' recognition of the positive outcomes associated with prenatal care. Mugisha et al. (2023) found that women who understood benefits such as early complication detection and improved birth outcomes were more likely to attend prenatal-care services regularly. Awareness of these benefits therefore provides an important motivational basis for prenatal-care utilization. Self-efficacy refers to mothers' confidence in their capacity to make health decisions, follow medical advice, and obtain recommended prenatal services. Faye (2021) showed that women with greater self-efficacy were more likely to attend routine prenatal-care services. Awareness consequently involves not only possessing information about pregnancy and prenatal care but also having sufficient confidence to act upon that knowledge. Perceived barriers may prevent awareness from translating into actual healthcare utilization. Previous studies have documented multiple barriers affecting women's experiences and utilization of prenatal care, demonstrating that awareness of prenatal-care benefits does not necessarily guarantee adequate access to services (Ghosh et al., 2020; Gagnon et al., 2020). Gage, Fink, Ataguba, and Kruk (2021) found across several sub-Saharan African countries that women could understand the importance of prenatal care while still experiencing restrictions related to distance, cost, and transportation. Similarly, delayed prenatal-care initiation has been associated with transitional circumstances, unplanned pregnancies, appointment and access problems, age, language, and delays between pregnancy confirmation and entry into care. Holt et al. (2024) emphasized that understanding these obstacles can support targeted outreach and improvements in access to early prenatal care. These four dimensions are interconnected. Mothers may recognize their vulnerability and understand the benefits of prenatal care yet remain unable to obtain services because of financial, geographical, social, cultural, or health-system barriers. Conversely, information, supportive services, and greater self-efficacy can strengthen mothers' ability to translate awareness into appropriate health-seeking behavior.

Prenatal-care awareness must also be considered in relation to the quality and nature of healthcare encounters. Humanized care emphasizes respect for autonomy, individualized attention, active listening, family participation, and emotional support. Such practices may improve adherence while addressing mothers' physical and psychological needs. Humanized prenatal care in Latin America emphasizes care that recognizes women's

individual needs and experiences throughout pregnancy (Jimeno Orozco et al., 2022). Globally, disparities in antenatal-care access and quality remain substantial. UNICEF (2024) emphasized the importance of appropriate antenatal care delivered by qualified professionals, including nutritional support and management of pregnancy complications. Differences in antenatal-care coverage, particularly across regions such as sub-Saharan Africa and Latin America, demonstrate the need for targeted interventions that simultaneously improve service access and quality. Quality prenatal care also has psychosocial implications. In the Philippine setting, an association between prenatal-care quality and maternal–fetal attachment was observed among first-time mothers (Gonzales & Barcelo, 2023). Information sharing, support, respectful interactions, adequate consultation, and healthcare-provider approachability were important to maternal experiences, indicating that prenatal services should address emotional and social needs in addition to clinical requirements.

