

Cultural Practices Related to the Prevalence of Non-Communicable Diseases among Pregnant Women

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ABSTRACT

The study determined the cultural practices related to the prevalence of non-communicable diseases among pregnant women in Baao, Camarines Sur. Specifically, it sought answers to the demographic profile of the respondents in terms of age, educational background, family monthly income, religion, number of pregnancies, age of gestation, and non-communicable diseases during pregnancy, the cultural practices related to the prevalence of non-communicable diseases along lifestyle practices, socio-economic background, environmental influences, and genetic predisposition, the significant relationship between the demographic profile of the respondents and these cultural practices, and the measures that could be proposed to address the cultural practices affecting the prevalence of non-communicable diseases among pregnant women.

The study utilized the descriptive-correlational method using a structured questionnaire checklist as the data-gathering instrument. The respondents of the study were 95 pregnant women with non-communicable diseases from 22 out of 30 barangays in Baao, Camarines Sur, using purposive sampling, while 2 barangays refused to participate. The cultural practices related to the prevalence of non-communicable diseases among pregnant women is highly practiced along socio-economic background (3.82), lifestyle practices (3.61), genetic predisposition (3.61), and environmental influences (3.58), indicating that most respondents actively adhere to protective, health-promoting behaviors rather than potentially risk-enhancing traditions, although some specific traditional beliefs and practices still persist.

The statistical tests revealed that age, educational background, and the type of non-communicable disease during pregnancy had a significant relationship with cultural practices along lifestyle, socio-economic background, environmental influences, and genetic predisposition, while family monthly income, religion, number of pregnancies, and age of gestation showed not significant relationship. Based on the identified gaps, the prenatal health education program “Ligtas na Pagbubuntis Pagunawa sa Paniniwala at Hindi Nakakahawang Sakit” was developed as a necessary and appropriate intervention to modify high-risk practices and strengthen protective behaviors related to non-communicable diseases among pregnant women.

Keywords: cultural practices; non-communicable diseases; pregnant women; prenatal health education program

INTRODUCTION

Cultural practices are important structures that influence the behaviors, beliefs and decision making of the individual and community in every area of life, including health care. These traditions and customs, which can also carry important community knowledge and social cohesion, can have a powerful effect on health-seeking behavior, acceptance of treatment and preventive health practices. A cultural understanding and respect for engaging in cultural practices is important in creating interventions that effectively integrate cultural wisdom and contemporary health care methodology, thereby creating culturally appropriate and medically sound health programs.

The impact of non-communicable diseases (NCDs) on maternal health extends beyond immediate pregnancy outcomes, often related to long-term health trajectories for both mothers and their offspring. Gestational diabetes, for instance, not only affects maternal health during pregnancy but also increases the risk of type 2 diabetes and

cardiovascular diseases later in life. Similarly, hypertensive disorders of pregnancy are associated with an elevated risk of future cardiovascular events. The intrauterine environment shaped by maternal NCDs can also have lasting effects on fetal development, potentially predisposing them to various health issues throughout their lives. This intergenerational cycle of health risks underscores the importance of addressing NCDs as an integral part of maternal healthcare.

The World Health Organization (WHO) recognizes the growing burden of NCDs in pregnancy as a global health priority. According to WHO estimates, NCDs account for a significant proportion of maternal deaths worldwide, with cardiovascular diseases being a leading cause in many countries. The organization emphasizes the need for comprehensive strategies integrating NCD prevention, screening, and management into existing maternal health services. WHO guidelines stress the importance of early detection and appropriate management of NCDs during pregnancy to mitigate risks and improve outcomes for mothers and newborns.

Addressing NCDs in pregnancy focuses on strengthening health systems to provide continuous care throughout the life course. This includes promoting preconception health, enhancing antenatal care services to include NCD screening and management, and ensuring adequate follow-up in the postpartum period. The organization advocates multisectoral collaboration to address the social determinants of health that contribute to the development of NCDs. WHO also emphasizes the importance of health education and empowerment of women to make informed decisions about their health before, during, and after pregnancy.

In the Philippines, the legal framework supporting maternal health research and interventions is anchored in Republic Act 10354, known as the Responsible Parenthood and Reproductive Health Law of 2012. This comprehensive legislation mandates the Philippine government to promote universal access to reproductive health services, including maternal health care services with skilled birth attendance and facility-based deliveries. The law recognizes the fundamental human rights of individuals, including their right to make healthcare decisions in accordance with their religious convictions, ethics, and cultural beliefs, while simultaneously emphasizing the importance of responsible parenthood and reproductive health. This legal foundation provides a robust basis for investigating how cultural practices influence maternal health outcomes, as it acknowledges the intersection between cultural beliefs and health services while promoting evidence-based interventions that respect cultural diversity (Morato, 2025).

The prevalence and impact of NCDs on maternal health outcomes among pregnant women represent a complex and evolving challenge in public health. The traditional focus on acute obstetric complications must expand to encompass the management of chronic conditions throughout pregnancy and beyond. This shift demands not only clinical expertise but also a reevaluation of healthcare systems, policies, and resource allocation to ensure that women with NCDs receive comprehensive, integrated care that addresses both their immediate and long-term health needs. Without such integration, the goal of reducing global maternal mortality will remain increasingly difficult to achieve.

METHODOLOGY

The researcher utilized the descriptive-correlational method using a questionnaire checklist as the data-gathering instrument. The descriptive-correlational method was used to determine the respondents' demographic profile, the cultural practices influencing the prevalence of NCDs among pregnant women. The researcher utilized a purposive sampling technique in selecting the respondents of the study, focusing specifically on pregnant women diagnosed with NCDs in selected barangays of Baao, Camarines Sur. The respondents of the study consisted of 95 pregnant women with NCDs from 22 barangays in Baao, Camarines Sur. All included respondents were either primigravida or multigravida and were in their first, second, or third trimester at the time of data collection.

The data collection questionnaire was utilized, consisting of a questionnaire checklist as the primary data gathering tool. Part I aimed to establish the respondents' profile, including details such as age, educational attainment, family monthly income, number of pregnancy/ies, age of gestation and non-communicable disease during pregnancy. Part II focused on analyzing the prevalence of NCDs among pregnant women along with lifestyle factors, socio-economic factors, environmental factors, and genetic predisposition. Part III assessed the impact of NCDs on maternal health outcomes among pregnant women with pregnancy complications, delivery

outcomes, and postpartum health. The reliability of the instrument was then measured using Cronbach's Alpha, which yielded a result of 0.95, interpreted as excellent, indicating a high level of internal consistency among the items.

In this research study, the analysis involved the calculation of percentages and rankings. The Weighted Mean was employed as a statistical tool to assess and quantify the prevalence and impact of NCDs on maternal health outcomes among the respondents. A five-point Likert scale was employed to analyze the prevalence of NCDs among the respondents to compute the weighted mean for each indicator. The chi-square test examined the connection between the demographic profile of the respondents and the prevalence of NCDs among pregnant women.

RESULTS AND DISCUSSION

1. Demographic Profile

Age. Figure 1 presents the age profile of the respondents. Out of 95 respondents, the largest group was aged 26–30 years old with 36 or 37.89%, followed by those aged 31–35 years old with 21 or 22.11%. Smaller proportions were observed among those aged above 35 years old with 19 or 20.00%, those aged 21–25 years old with 14 or 14.74%, and those aged below 20 years old with only 5 or 5.26%. This age profile suggests that the respondents are predominantly composed of women in their prime to advanced reproductive years, a developmental stage where the physiological and metabolic demands of pregnancy naturally increase. The concentration of women aged 26 and above indicates a population that may be more vulnerable to the cumulative effects of metabolic aging, long-standing dietary habits, and adherence to specific cultural traditions that could trigger or exacerbate pregnancy-related complications.