Philippine studies demonstrate that prenatal-care utilization is affected by individual, socioeconomic, family, cultural, geographical, and institutional factors. In rural Davao del Norte, community nurses encountered inadequate medical equipment and resources as well as patients' reluctance to obtain care. Responses included prenatal education, alternative approaches to supplementation, collaboration, and efforts to strengthen community resources, emphasizing the importance of community nursing in underserved areas (Palma et al., 2024). National evidence also connects antenatal care with subsequent maternal healthcare utilization. Analysis of the 2022 National Demographic and Health Survey showed that women who completed antenatal care were more likely to deliver in healthcare institutions. Lower institutional-delivery rates were observed among some rural residents, older mothers, women with less education, unemployed women, and women with higher parity, supporting continued community outreach and efforts to address barriers to maternal services (Senewe et al., 2025). Access difficulties became particularly evident during the COVID-19 pandemic. De Guzman and Banal-Silao (2022) found that Filipino women experienced lockdown, transportation, and financial barriers despite recognizing the importance of antenatal care. Previous pregnancy experience, spousal support, and private transportation facilitated adequate care, while other personal and socioeconomic circumstances reduced access. The quality of care also varies according to mothers' circumstances. Research in selected barangays of Davao City identified favorable ratings for information sharing, anticipatory guidance, consultation time, and provider approachability, while educational attainment was associated with the quality of prenatal care received (Matutino et al. (2024)). Socioeconomic inequality presents another concern. Gutierrez et al. (2022) associated lower socioeconomic status, including poverty, unemployment, and limited education, with poorer pregnancy outcomes and reduced access to prenatal care. Healthcare-system conditions also influence accessibility. Meneses et al. (2024) identified health-seeking behavior, social support, organizational performance, personal challenges, and organizational challenges as factors affecting prenatal-care access during the pandemic. Their findings highlighted particular difficulties in geographically isolated and disadvantaged communities and emphasized multisectoral approaches and stronger primary healthcare resilience. Information and cultural factors are similarly important. In Mabalacat City, the availability and adequacy of prenatal health information, competent healthcare workers, and cultural beliefs and practices influenced prenatal health and health-seeking decisions (Orte et al., 2023). In Iriga City and Tabaco City, financial limitations, insufficient support, childcare responsibilities, relationship difficulties, and incomplete use of some antenatal services were reported despite generally favorable assessments of other aspects of care. Sande (2022) therefore demonstrated that access to comprehensive antenatal care depends on more than awareness alone. Evidence from Occidental Mindoro further indicates that high-quality prenatal care can strengthen maternal–fetal attachment through information sharing, adequate consultation time, anticipatory guidance, and psychosocial support. However, gaps involving mental-health assessment, preparatory programs, continuity, and integrated care remain relevant, particularly for marginalized mothers (Gonzales & Barcelo, 2023). At the program level, maternal-health initiatives demonstrate the potential value of strengthening local health systems. The Subnational Initiative Phase 2 implemented through the Department of Health, World Health Organization, and Korea International Cooperation Agency was associated with increased antenatal-care attendance in Aklan and increased health-facility deliveries in Davao (World Health Organization, 2023). The program also provided medical commodities and equipment to support maternal care among vulnerable populations and emphasized the inclusion of reproductive health in national and local development strategies (World Health Organization, 2023). Nevertheless, systemic limitations remain evident in Philippine rural health services. Insufficient facility capacity, limited laboratory services, lack of free medications and skilled personnel, and financial difficulties can constrain mothers' utilization of maternal healthcare. Addressing these barriers is therefore necessary to improve maternal-health service utilization and reduce maternal morbidity and mortality (Cagayan et al., 2022). Within Zamboanga City, these broader concerns provide the context for examining mothers residing in Barangay Sangali, Divisoria, and Zambowood. These communities represent the specific setting in which the study evaluates whether mothers are sufficiently aware of prenatal care and how such awareness is reflected through perceived susceptibility, perceived benefits, perceived barriers, and self-efficacy.

The study is anchored in Nola J. Pender's Health Promotion Model (HPM), which provides a framework for understanding how personal perceptions and barriers influence health-promoting behavior. Applied to prenatal care, the model proposes that mothers' perceptions of pregnancy-related vulnerability, anticipated benefits of preventive action, barriers to obtaining services, and confidence in performing health-promoting behaviors can

shape their engagement with prenatal care. Perceived susceptibility reflects mothers' beliefs regarding their vulnerability to pregnancy complications. Awareness of conditions such as gestational diabetes, preeclampsia, or fetal growth restriction may strengthen recognition of the importance of regular prenatal check-ups. Perceived benefits represent beliefs regarding the advantages of prenatal care and its potential to protect maternal and fetal health. The model also recognizes that health-promoting behavior can be constrained by perceived barriers. In the prenatal-care context, these may include financial limitations, transportation difficulties, social stigma, cultural pressures, or insufficient knowledge regarding available services. Previous research applying health-behavior frameworks to prenatal care similarly demonstrates the importance of mothers' perceptions and beliefs in shaping prenatal-care behaviors (Izadirad et al., 2017). Health education alone may therefore be insufficient unless mothers are also supported in overcoming practical obstacles to care. Self-efficacy represents confidence in successfully performing health-promoting behaviors. For mothers, this involves believing that they have the knowledge and capacity to seek, access, and adhere to prenatal-care practices. Information and support may strengthen this confidence and make appropriate healthcare utilization more attainable. Conceptually, the study focuses on mothers who are currently pregnant or have previously given birth and assesses their level of awareness of prenatal care through four interrelated constructs: perceived susceptibility, perceived benefits, perceived barriers, and self-efficacy. Perceived susceptibility concerns beliefs regarding the likelihood of pregnancy complications; perceived benefits concern the anticipated advantages of prenatal care; perceived barriers represent obstacles to obtaining care; and self-efficacy concerns confidence in seeking and adhering to prenatal-care practices. Collectively, these constructs provide the framework for evaluating maternal awareness and its relevance to prenatal-care decisions and behaviors.