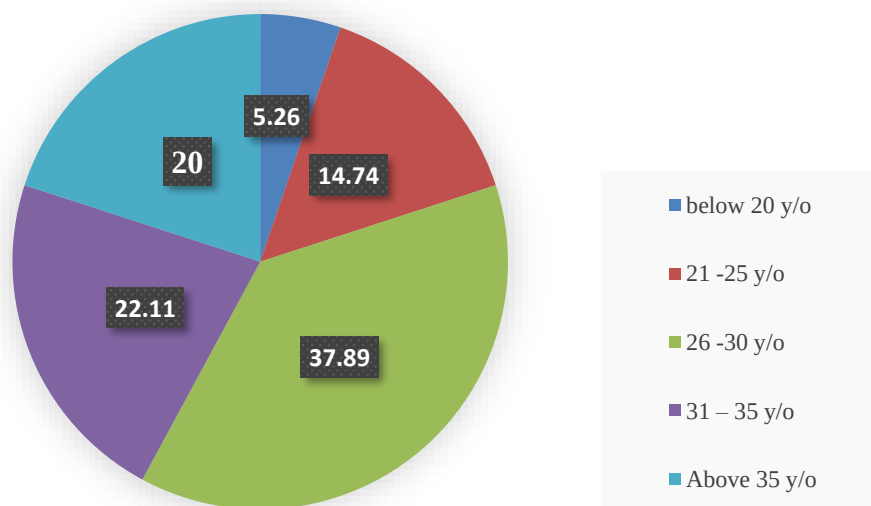


Figure 1.
Age

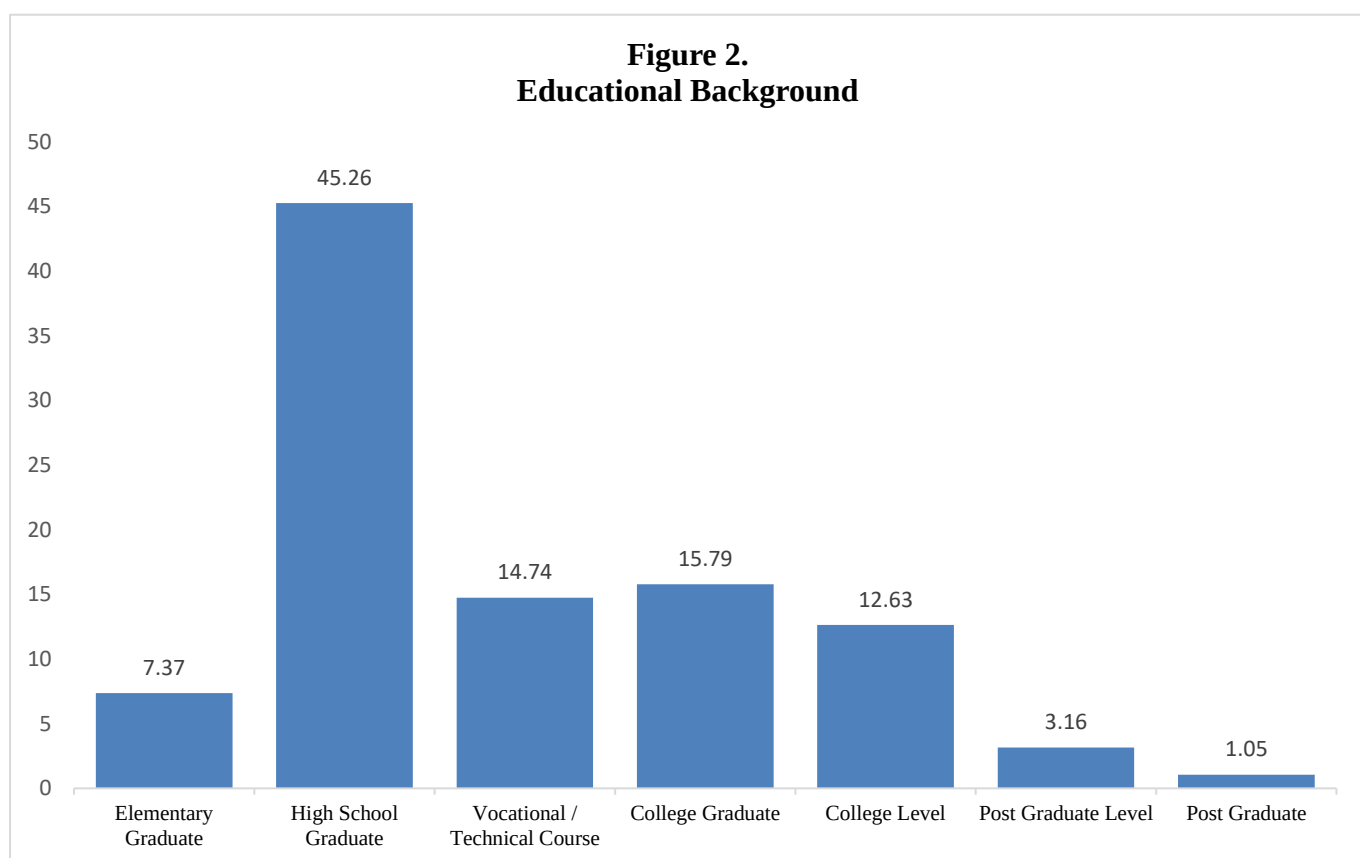
The high concentration of women in their mid-twenties to late thirties highlights a critical window where both biological aging and sustained exposure to traditional lifestyle practices begin to significantly impact maternal health. As women advance in maternal age, their natural metabolic reserves decline, making them more susceptible to NCDs such as gestational diabetes and hypertension, particularly when these physiological changes are compounded by culturally entrenched dietary restrictions or sedentary behaviors during pregnancy.

A study on the knowledge and practices surrounding gestational diabetes mellitus by Siuluta et al. (2024) highlighted that advanced maternal age, alongside poor diet and a lack of physical activity, significantly elevates

the risk of developing NCDs during pregnancy. Furthermore, a systematic review by Olajide et al. (2024) demonstrated that culturally prescribed food practices, such as the restriction of protein-rich foods and essential nutrients due to traditional beliefs, act as major barriers to adequate maternal nutrition and directly increase the risk of developing gestational diabetes mellitus and pregnancy-induced hypertension. Together, these findings reinforce that the intersection of advancing maternal age and rigid cultural practices heavily influences the prevalence of NCDs among expectant mothers.

Educational background. Figure 2 presented the educational background of the respondents. Most of the pregnant women were high school graduates, with 43 or 45.26% of the total sample, followed by college graduates with 15 or 15.79%. Vocational or technical course completers accounted for 14 or 14.74%, while those at college level but not yet graduates comprised 12 or 12.63%. A smaller proportion had completed only elementary education, with 7 or 7.37%, whereas 3 or 3.16% reached post-graduate level and just 1 or 1.05% had completed a post-graduate degree. This distribution indicated that most respondents had attained secondary education, with fewer women reaching higher education, which may have implications for their access to health information, understanding of non-communicable diseases, and use of maternal health services.

Figure 2.
Educational Background



The concentration of respondents with secondary education or below highlights a critical intersection between educational attainment and maternal health-seeking behaviors, particularly concerning the management of NCDs. Formal education is a foundational determinant of health literacy, empowering pregnant women to understand clinical risks and make informed decisions rather than defaulting strictly to culturally prescribed norms that may be biologically harmful.

A qualitative exploration by Melwani et al. (2024) emphasized that maternal health literacy is deeply intertwined with educational and social determinants, dictating a mother's knowledge and awareness of NCDs and strongly influencing her ability to navigate complex health information rather than relying solely on socially constructed beliefs. Furthermore, Shetty et al. (2024) highlighted that knowledge gaps surrounding NCDs like gestational diabetes mellitus which are often exacerbated by limited formal education led to poor communication with healthcare professionals and a heavier reliance on traditional cultural practices and family opinions, ultimately complicating treatment adherence and maternal outcomes. Consequently, a lower educational background may predispose pregnant women to adhere more rigidly to traditional practices, inadvertently increasing their vulnerability to NCD-related complications.

Family Monthly Income. Figure 3 presents the family monthly income profile of the respondents. Out of 95 respondents, most belonged to the income bracket of below ₱10,000 with 47 or 49.47%, followed by those earning ₱10,001–₱20,000 with 25 or 26.32%. Smaller proportions were observed among those earning ₱20,001–₱30,000 with 12 or 12.63%, those earning ₱30,001–₱40,000 with 9 or 9.47%, and those earning above ₱40,000 with only 2 or 2.11%. Because the respondents earning ₱20,000 and below collectively constitute the majority (75.79%) of the population, this income profile suggests that the respondents belong predominantly to low-income households. This economic constraint heavily dictates their access to quality prenatal healthcare, nutritious food options, and health education, thereby increasing their reliance on affordable, culturally driven alternative health practices that may influence the prevalence of NCDs during pregnancy.

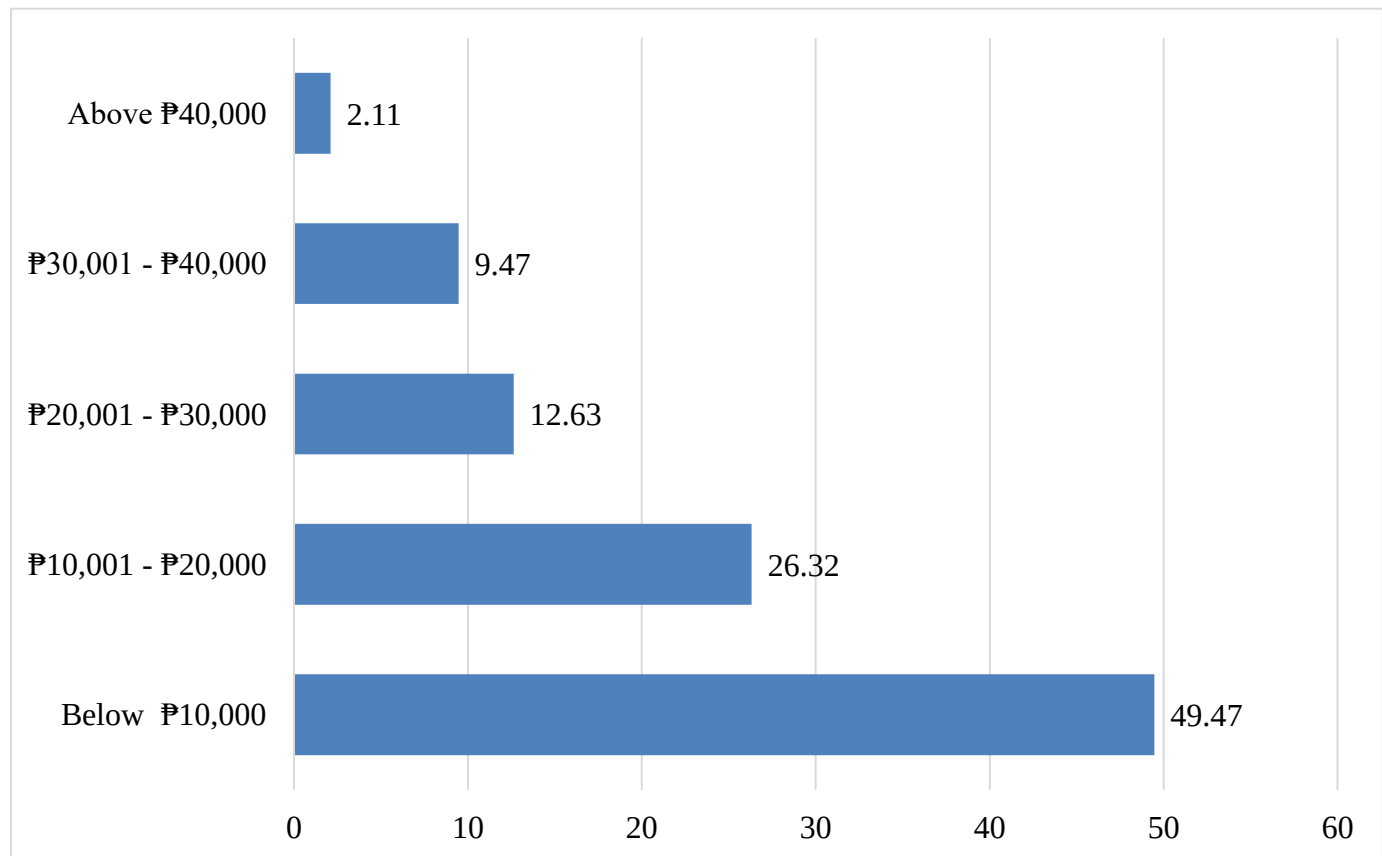


Figure 3. Family Monthly Income

The high concentration of respondents in the lower income brackets highlights a significant socioeconomic vulnerability that directly impacts maternal health outcomes and shapes dietary choices. Financial limitations often force pregnant women to prioritize basic survival needs, which restricts their access to routine medical screenings or dietary modifications required to prevent or manage non-communicable diseases.

According to Jiang et al. (2022), the development and clinical consequences of non-communicable cardiometabolic complications during pregnancy, such as gestational diabetes mellitus and hypertensive disorders, are heavily influenced by the socioeconomic determinants of health, with the disease burden disproportionately affecting low-income populations. Consequently, financial constraints often drive these women to lean heavily on affordable yet nutritionally inadequate food choices and deeply ingrained cultural traditions. A systematic review by Olajide et al. (2024) emphasized that pregnant women from low-income backgrounds frequently engage in cultural food practices that restrict essential nutrients, which acts as a major barrier to adequate maternal nutrition and significantly elevates the risk of adverse outcomes, including gestational diabetes mellitus and other non-communicable diseases. Therefore, limited family income acts as a catalyst that reinforces adherence to potentially harmful cultural practices, thereby amplifying the prevalence of NCDs among pregnant women.

Religion. Figure 4 presents the religious profile of the respondents. Out of 95 pregnant women, the majority were Roman Catholic with 86 or 90.53%, followed by Christians with 6 or 6.32%. Smaller proportions were observed

among Seventh-day Adventists with 2 or 2.11%, and Jehovah's Witnesses with only 1 or 1.05%. This religious profile suggests that the respondents are predominantly affiliated with the Roman Catholic faith, reflecting the prevailing religious demographic in the community. This homogenous religious background indicates that the cultural and spiritual practices influencing these pregnant women are likely deeply intertwined with Catholic teachings, community norms, and traditions. Such a dominant religious context can heavily shape their lifestyle choices, dietary habits, and adherence to specific prenatal rituals, ultimately playing a critical role in how they perceive medical advice and manage the risks of NCDs during pregnancy.

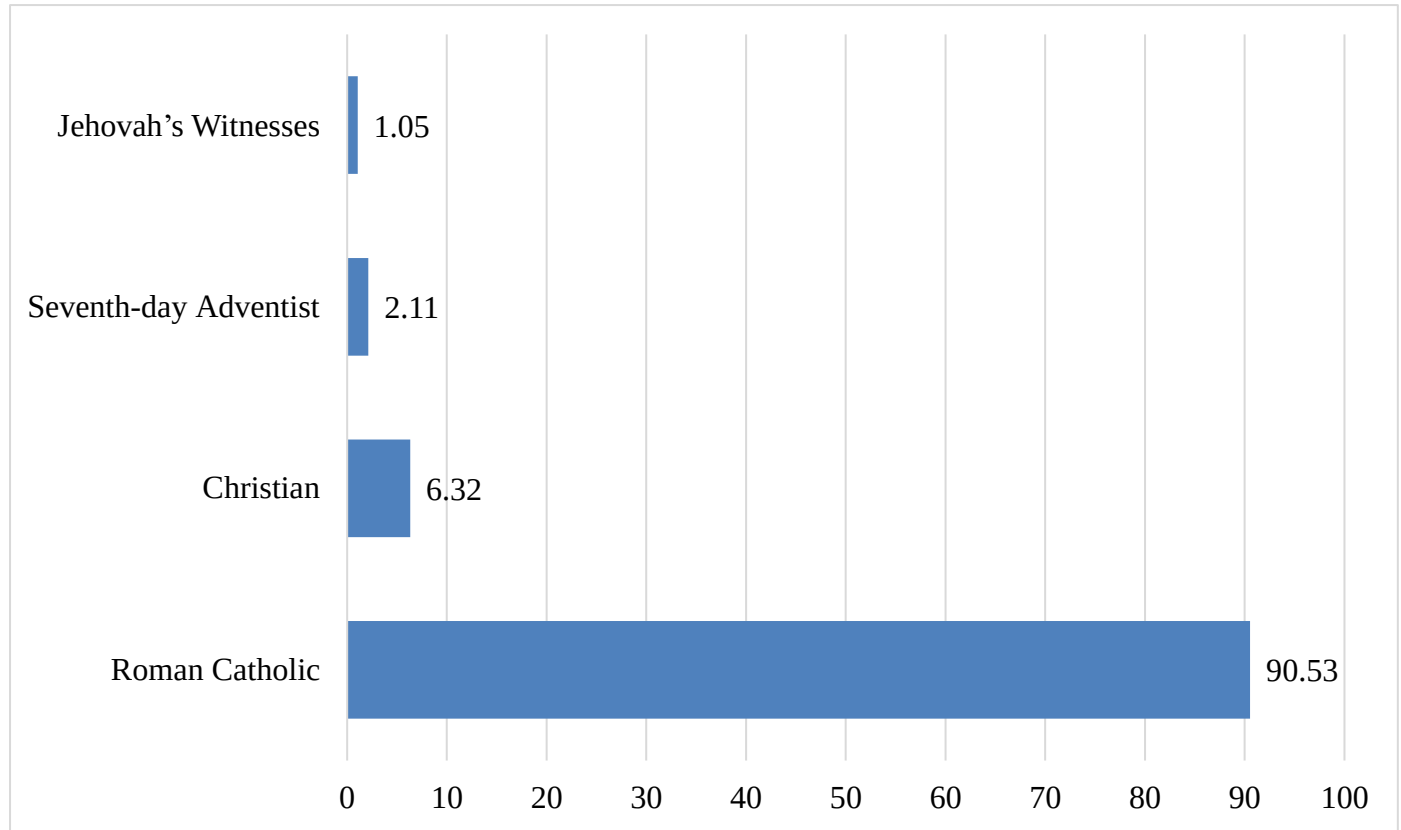


Figure 4. Religion

The overwhelming majority of respondents identifying as Roman Catholic highlights the profound influence of religious affiliation on maternal health behaviors and cultural practices. Religious and cultural norms often act as foundational structures that dictate daily routines, dietary restrictions, and health-seeking behaviors during pregnancy, all of which directly affect a mother's vulnerability to NCDs such as gestational diabetes or hypertension.