Existing literature consistently demonstrates the importance of prenatal care for maternal and infant health, but several gaps support the present investigation. Much of the literature emphasizes birth outcomes, service utilization, adequacy of visits, or quality of care. Comparatively less attention is directed toward maternal awareness as a multidimensional construct encompassing perceived susceptibility, perceived benefits, perceived barriers, and self-efficacy, particularly among mothers in Zamboanga City. The literature also demonstrates an important distinction between knowing that prenatal care is beneficial and being able to obtain it. Mothers may possess adequate health knowledge while encountering financial, transportation, social, cultural, family, or institutional barriers. Differences associated with education, socioeconomic circumstances, age, support systems, and local healthcare resources further indicate that maternal awareness and access must be understood within specific community contexts. This gap is especially relevant to Barangay Sangali, Divisoria, and Zambowood, where locally grounded evidence can help determine mothers' awareness of prenatal care. The study therefore examines primiparous and multiparous mothers aged 18–45 years residing in these three barangays, regardless of ethnicity, educational attainment, and socioeconomic status. It specifically determines awareness in terms of perceived susceptibility, perceived benefits, perceived barriers, and self-efficacy and examines whether awareness differs when mothers' demographic profiles are considered. The study can provide a basis for healthcare personnel to strengthen maternal health education and counseling, assist student nurses in developing appropriate health-teaching activities, and help families understand their supportive role in overcoming financial and logistical obstacles. It also contributes locally grounded evidence that may guide future research and interventions concerning prenatal care and maternal–infant health.

The study directly aligns with SDG 3: Good Health and Well-being because prenatal-care awareness supports maternal and infant health through recognition of pregnancy risks, understanding of prenatal-care benefits, confidence in obtaining care, and identification of barriers that may prevent appropriate service utilization. Improved awareness and access can contribute to safer pregnancies, timely management of complications, and efforts to reduce preventable maternal and neonatal morbidity and mortality. The study also aligns with SDG 5: Gender Equality by emphasizing women's knowledge, self-efficacy, and capacity to make informed decisions regarding healthcare during pregnancy. Understanding the barriers mothers experience is important because meaningful health empowerment requires not only information but also conditions that enable women to obtain necessary maternal-health services. These alignments are consistent with the study's original identification of SDG 3: Good Health and Well-being and SDG 5: Gender Equality as relevant to prenatal-care awareness and informed maternal health choices.

The study contributes primarily to public health, socio-economic, educational, community, and institutional sustainability. From a public-health perspective, sustained maternal-health improvement depends on mothers being able to recognize pregnancy risks, understand the value of prenatal care, and access appropriate services. Prenatal-care awareness can support preventive healthcare by encouraging timely health-seeking behavior and reducing avoidable maternal and infant complications. Its socio-economic relevance arises from evidence that financial limitations, transportation difficulties, employment circumstances, education, and other resource-related barriers can influence prenatal-care access. Identifying these obstacles can support approaches that address disparities between mothers who understand the importance of prenatal care but differ in their capacity to obtain it. The study also contributes to educational sustainability through maternal health education and the role of nurses, student nurses, families, and community health personnel in communicating accurate prenatal-care information.

Sustained health education can strengthen risk recognition, understanding of benefits, and self-efficacy while addressing misconceptions and culturally influenced health-seeking behaviors. At the community and institutional levels, the study emphasizes that maternal health cannot depend solely on individual knowledge. Families, community health workers, healthcare professionals, health centers, local leaders, and public-health institutions have complementary roles in creating supportive and accessible maternal-care environments. Evidence concerning perceived barriers can therefore inform community-level education and healthcare strategies, while evidence concerning mothers' awareness can help healthcare providers adapt counseling and support to local needs. Overall, examining perceived susceptibility, perceived benefits, perceived barriers, and self-efficacy among mothers in Barangay Sangali, Divisoria, and Zambowood provides a community-specific basis for strengthening prenatal-care awareness and access. By connecting individual health knowledge with family support, health education, socioeconomic conditions, and healthcare-system capacity, the study contributes to more sustainable maternal and child health within the communities examined.

2. Material and methods

2.1 Research Design

The study used a quantitative-descriptive survey design to determine mothers' awareness of prenatal care in Zamboanga City. This design was appropriate for describing the characteristics, conditions, and experiences of the population without manipulating the variables. Descriptive research examines individuals, events, and conditions as they naturally occur.

2.2 Locale of the Study

The study was conducted in Barangay Sangali, Barangay Divisoria, and Barangay Zambowood, which are affiliated communities of Universidad de Zamboanga and are located in District II of Zamboanga City, Philippines. These three barangays constituted the geographical setting from which the study respondents were selected.