Research indicates that religious structures and customary beliefs are critical determinants that shape the uptake of maternal health services and influence overall maternal health outcomes, as women often rely on culturally embedded, faith-based guidance alongside conventional medical care (Opara et al., 2024). Furthermore, specific religious affiliations and their accompanying sociocultural lifestyles have been statistically linked to varying rates of NCDs during pregnancy. For instance, a study on the burden of pregnancy-related NCDs demonstrated that a woman's religious background significantly predicts her likelihood of developing conditions like gestational diabetes, underscoring that faith-based cultural environments directly impact metabolic health risks (Chauhan et al., 2023).

Number of Pregnancy/ies. Figure 5 presents the religion profile of the respondents. Out of 95 pregnant women, most were on their second pregnancy with 29 or 30.53%, followed by those on their third pregnancy with 21 or 22.11%, and those with more than four pregnancies with 20 or 21.05%. Smaller proportions were observed among those on their fourth pregnancy with 16 or 16.84%, and those on their first pregnancy with only 9 or 9.47%. Because the majority of the women (90.53%) have experienced multiple pregnancies (multigravida), this profile suggests that the respondents possess prior maternal experiences that significantly shape their current health behaviors. This extensive obstetric history likely influences their adherence to traditional cultural practices and

their perceived vulnerability to NCDs, as established habits from previous pregnancies often dictate how women navigate subsequent maternal health challenges.

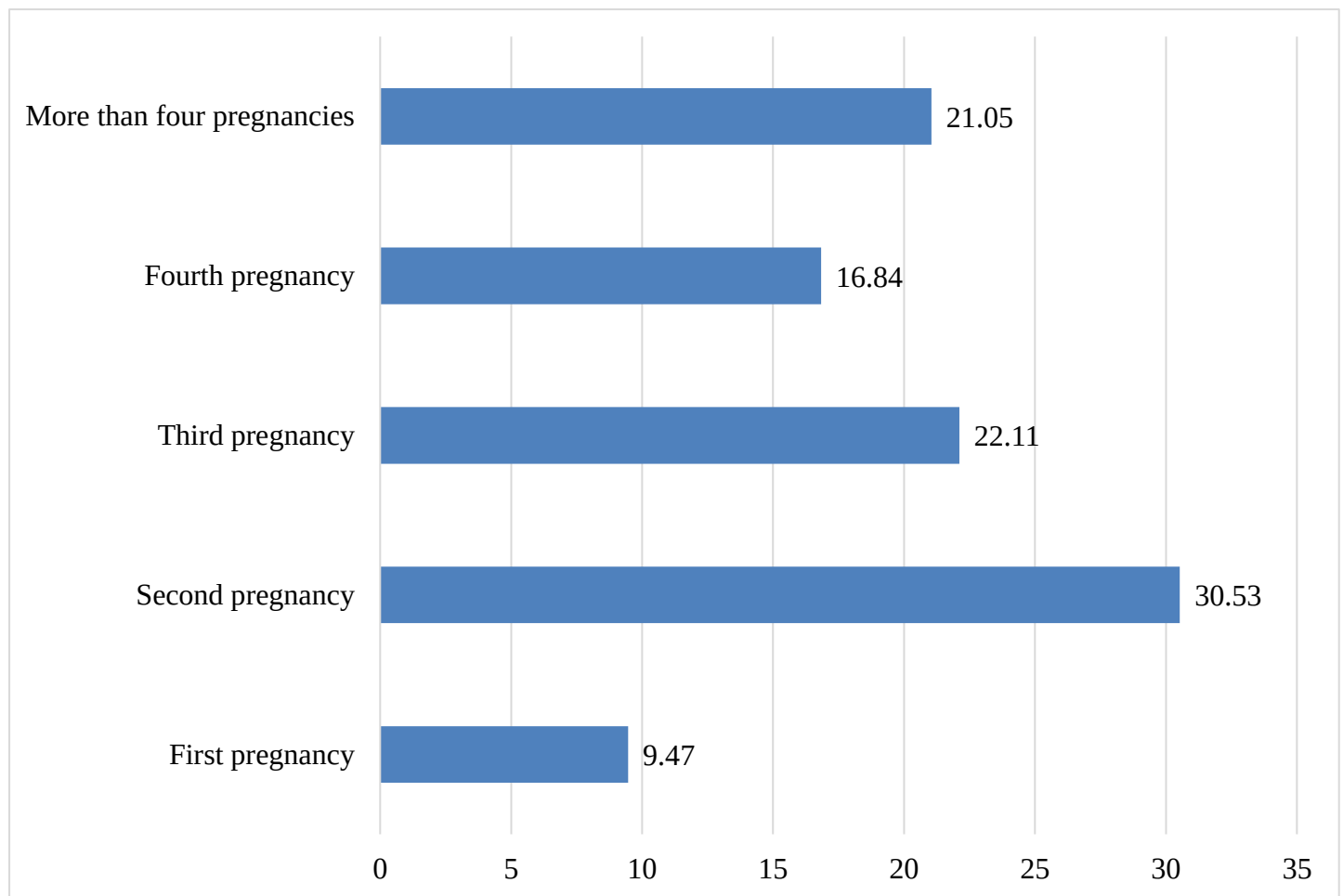


Figure 5. Number of Pregnancy/ies

The dominance of multigravida women within the population highlights a growing vulnerability to non-communicable diseases, as higher parity is known to exacerbate metabolic and obstetric risks. Repeated pregnancies expose women to cumulative physiological stressors, increasing the likelihood of conditions like gestational diabetes and chronic hypertension, which are often worsened by cultural norms that prioritize large families without adequate spacing or preconception care. A study on maternal characteristics by Fujikawa Shingu et al. (2022) emphasized that pre-existing metabolic strain from prior pregnancies substantially elevates the risks of perinatal adverse outcomes, particularly when conditions like diabetes remain uncontrolled across subsequent pregnancies due to delayed early maternal care. Furthermore, research by Mumba (2025) underscored that high parity is profoundly shaped by socio-cultural factors such as the cultural valuation of large families and poor access to modern family planning due to traditional beliefs and remains a significant public health problem because it drastically raises the odds of medical and obstetric complications. Consequently, addressing the non-communicable disease risks among multigravida women requires culturally sensitive health strategies that account for both the physiological toll of repeated pregnancies and the deeply rooted cultural traditions related to maternal health behaviors.

Age of Gestation. Figure 6 presents the age of gestation profile of the respondents. Out of 95 pregnant women, most were in their third trimester with 44 or 46.32%, followed by those in their second trimester with 33 or 34.74%. The smallest proportion was observed among those in their first trimester with 18 or 18.95%. Because the second and third trimesters combined make up the majority (81.06%) of the population, this profile suggests that the respondents were predominantly in the advanced stages of pregnancy. This stage of gestation is a critical period where the physiological and metabolic demands of the mother naturally peak, making them significantly more vulnerable to the onset or exacerbation of NCDs such as gestational diabetes and pregnancy-induced hypertension, especially when these biological changes are influenced by strict cultural traditions.

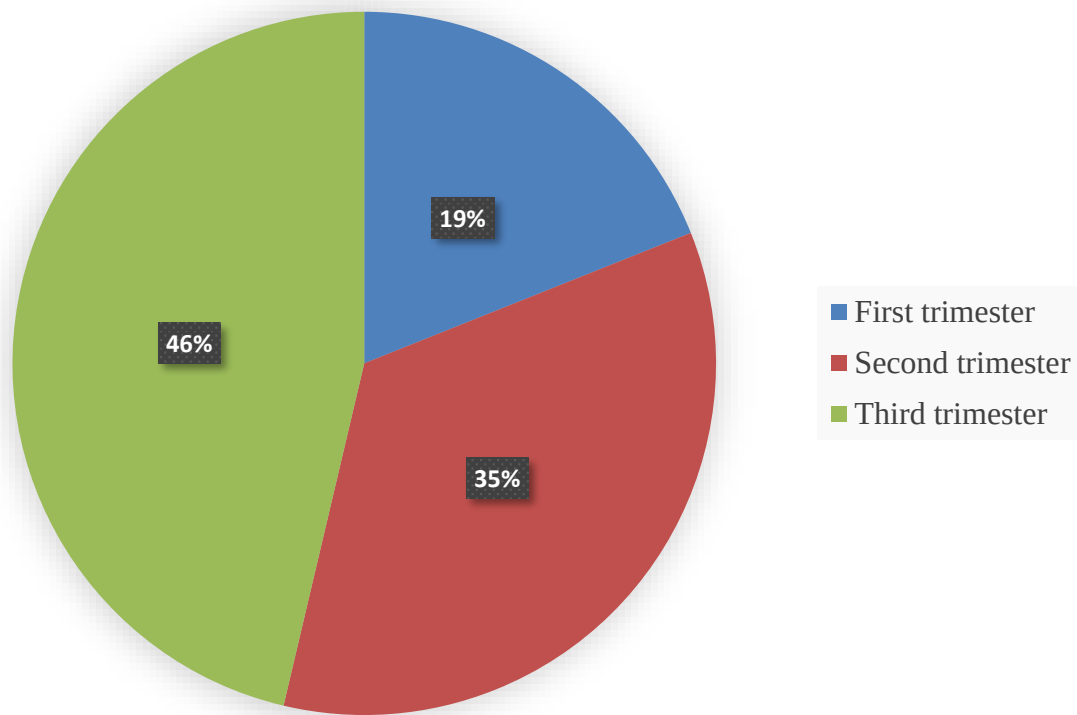


Figure 6. Age of Gestation

The high concentration of women in their second and third trimesters highlights a crucial window where biological vulnerability intersects heavily with cultural health behaviors. During the later stages of pregnancy, increased insulin resistance and cardiovascular stress are normal physiological adaptations; however, these changes can escalate into severe NCDs when compounded by certain traditional practices. Many cultures encourage reduced physical activity and enforce excessive caloric intake during the third trimester under the belief that the mother must "eat for two" to ensure fetal growth.

A systematic review by Olajide et al. (2024) emphasized that adherence to cultural food practices such as restricting essential nutrients to prevent complicated deliveries or excessively consuming specific culturally prescribed foods acts as a significant barrier to balanced maternal nutrition, directly increasing the risk of gestational diabetes mellitus and pre-eclampsia during the late stages of pregnancy. Furthermore, Siuluta et al. (2024) noted that traditional beliefs and poor dietary practices during the advanced trimesters often contradict clinical guidelines for managing blood glucose levels, leading to uncontrolled metabolic spikes and a heavier reliance on folk advice over medical intervention. Consequently, the combination of advanced gestational age and rigid adherence to cultural practices heavily influences the high prevalence of NCDs among pregnant women.

Non-communicable Diseases During Pregnancy. Figure 7 presents the profile of NCDs experienced by the pregnant women respondents. Out of 95 respondents, most reported experiencing hypertension with 30 or 31.58%, followed by those with dental caries with 21 or 22.11%. Smaller proportions were observed among those with diabetes with 17 or 17.89%, those with thyroid disorders with 16 or 16.84%, and those with asthma with 11 or 11.58%. This disease profile suggests that pregnant respondents are predominantly burdened by cardiovascular, oral, and metabolic conditions. The significant presence of these NCDs indicates that the natural physiological stressors of pregnancy may be further complicated by culturally influenced lifestyle choices, such as traditional dietary habits, intense physical demands, and delayed prenatal clinical interventions driven by deep-rooted beliefs.

The high concentration of hypertension, dental caries, and diabetes among the respondents highlights the critical need to address how cultural practices intersect with maternal health. Pregnancy inherently alters a woman's metabolic and cardiovascular functions; however, when cultural norms dictate rigid dietary restrictions or promote unverified traditional remedies over formal healthcare, maternal susceptibility to NCDs significantly increases.

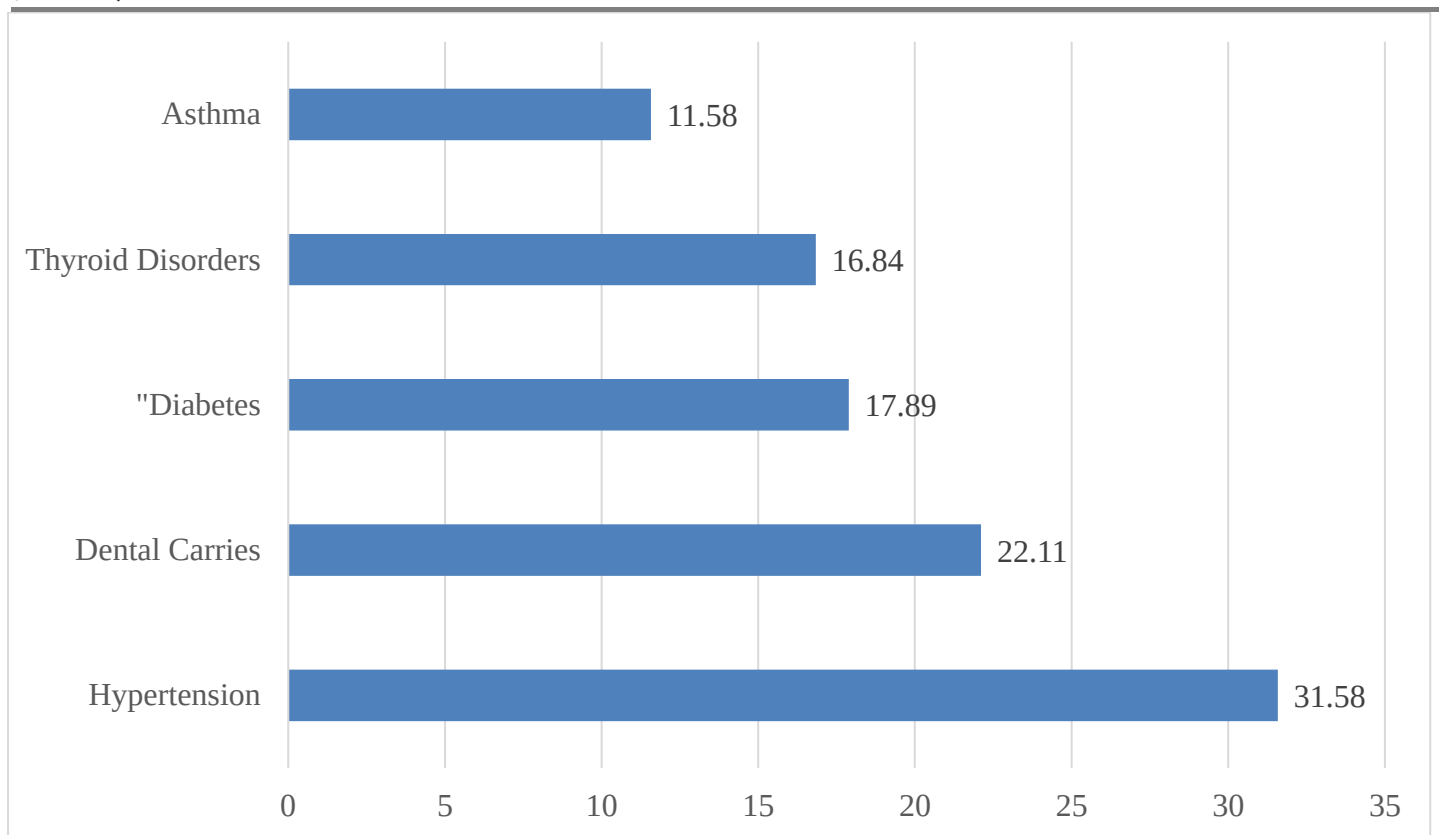


Figure 6. Non-communicable Diseases During Pregnancy

A descriptive qualitative study by Felisian et al. (2023) highlighted deeply embraced sociocultural practices during pregnancy, such as restricting essential nutrient-rich foods and encouraging expectant mothers to overwork without adequate rest based on cultural myths, directly compromise maternal well-being and exacerbate pregnancy complications. Furthermore, Melwani et al. (2023) emphasized that addressing societal and cultural norms around pregnancy is crucial, as adherence to socially constructed beliefs over evidence-based clinical practices limits maternal health literacy and directly increases the risk and perpetuation of NCDs among mothers.

2. Cultural Practices Related to the Prevalence of NCDs among Pregnant Women

Lifestyle Practices. Table 1 presents the cultural practices related to the prevalence of NCDs among pregnant women along lifestyle practices. Based on the data, the respondents highly practiced encouraging adequate rest and sleep during the day to support physical recovery (3.89), following the dietary guidance of healthcare professionals to reduce pregnancy complications (3.85) and seeking immediate medical attention upon experiencing symptoms of NCDs (3.79). Conversely, the least practiced indicators include consuming nutritious and balanced foods to promote healthy blood circulation (3.49) and attending regular prenatal check-ups to prevent and manage hypertension (3.38), which are both still highly practiced, while eating a variety of nutritious foods for the healthy growth of the baby ranked lowest and was only moderately practiced (3.12). Overall, lifestyle practices are highly practiced with an Average Weighted Mean (AWM) of 3.61. This pattern suggests that while pregnant women are highly compliant in seeking immediate medical interventions, resting, and acknowledging professional dietary advice, they are relatively less consistent in the practical, day-to-day execution of maintaining a diverse, nutrient-rich diet and adhering strictly to routine preventive monitoring for specific conditions like hypertension.