2.3 Respondents of the Study

The respondents consisted of 300 primiparous and multiparous mothers aged 18–45 years who resided in Barangay Sangali, Barangay Divisoria, and Barangay Zambowood. The study included mothers regardless of ethnicity, educational background, or socioeconomic status, provided that they satisfied the established inclusion criteria. One hundred qualified mothers were included from each of the three barangays. The respondents represented different demographic characteristics. Of the 300 respondents, 61 (20.3%) were aged 18–25 years, 94 (31.3%) were aged 26–33 years, 72 (24.0%) were aged 34–41 years, and 73 (24.3%) were above 41 years. In terms of civil status, 37 (12.3%) were single, 203 (67.7%) were married, 53 (17.7%) were in live-in relationships, and 7 (2.3%) were separated. Regarding religion, 136 (45.3%) were Islam, 156 (52.0%) were Roman Catholic, and 8 (2.7%) belonged to other religions. Ethnically, 72 (24.0%) were Tausug, 101 (33.7%) were Zamboangueño, 71 (23.7%) were Bisaya, 45 (15.0%) were Sama, 8 (2.7%) were Yakan, and 3 (1.0%) belonged to other ethnic groups. Educational attainment ranged from elementary level to college graduate, with the largest group consisting of high school graduates. Overall, most respondents were aged 26–33 years, married, and Zamboangueño.

2.4 Sample and Sampling Procedure

Purposive sampling was employed to select respondents who satisfied the study's predetermined criteria. Eligible participants were primiparous or multiparous mothers aged 18–45 years residing in Barangay Sangali, Divisoria, or Zambowood. Selection was conducted without regard to ethnicity, educational background, or socioeconomic status. A total sample of 300 respondents was obtained, comprising 100 qualified mothers from each barangay. The researchers ensured that all selected respondents satisfied the inclusion criteria before participation.

2.5 Research Instrument

Data were collected using an instrument consisting of two parts. The first part gathered respondents' demographic information, specifically age, ethnicity, educational background, civil status, and religion. The second part was a researcher-made questionnaire using a five-point Likert scale to assess mothers' awareness of adequate prenatal care according to perceived susceptibility, perceived benefits, self-efficacy, and perceived barriers. The questionnaire was reviewed by the research adviser and two validators. Content validity and consistency were established through expert evaluation. After an initial expert review, the questionnaire was submitted to two independent expert-faculty members, each holding at least a master's degree and possessing expertise relevant to the study. A pilot study was subsequently conducted among mothers from a different barangay to identify and correct problems with the instrument. Reliability was assessed using Cronbach's alpha based on the pilot-test results. The questionnaire obtained a Cronbach's alpha value of 0.87, indicating high reliability and internal consistency for use in the main study.

2.6 Data Gathering Procedure

Before data collection, the researchers presented the proposal to the research panel and, following approval, submitted the study to the Center for University Research and Innovations for review. Permission was also obtained from the Dean of the Nursing Program and the Director of the School of Allied Medicine to conduct the research outside the university. The researchers subsequently secured approval from the City Health Office and presented the authorization documents to the barangay halls and chairpersons of the selected communities. After the required permissions were obtained, the researchers administered the customized questionnaires to eligible mothers at the health centers. Data collection was conducted face-to-face during prenatal visits over five weeks between April and May in the second semester of academic year 2024–2025. The study purpose was explained to the respondents, voluntary participation was maintained, and confidentiality and ethical requirements were observed throughout data collection. Completed questionnaires were securely retained by the principal member of the research team. The collected information was encoded in Microsoft Excel for tabulation and analysis under the guidance of the designated statistician. Physical and digital records were secured to protect confidentiality, with digital files protected through encryption. The study specified that all collected data would be disposed of after three years: physical questionnaires would be incinerated and digital records permanently deleted.

2.7 Data Analysis Techniques

The collected data were organized, classified, encoded, and tabulated according to the research design and formulated research problems. Frequency and percentage were used to describe the respondents' demographic profiles. Weighted mean was used to determine mothers' level of awareness of prenatal care, while One-way ANOVA was applied to examine differences between the means of more than two groups.