The lifestyle practices among pregnant women in managing NCDs reflect a responsive rather than strictly preventive approach to maternal health. They place a strong cultural emphasis on physical rest and immediate clinical consultation when symptoms arise, indicating a high regard for reactive medical guidance. However, their relatively weaker adherence to actually consuming a wide variety of nutritious foods and maintaining regular preventive check-ups suggests practical barriers such as food insecurity, economic constraints, or cultural dietary preferences that hinder the continuous, proactive management of their daily nutritional and long-term preventive care.

Table 1		
Cultural Practices Related to the Prevalence of Non-Communicable Diseases among Pregnant Women along Lifestyle Practices		
Indicators	Weighted Mean	Verbal Interpretation
1. Adequate rest and sleep during the day are encouraged to support the physical recovery and overall health among pregnant women.	3.89	Highly Practiced
2. Following the dietary guidance of healthcare professionals helps ensure proper nutrition and reduces the risk of complications during pregnancy.	3.85	Highly Practiced
3. Seeking immediate medical attention upon experiencing symptoms of NCDs ensures early diagnosis and proper management during pregnancy.	3.79	Highly Practiced
4. Seeking proper medical consultation and treatment is the recommended approach for managing symptoms of gestational diabetes.	3.74	Highly Practiced
5. Engaging in light physical activities and approved exercises helps promote a healthy pregnancy and supports the well-being of both mother and baby.	3.72	Highly Practiced
6. Maintaining a regular and nutritious meal schedule supports physical health and well-being during pregnancy.	3.58	Highly Practiced
7. Following medical nutrition advice helps maintain a healthy diet and supports a safe and balanced pregnancy.	3.51	Highly Practiced
8. Consuming nutritious and balanced foods is encouraged to promote healthy blood circulation and overall well-being during pregnancy.	3.49	Highly Practiced
9. Attending regular prenatal check-ups and following medical advice are the most effective ways to prevent and manage hypertension during pregnancy.	3.38	Highly Practiced
10. Eating a variety of nutritious foods is encouraged to promote the healthy growth and development of the baby.	3.12	Moderately Practiced
Average Weighted Mean	3.61	Highly Practiced

According to Agbayani and Coronado (2024), knowledge of healthcare guidelines often does not directly translate into actual behavioral changes; effectively managing lifestyle-related NCDs in the Philippines requires bridging the gap between merely receiving clinical advice and the practical reality of maintaining a predominantly whole-food, nutrient-diverse diet. Furthermore, the National Nutrition Council (2023) highlights that addressing maternal health vulnerabilities necessitates moving beyond basic consultations to providing actionable, multi-sectoral support that enables pregnant women especially those in resource-limited areas to consistently consume diverse diets and engage in routine preventive monitoring.

Socio-economic Background. Table 2 shows the cultural practices related to the prevalence of NCDs among pregnant women along socio-economic backgrounds. Based on the data, the respondents very highly practiced balancing cultural traditions with prioritized healthcare expenses to ensure the well-being of the mother and baby (4.01). Furthermore, they highly practiced prioritizing spending on prenatal check-ups, medications, and preventive care (3.97), and making healthcare decisions in consultation with healthcare providers alongside their family's support (3.89).

Conversely, the least practiced indicators though still qualitatively assessed as highly practiced, include allocating financial resources toward regular medical consultations and treatments (3.78), recognizing healthcare as a valuable investment for timely medical attention (3.78), consulting licensed professionals for accurate diagnosis (3.73), and valuing formal medical diagnoses as the primary basis for healthcare decisions (3.52). Overall, the respondents highly practiced these cultural behaviors with an AWM of 3.82. This pattern suggests that while pregnant women in Baao adeptly merge their cultural values with immediate prenatal spending and family-centered decision-making, they are relatively less inclined to view continuous, formal medical diagnostics and long-term clinical healthcare as their absolute, guiding investments.

Table 2		
Cultural Practices Related to the Prevalence of Non-Communicable Diseases among Pregnant Women along Socio-economic Background		
Indicators	Weighted Mean	Verbal Interpretation
1. Balancing cultural traditions with prioritized healthcare expenses ensures that the health and well-being of the mother and baby remain the foremost concern during pregnancy.	4.01	Very Highly Practiced
2. Prioritizing spending on prenatal check-ups, medications, and preventive healthcare ensures better health outcomes for both mother and baby.	3.97	Highly Practiced
3. Healthcare decisions during pregnancy are made by the pregnant woman in consultation with her healthcare provider, with the support of her family.	3.89	Highly Practiced
4. Combining traditional knowledge with formal health education promotes better health literacy and supports informed decision-making during pregnancy.	3.88	Highly Practiced
5. Seeking culturally sensitive healthcare services is encouraged to build trust and ensure that pregnant women receive appropriate and respectful medical care.	3.85	Highly Practiced
6. Making healthcare decisions based on professional medical advice and one's own informed judgment promotes safer and healthier pregnancy outcomes.	3.82	Highly Practiced
7. Allocating financial resources toward regular medical consultations and prescribed treatments provides the most effective protection against health complications during pregnancy.	3.78	Highly Practiced
8. Recognizing healthcare as a necessary and valuable investment encourages pregnant women to seek timely medical attention and preventive care.	3.78	Highly Practiced
9. Consulting licensed healthcare professionals ensures accurate diagnosis and evidence-based treatment for health concerns during pregnancy.	3.73	Highly Practiced
10. Formal medical diagnoses and healthcare professional recommendations are valued and considered as the primary basis for healthcare decisions during pregnancy.	3.52	Highly Practiced
Average Weighted Mean	3.82	Highly Practiced

Pregnant women’s cultural practices in managing NCDs show a practical, family-based approach shaped by limited resources. They blend traditions with short-term spending on basic preventive care yet invest less in continuous clinic visits and fully relying on licensed professionals, indicating that long-term formal care is constrained and complemented by traditional knowledge and family support.

According to Modillas et al. (2024), maternal healthcare choices in the Philippines are deeply influenced by economic constraints, familial support networks, and deeply rooted cultural beliefs, leading women to balance clinical care with autonomous, family-driven health management strategies rather than strictly adhering to facility-based mandates. Furthermore, the effective management of health complications during pregnancy is often restricted by varying socio-economic statuses, cultural practices, and limited healthcare access, highlighting the universal challenge of integrating professional maternal care with local socio-economic realities (Gebrehana et al., 2025).

Environmental Influences. Table 3 presents the cultural practices related to the prevalence of NCDs among pregnant women along environmental influences. Based on the data, the respondents highly practice creating a positive, stress-free, and safe home environment to promote emotional and physical well-being (3.83). Furthermore, they highly practice following prescribed medical treatments and maintaining regular prenatal consultations (3.77), alongside making health-related decisions based on medical advice, personal well-being, and evidence-based guidelines (3.76). Conversely, the least practiced indicators, though still highly practiced, include being mindful of environmental exposures and maintaining proper hygiene (3.46), ensuring proper ventilation and a clean home environment (3.43), and staying in safe and clean surroundings while avoiding potentially hazardous environments (3.11).

Table 3		
Cultural Practices Related to the Prevalence of Non-Communicable Diseases among Pregnant Women along Environmental Influences		
Indicators	Weighted Mean	Verbal Interpretation
1. Maintaining personal hygiene and a clean living environment is practiced to protect health and prevent illness during pregnancy.	3.66	Highly Practiced
2. Being mindful of environmental exposures and maintaining proper hygiene practices helps prevent health complications during pregnancy.	3.46	Highly Practiced
3. Wearing appropriate footwear and maintaining warmth in cold environments supports healthy circulation and physical well-being during pregnancy.	3.62	Highly Practiced
4. Ensuring proper ventilation and a clean, well-maintained home environment reduces the risk of respiratory and other health complications during pregnancy.	3.43	Highly Practiced
5. Staying in safe and clean surroundings and avoiding potentially hazardous environments supports the health and safety among pregnant women.	3.11	Highly Practiced
6. Creating a positive, stress-free, and safe home environment promotes emotional and physical well-being during pregnancy.	3.83	Highly Practiced
7. Following prescribed medical treatments and maintaining regular prenatal consultations provides the most reliable protection against diseases during pregnancy.	3.77	Highly Practiced
8. Maintaining a consistent routine of rest, physical activity, and medical check-ups regardless of environmental or lunar conditions supports a healthy pregnancy.	3.71	Highly Practiced
9. Living in a multigenerational household is encouraged when it provides emotional support, shared caregiving, and a nurturing environment for the pregnant woman and her baby.	3.49	Highly Practiced
10. Making health-related decisions based on medical advice, personal well-being, and evidence-based guidelines ensures the best outcomes for mother and baby during pregnancy.	3.76	Highly Practiced
Average Weighted Mean	3.58	Highly Practiced

Overall, the respondents highly practiced these environmental practices with an AWM of 3.58. This pattern indicates that while pregnant women prioritize their internal psychological environment and strict adherence to clinical medical care, they place relatively less emphasis on actively controlling their physical external environments, such as mitigating hazard exposure and ensuring structural environmental safety like home ventilation.

The cultural practices among pregnant women regarding environmental influences indicate strong focus on emotional stability at home and adherence to medical advice, but less on managing physical surroundings. They show limited emphasis on reducing hazardous exposures, improving ventilation, or altering structural conditions, suggesting either low awareness or limited control over environmental risks to maternal health.

According to the United Nations Population Fund (2024), exposure to environmental factors, including poor air quality and physical neighborhood stressors, directly intersects with and exacerbates pre-existing NCDs in pregnant women, necessitating a broader understanding of environmental safety beyond just emotional stress management. Furthermore, UNICEF (2025) highlights that the developing fetus and the pregnant woman possess unique physiological vulnerabilities to environmental hazards; relying primarily on medical compliance while inadvertently under-prioritizing physical environmental risks, such as poor ventilation or ambient pollutants, represents a critical gap in holistic maternal healthcare and effectively limits the prevention of pregnancy-related health complications.

Genetic predisposition. Table 4 presents the data along genetic predisposition. Based on the data, the respondents highly practice acknowledging that similar health complications across family members may have a

shared genetic basis, which encourages collaborative family health management and regular consultations (3.93). Furthermore, they highly practice accepting that diseases have identifiable medical and biological causes to empower proactive prevention (3.81), and seeking specialized medical monitoring to ensure effective management of hereditary health risks (3.79). Conversely, the least practiced indicators include the highly practiced disclosure of family history of NCDs for early risk assessment (3.61) and understanding that unusual symptoms have physiological explanations necessitating professional consultation (3.27). Notably, understanding that health conditions may have specific genetic and medical causes to encourage seeking proper medical evaluation is only moderately practiced (2.79).

Table 4		
Cultural Practices Related to the Prevalence of Non-Communicable Diseases among Pregnant Women along Genetic predisposition		
Indicators	Weighted Mean	Verbal Interpretation
1. Acknowledging that similar health complications across family members may have a shared genetic basis encourages collaborative family health management and regular medical consultations.	3.93	Highly Practiced
2. Accepting that diseases have identifiable medical and biological causes empowers pregnant women to take proactive steps toward prevention, early diagnosis, and proper treatment.	3.81	Highly Practiced
3. Seeking specialized medical monitoring and evidence-based treatment for NCDs ensures the most effective management of hereditary health risks during pregnancy.	3.79	Highly Practiced
4. Consulting licensed healthcare professionals and genetic counselors about family patterns of disease provides the most accurate and reliable guidance for managing hereditary health risks during pregnancy.	3.78	Highly Practiced
5. Recognizing that health complications running in families may have a genetic basis motivates pregnant women to disclose family medical history to their healthcare provider for early screening and prevention.	3.74	Highly Practiced
6. Recognizing that recurring health problems across generations may indicate a hereditary condition encourages families to seek genetic counseling and regular medical monitoring.	3.71	Highly Practiced
7. Adopting healthy lifestyle practices and adhering to medical advice can significantly reduce the risk of developing inherited NCDs during pregnancy.	3.68	Highly Practiced
8. Disclosing family history of NCDs to healthcare providers enables early risk assessment, appropriate monitoring, and timely medical intervention during pregnancy.	3.61	Highly Practiced
9. Understanding that unusual symptoms during pregnancy have physiological explanations encourages pregnant women to consult healthcare professionals for proper assessment and care.	3.27	Highly Practiced
10. Understanding that health conditions may have genetic and medical causes encourages pregnant women to seek proper medical evaluation and timely care.	2.79	Moderately Practiced
Average Weighted Mean	3.61	Highly Practiced

Overall, the cultural practices along genetic predisposition are highly practiced with an AWM of 3.61. This pattern indicates that while pregnant women strongly acknowledge familial patterns of disease and broad biological concepts, they are comparatively less proficient at recognizing their own physiological symptoms or acting on these genetic causes through detailed clinical disclosure and immediate medical evaluation.

The findings indicate a clear gap between family-level awareness of hereditary risks and personal clinical action among pregnant women. They acknowledge genetic predisposition in general terms but hesitate to fully disclose

detailed family medical histories or relate unusual symptoms to biological causes. This suggests barriers in health literacy and communication, limiting translation of family awareness into proactive, individualized care.

According to Jung et al. (2022), the effective management of NCDs during pregnancy requires an integrated clinical approach that bridges the gap between a patient's informal familial knowledge and structured clinical care, as many women understand general hereditary risks but struggle to translate this awareness into actionable clinical disclosures. Furthermore, Sheikh et al. (2024) emphasize that addressing vulnerabilities in maternal health necessitates culturally sensitive health literacy programs that empower pregnant women to confidently communicate their detailed family medical histories and specific physiological symptoms to healthcare providers, ensuring early screening and active clinical monitoring rather than passive familial acceptance.

3. Relationship between demographic profile and the cultural practices related to the prevalence of NCDs among Pregnant Women.

Table 8 presents the relationship between the demographic profile among pregnant women and the cultural practices related to the prevalence of NCDs across lifestyle practices, socio-economic background, environmental influences, and genetic predisposition.

Age showed a significant relationship with lifestyle practices ($df = 12$, computed $\chi^2 = 9.37$, critical $\chi^2 = 9.026$, $p = 0.041$), leading to rejection of the null hypothesis and indicating a significant association. Educational background was likewise significantly related to lifestyle practices ($df = 18$, computed $\chi^2 = 21.00$, critical $\chi^2 = 19.869$, $p = 0.028$), resulting in rejection of the null hypothesis and indicating a significant relationship. In addition, the presence of NCDs during pregnancy demonstrated a significant association with lifestyle practices ($df = 12$, computed $\chi^2 = 9.08$, critical $\chi^2 = 7.026$, $p = 0.023$), again leading to rejection of the null hypothesis and indicating a significant relationship. In contrast, family monthly income ($df = 12$, computed $\chi^2 = 10.80$, critical $\chi^2 = 21.026$, $p = 0.546$), religion ($df = 9$, computed $\chi^2 = 6.92$, critical $\chi^2 = 16.919$, $p = 0.645$), number of pregnancy ($df = 12$, computed $\chi^2 = 18.60$, critical $\chi^2 = 21.026$, $p = 0.099$), and age of gestation ($df = 6$, computed $\chi^2 = 3.68$, critical $\chi^2 = 12.592$, $p = 0.720$) all yielded p-values greater than 0.05, leading to acceptance of the null hypothesis and indicating no significant relationship with lifestyle practices.

Table 8 Relationship Between the Demographic Profile and Cultural Practices Related to the Prevalence of Non-Communicable Diseases among Pregnant Women						
Profile	LIFESTYLE PRACTICES					
	df	Computed χ^2	Critical χ^2 Value	p-value (0. 05)	Decision	Interpretation
a. Age	12	9.37	9.026	0.041	Rejected	Significant
b. Educational Background	18	21.0	19.869	0.028	Rejected	Significant
c. Family Monthly Income	12	10.8	21.026	0.546	Accepted	Not Significant
d. Religion	9	6.92	16.919	0.645	Accepted	Not Significant
e. Number of Pregnancy	12	18.6	21.026	0.099	Accepted	Not Significant
f. Age of Gestation	6	3.68	12.592	0.720	Accepted	Not Significant
g. Non-communicable Diseases During Pregnancy	12	9.08	7.026	0.023	Rejected	Significant
Profile	SOCIO-ECONOMIC BACKGROUND					
	df	Computed χ^2	Critical χ^2 Value	p-value (0. 05)	Decision	Interpretation
a. Age	12	22.0	21.026	0.038	Rejected	Significant
b. Educational Background	18	12.3	8.869	0.003	Rejected	Significant
c. Family Monthly Income	12	11.6	21.026	0.477	Accepted	Not Significant
d. Religion	9	12.0	16.919	0.212	Accepted	Not Significant
e. Number of Pregnancy	12	11.0	21.026	0.530	Accepted	Not Significant
f. Age of Gestation	6	7.72	12.592	0.259	Accepted	Not Significant