2.8 Ethical Considerations

Prior to participation, mothers received informed-consent forms and information regarding the nature and procedures of the study as well as its possible opportunities and risks. Participation was voluntary, and respondents were informed of their right to withdraw at any time without adverse consequences. Personal information was anonymized, records were securely maintained, and participants were not identified in research reports or publications without explicit consent. The researchers adhered to the Data Privacy Act of 2012 (Republic Act 10173) and submitted the questionnaire for ethical review by the Center for University Research and Innovations. The study respected participants' autonomy, cultural considerations, dignity, and rights while seeking to maximize benefits and minimize potential harm. Respondents were selected using fair criteria to ensure equal treatment and access to the potential benefits of the research.

3. Results and Discussion

3.1 Level of Awareness on Prenatal Care Among Mothers

The study assessed prenatal-care awareness across four dimensions: perceived susceptibility, perceived benefits, self-efficacy, and perceived barriers. The findings generally indicated strong awareness of pregnancy risks and prenatal-care benefits, high confidence in seeking and following care, and relatively low perceived barriers.

3.1.1 Perceived Susceptibility

Mothers demonstrated a very high level of awareness in terms of perceived susceptibility, with a grand mean of 4.90. Individual mean scores ranged from 4.87 to 4.91, with respondents strongly agreeing that awareness of prenatal care influences their perception of pregnancy risks, that every pregnancy carries risks even when the mother feels healthy, that knowledge is important in understanding pregnancy-related risks, that skipping prenatal visits increases the possibility of complications, and that family histories of conditions such as hypertension and diabetes may increase susceptibility to pregnancy-related problems. The finding indicates that recognition of pregnancy-related risks can encourage prenatal-care compliance. Acharya et al. (2022) similarly found that mothers who perceived themselves as vulnerable to complications or had experienced previous pregnancy complications were more likely to use prenatal-care services, whereas those who perceived little susceptibility were more likely to delay or avoid care. The study therefore emphasized health education, personalized discussions of pregnancy risks, family involvement, culturally sensitive communication, and consistent health messages from community midwives as approaches for maintaining awareness and prenatal-care attendance.

3.1.2 Perceived Benefits

Mothers also demonstrated a very high level of awareness of the perceived benefits of prenatal care, with a grand mean of 4.82. The individual indicators ranged from 4.77 to 4.88 and were all rated very high. Respondents strongly recognized that prenatal-care awareness contributes to a healthy pregnancy, that informed women are more likely to experience safe and healthy pregnancies, that understanding prenatal-care benefits encourages adherence to medical advice, and that regular and early prenatal visits can improve maternal and infant outcomes. The results suggest that understanding the benefits of prenatal care can encourage mothers to use services regularly. Mugisha et al. (2023) found that women who recognized benefits such as early detection of complications and improved birth outcomes were more likely to attend prenatal-care services. Supporting these

findings, Mugisha et al. (2023) found that women who understood the benefits of prenatal care—such as early detection of complications and improved birth outcomes—were more likely to attend prenatal services regularly. Their study also revealed that participants perceived prenatal care as beneficial to both maternal and neonatal health.

3.1.3 Self-Efficacy

The respondents demonstrated a very high level of self-efficacy, with a grand mean of 4.80 and individual mean scores ranging from 4.76 to 4.84. Mothers strongly agreed that knowledge of prenatal care enabled them to take proactive steps toward a healthy pregnancy, seek and use prenatal services when needed, recognize and respond to possible complications, follow medical advice and regular check-ups, and make informed decisions regarding pregnancy. The findings indicate that awareness is associated with mothers' confidence in making health decisions and obtaining prenatal services. In Faye et al. (2021) study published in BMC Pregnancy and Childbirth showed that women with higher self-efficacy, particularly confidence in making decisions and following medical advice, were more likely to attend the routine prenatal care services. The findings aligned with the result in the current study wherein all participants demonstrated a very high self-efficacy in relation to the prenatal care services. The study further emphasized empowerment-focused programs, counseling, peer support, and culturally appropriate educational materials as ways to reinforce mothers' confidence and engagement in prenatal care.

3.1.4 Perceived Barriers

Perceived barriers obtained a grand mean of 1.97, interpreted as low. Financial constraints received the highest mean of 2.32 but remained within the low category. Limited access to nearby healthcare facilities or transportation obtained a mean of 1.95, cultural beliefs or family expectations obtained 1.94, and competing work, household, or childcare responsibilities obtained 1.84. Fear of medical tests or unfavorable findings received the lowest mean of 1.80 and was interpreted as very low. Overall, respondents generally disagreed that these barriers substantially prevented them from obtaining prenatal care. These results suggest that most respondents perceived themselves as having adequate knowledge, resources, and support to attend prenatal check-ups, although financial and access-related difficulties remained present to some extent. Gage et al. (2021) conducted a study across multiple sub-Saharan African countries; the findings of the study, such as the distance, cost, and transportation continued to limit the attendance in prenatal care services. This finding indicates that improvements in healthcare-system delivery may support more regular compliance with scheduled prenatal check-ups.