g. Non-communicable Diseases During Pregnancy	12	10.1	6.026	0.009	Rejected	Significant
Profile	ENVIRONMENTAL INFLUENCES					
	df	Computed χ^2	Critical χ^2 Value	p-value (0. 05)	Decision	Interpretation
a. Age	12	14.2	12.026	0.004	Rejected	Significant
b. Educational Background	18	18.1	16.869	0.044	Rejected	Significant
c. Family Monthly Income	12	6.12	21.026	0.910	Accepted	Not Significant
d. Religion	9	11.0	16.919	0.274	Accepted	Not Significant
e. Number of Pregnancy	12	15.2	21.026	0.231	Accepted	Not Significant
f. Age of Gestation	6	4.26	12.592	0.642	Accepted	Not Significant
g. Non-communicable Diseases During Pregnancy	12	14.0	11.026	0.032	Rejected	Significant
Profile	GENETIC PREDISPOSITION					
	df	Computed χ^2	Critical χ^2 Value	p-value (0. 05)	Decision	Interpretation
1. Age	12	18.5	21.026	0.010	Rejected	Significant
2. Educational Background	18	21.5	28.869	0.002	Rejected	Significant
3. Family Monthly Income	12	8.07	21.026	0.779	Accepted	Not Significant
4. Religion	9	10.2	16.919	0.333	Accepted	Not Significant
5. Number of Pregnancy	12	5.63	21.026	0.934	Accepted	Not Significant
6. Age of Gestation	6	12.6	12.592	0.079	Accepted	Not Significant
7. Non-communicable Diseases During Pregnancy	12	7.31	21.026	0.037	Rejected	Significant

For socio-economic background, age exhibited a significant relationship ($df = 12$, computed $\chi^2 = 22.00$, critical $\chi^2 = 21.026$, $p = 0.038$), resulting in rejection of the null hypothesis and indicating a significant association. Educational background was also significantly related to socio-economic background practices ($df = 18$, computed $\chi^2 = 12.30$, critical $\chi^2 = 8.869$, $p = 0.003$), leading to rejection of the null hypothesis and indicating a significant relationship, the presence of NCDs during pregnancy ($df = 12$, computed $\chi^2 = 10.10$, critical $\chi^2 = 6.026$, $p = 0.009$), which likewise resulted in rejection of the null hypothesis indicated a significant relationship. In contrast, family monthly income ($df = 12$, computed $\chi^2 = 11.60$, critical $\chi^2 = 21.026$, $p = 0.477$), religion ($df = 9$, computed $\chi^2 = 12.00$, critical $\chi^2 = 16.919$, $p = 0.212$), number of pregnancy ($df = 12$, computed $\chi^2 = 11.00$, critical $\chi^2 = 21.026$, $p = 0.530$), and age of gestation ($df = 6$, computed $\chi^2 = 7.72$, critical $\chi^2 = 12.592$, $p = 0.259$) all had p-values greater than 0.05, leading to acceptance of the null hypothesis and indicating no significant relationship with socio-economic background-related practices.

Regarding environmental influences, age showed a significant relationship ($df = 12$, computed $\chi^2 = 14.20$, critical $\chi^2 = 12.026$, $p = 0.004$), leading to rejection of the null hypothesis and indicating a significant association. Educational background also presented a significant relationship with environmental influences ($df = 18$, computed $\chi^2 = 18.10$, critical $\chi^2 = 16.869$, $p = 0.044$), resulting in rejection of the null hypothesis and indicating a significant relationship, and NCDs during pregnancy were likewise significantly associated with environmental influences ($df = 12$, computed $\chi^2 = 14.00$, critical $\chi^2 = 11.026$, $p = 0.032$), again leading to rejection of the null hypothesis and indicating a significant relationship. In contrast, family monthly income ($df = 12$, computed $\chi^2 = 6.12$, critical $\chi^2 = 21.026$, $p = 0.910$), religion ($df = 9$, computed $\chi^2 = 11.00$, critical $\chi^2 = 16.919$, $p = 0.274$), number of pregnancy ($df = 12$, computed $\chi^2 = 15.20$, critical $\chi^2 = 21.026$, $p = 0.231$), and age of gestation ($df = 6$, computed $\chi^2 = 4.26$, critical $\chi^2 = 12.592$, $p = 0.642$) all produced p-values greater than 0.05, leading to acceptance of the null hypothesis and indicating not significant relationship with environmental influences.

Finally, in terms of genetic predisposition, age showed a significant relationship with cultural practices ($df = 12$, computed $\chi^2 = 18.50$, critical $\chi^2 = 21.026$, $p = 0.010$), leading to rejection of the null hypothesis and indicating a significant association. Educational background was likewise significantly related to genetic predisposition practices ($df = 18$, computed $\chi^2 = 21.50$, critical $\chi^2 = 28.869$, $p = 0.002$), resulting in rejection of the null hypothesis indicating a significant relationship, and the presence of NCDs during pregnancy also exhibited a significant

relationship with genetic predisposition-related cultural practices ($df = 12$, computed $\chi^2 = 7.31$, critical $\chi^2 = 21.026$, $p = 0.037$), again leading to rejection of the null hypothesis and indicating a significant association. In contrast, family monthly income ($df = 12$, computed $\chi^2 = 8.07$, critical $\chi^2 = 21.026$, $p = 0.779$), religion ($df = 9$, computed $\chi^2 = 10.20$, critical $\chi^2 = 16.919$, $p = 0.333$), number of pregnancy ($df = 12$, computed $\chi^2 = 5.63$, critical $\chi^2 = 21.026$, $p = 0.934$), and age of gestation ($df = 6$, computed $\chi^2 = 12.60$, critical $\chi^2 = 12.592$, $p = 0.079$) all yielded p-values greater than 0.05, leading to acceptance of the null hypothesis and indicating not significant relationship with genetic predisposition practices.

This pattern underscores that cultural adherence among pregnant women is predominantly driven by developmental maturity, literacy levels, and the lived experience of managing chronic health conditions rather than their economic or religious background. As women advance in age and education, their ability to critically evaluate and navigate the tension between traditional practices and modern medical necessities evolves, significantly impacting their lifestyle choices and their engagement with maternal health services. The significant link between existing NCDs and cultural practices suggests that the ongoing management of a chronic condition compels women to re-evaluate their traditional beliefs to better align with clinical management.

A study by Melwani et al. (2024) highlighted that health literacy which is fundamentally tied to formal education is the primary determinant in how women navigate the complex interplay between cultural beliefs and NCD management, noting that higher education levels empower mothers to prioritize biomedical evidence. Furthermore, research by Liyew et al. (2024) emphasized that maternal age and current health status serve as critical predictors for health service utilization; their findings suggest that older women and those already managing chronic conditions are significantly more likely to shift their reliance from traditional, environmentally-based beliefs toward evidence-based clinical monitoring, as the immediate health risks associated with their NCDs necessitate a more rigorous, medically-integrated approach.

CONCLUSION

The study concludes that among the predominantly mid-reproductive, low-income, multiparous, and late-gestation pregnant women, who most commonly experience hypertension, maternal health behaviors and the prevalence of non-communicable diseases (NCDs) are deeply intertwined with high levels of cultural practices. While these cultural practices regarding lifestyle, socio-economic background, environmental influences, and genetics are significantly correlated with the mother's age, education level, and specific NCD type, they show no significant relationship with her income, religion, number of pregnancies, or gestational age. Ultimately, effectively managing and mitigating NCD risks during pregnancy requires healthcare providers to integrate culturally responsive, family-centered strategies into prenatal care that acknowledge these underlying socio-economic and cultural realities.

RECOMMENDATIONS

1. Given that most respondents were in their mid-reproductive ages, had at least high school education, belonged to lower income brackets, were multigravida in late gestation, and frequently had hypertension, local health authorities and Rural Health Units may prioritize regular, free or low-cost blood pressure and NCD screening, coupled with tailored prenatal counseling for multigravida, low-income Roman Catholic women, so that early detection and management of NCDs in this high-risk group may be strengthened.
2. Since cultural practices along lifestyle, socio economic background, environmental influences, and genetic predisposition were highly practiced but some risk enhancing beliefs still persist, barangay health centers and midwives may conduct focused, periodic health education sessions that clarify specific harmful beliefs (e.g., restrictive food taboos, unsafe herbal use) while reinforcing already positive practices, so that residual risky behaviors may be further reduced without dismissing culturally acceptable traditions.
3. Healthcare providers and policymakers should develop targeted prenatal health education programs customized to an expectant mother's age, educational background, and specific non-communicable disease diagnosis, as these factors significantly dictate their cultural health practices. Conversely, because income, religion, number of pregnancies, and gestational age do not significantly impact these behaviors, maternal health interventions and resource allocations can be broadly standardized across these specific demographics to streamline care delivery and maximize program efficiency.

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