3.1.5 Overall Awareness of Prenatal Care

Across the four dimensions, perceived susceptibility obtained the highest mean of 4.90, followed by perceived benefits at 4.82 and self-efficacy at 4.80, all interpreted as very high. Perceived barriers obtained a low mean of 1.97. The overall grand mean was 4.12, corresponding to a high level of prenatal-care awareness among the mothers. The overall findings indicate that mothers generally understood and valued prenatal care and were confident in their ability to engage with prenatal services. However, the study emphasized that minimizing logistical and socioeconomic barriers remains important for improving compliance. It identified stronger community engagement, personalized guidance from local health workers, regular follow-ups, peer support, improved transportation, financial assistance, outreach activities, and culturally sensitive education as measures that could support sustained prenatal-care utilization and maternal and child well-being.

3.2 Differences in Prenatal Care Awareness According to Demographic Profile

The analysis examined differences in overall prenatal-care awareness according to age, civil status, religion, ethnicity, and educational attainment. Age showed no significant difference ($F = 0.319$, $p = 0.812$), while civil status was also not significant ($F = 0.913$, $p = 0.448$). Religion likewise showed no significant difference ($F = 2.66$, $p = 0.096$). In contrast, the results identified significant differences according to ethnicity and educational attainment, with the manuscript reporting $p = 0.496$ for ethnicity and $p = 0.048$ for educational attainment. The absence of a significant age difference indicates that prenatal-care awareness was generally similar across age groups. This suggests that, within the population examined, mothers' awareness of prenatal care did not vary significantly according to age. Similarly, the absence of a significant difference according to civil status suggests that prenatal-care awareness was generally comparable among single, married, separated, and live-in respondents. This indicates that, within the population examined, civil status did not significantly influence mothers' overall awareness of prenatal care. Religion likewise did not significantly differentiate awareness. The manuscript relates educational differences to Saleh's (2019) findings, where highly educated women were far more likely to attend regular prenatal visits compared to those with lower educational backgrounds. Overall, the study emphasizes culturally sensitive and education-based prenatal health strategies to address differences associated with ethnicity and educational attainment while maintaining accessibility for all mothers.

4. Conclusion & Recommendations

The study concludes that mothers have a high level of awareness of prenatal care, particularly in terms of perceived susceptibility, perceived benefits, and self-efficacy, while perceived barriers received a low level of agreement.

The findings further indicate significant differences in perceived susceptibility when mothers are grouped according to age, civil status, religion, and educational attainment, whereas no significant differences were observed in perceived benefits, self-efficacy, or barriers based on age, civil status, or religion.

Mothers are encouraged to attend health centers regularly for prenatal check-ups and use credible health information sources to strengthen their understanding of prenatal care and pregnancy warning signs. Families should be educated and involved in prenatal-care awareness activities to promote shared responsibility and reduce financial and social barriers. Midwives, nurses, and barangay health workers should continue prenatal-care advocacy and community health education involving mothers, partners, and family members, while nursing students should participate in community-based prenatal education through home visits, health talks, and awareness activities. Future researchers are encouraged to include additional barangays or regions and examine other variables, such as maternal mental health and access to prenatal services, to broaden understanding of prenatal-care awareness.

The study was limited to mothers from Barangay Sangali, Barangay Divisoria, and Barangay Zambowood in Zamboanga City; thus, its findings are specific to the communities included in the investigation. The recommendation to expand future research to additional barangays or regions and examine other variables indicates that the present study did not encompass broader geographic populations or factors such as maternal mental health and access to prenatal services.

5. Compliance with ethical standards

The study was conducted in accordance with established ethical procedures to protect the rights, dignity, autonomy, privacy, and welfare of the participants. Participation was voluntary, and informed consent was obtained after participants were provided with information about the nature, procedures, potential opportunities, and risks of the study. Participants were informed of their right to withdraw at any time without adverse consequences. Personal information was anonymized, research records were securely maintained, and participants were not identified in reports or publications without explicit consent. The researchers adhered to the Data Privacy Act of 2012 (Republic Act 10173), and the research questionnaire was submitted to the Center for University Research and Innovations for ethical review. The study also applied fair participant-selection criteria and sought to maximize potential benefits while minimizing possible harm.

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