Awareness and Readiness on Pregnancy Attending Antenatal Care

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ABSTRACT

This study emphasizes the importance of engaging pregnant women in antenatal care to improve maternal and child health outcomes. It seeks to investigate these aspects in detail, providing insightful information that can be applied to creating initiatives to improve antenatal care use. The research was conducted using survey questionnaires via purposive sampling method for 400 pregnant women aged 15-49 attending antenatal care in Cabanatuan City. The study investigated the level of awareness and readiness among pregnant women regarding antenatal care, evaluating their readiness to participate actively in essential care using quantitative descriptive research. This study shows participants' awareness levels regarding pregnancy-related issues such as prenatal nutrition, maternal health screenings, and birth preparedness. The population of this study was the pregnant women from the municipality of Cabanatuan City, Nueva Ecija. The inclusion criteria for this study are pregnant women aged 15-49 years old, and the exclusion criteria for this study are pregnant women aged 15 years old and below and 49 years old and above who are attending antenatal care in Cabanatuan City, Nueva Ecija. Additionally, readiness measures exhibited a span of responses, highlighting women's emotional preparedness for the challenges ahead.The research findings explore pregnant women's socio-demographic profile, awareness, and readiness in Cabanatuan City. Most respondents are aged 26-30, have a high school level education, are married, and earn a monthly income of 15,000 or below and most have had one pregnancy. Awareness regarding pregnancy standards is moderate, with a high awareness of avoiding self-aware conditions and good knowledge about pregnancy. Pregnant women exhibit motivation and readiness for pregnancy, prioritizing their baby's health and seeking support from partners and family.

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1. INTRODUCTION

Every family's dream is to have a child, and it is indeed a notable moment for them. Mothers sacrifice nine months to carry their babies safely and healthily. Based on the study of Acta Medica Philippina, women who had four or more Antenatal Care visits in 2017 improved by 87%. [1] Women are prevented from receiving or seeking care during pregnancy and childbirth due to poverty, distance, a lack of information, inadequate services, and cultural practices. Despite the barriers mentioned, skilled healthcare workers are doing their best to provide quality antenatal care services in the communities' urban and remote rural areas. Thus, this study wants to find out the "Awareness and Readiness" in attending antenatal care, assess the awareness among pregnant women attending antenatal care and readiness for pregnancy, and give information and health teachings to pregnant women. Being in the middle age group, urban residence, increased educational level, improved household wealth status, Orthodox religious followers increase the number of antenatal care utilization.

Being middle-aged, married, having increased educational status, and improved household wealth, Orthodox religious followers decrease the probability of not attending antenatal care. Advocacy and behavioral change communication should be areas of concern for organizations working on antenatal care, especially for rural, poor, and uneducated women, through mass campaigns, community dialog, and enhancing the effectiveness of health extension programs. One of the three strategic moves to be pursued is the achievement of health-related Millennium Development Goals (MDG), which includes MDG 5- "Improve on Maternal Health." The Philippines is on track to meet most of its MDGs, except to minimize maternal mortality. We have a high number of maternal deaths, which could be attributed to women's lack of access to reproductive health and safe motherhood services.[2] Based on Gebremariam, Tesfai, et al. (2023) even though the majority of the pregnant mothers had a high level of knowledge and attitude, their practice towards Antenatal Care was relatively low.[3]

Age, marital status, and occupation showed statistically significant association with their comprehensive knowledge. Moreover, multiparous and multigravida mothers had a higher level of knowledge and practice in antenatal care. Enhancing community awareness on early starting of antenatal care and improving their practice through proper counselling are highly recommended. The first antenatal care visit falls between 8 and 12 weeks of pregnancy, the second occurs between 24 and 26 weeks, the third occurs a 32 weeks, and the fourth occurs between 36 and 38 weeks of gestation, based on "the WHO Focused Antenatal Care model".[4] Despite the availability of Antenatal Care services in the country, not all pregnant women utilize the service. In the Philippines, 78% of women had at least four Antenatal Care visits recorded in 2014, which the DOH considers a success despite being deficient.[21] This study emphasized the crucial importance of pregnant women's awareness and preparedness when engaging in antenatal care for the improvement of maternal and child health outcomes.

It aimed to thoroughly explore these aspects, offering valuable insights that can guide the development of effective strategies for enhancing antenatal care. Encouraging expectant mothers to actively seek antenatal care and educating them about pregnancy warning signs can significantly contribute to better preparedness for childbirth complications.[5] This study not only aids in refining targeted approaches but also sheds light on the influencing factors behind such behaviors. Moreover, this research significantly contributes to advancing the theoretical understanding of awareness and readiness in the context of pregnancy and antenatal care. It adds depth to the existing knowledge base on expectant mothers' health, potentially leading to the emergence of new research areas.[5] In summary, this study aimed to investigate the level of awareness and readiness among pregnant women regarding antenatal care, evaluating their readiness to actively participate in essential care.

2. RESEARCH METHOD

The research design used in this study was quantitative descriptive research.

According to Adedoyin (2020), quantitative research studies phenomena using numerical data and statistical, analytical, or computing tools. It was seen as the best method for the researchers to use to reach a large portion of the targeted population.[6]

The researchers used the purposive sampling method because of a specific respondent characteristic. It is a probability sampling technique where the researcher's inclusion is the respondents using their age, which are the 15- 49-year-old pregnant women; all respondents within the selected criteria are included in the sample. This approach was more efficient than simple random sampling because it reduced the time and cost of sampling by reducing the number of populations. The researchers also applied random sampling to select pregnant women attending antenatal care in the City Health Center to be selected as the population of this study.

The researchers adhered to ethical guidelines, including the right to privacy and anonymity, ensuring participants' privacy and anonymity. They used encryption, secure storage, and anonymized data collection methods to protect participant data. The study also upheld the right to self-determination, allowing respondents to voice their thoughts, make decisions, and participate in the research process. This involved protecting their privacy, consent, autonomy, and the freedom to leave the study at any time.

The face and content validity of the questionnaire is established through consultations with five-degree holders who hold at least a MAN, RN and are considered knowledgeable in the field of the study. Following the

review of all comments, suggestions were implemented prior to the pilot testing of the study with non-respondents. The test-retest reliability coefficient was determined when establishing the internal consistency of the items. According to Ursachi et al. (2015), the minimum acceptable value for a test-retest reliability coefficient is 0.7, and values below 0.7 indicate that the measure is not reliable enough to be used for research purposes. The Cronbach Alpha of the study resulted in 0.94, which indicates a very satisfactory result.[7] Questionnaire administration of the test generated a score of above 0.75, which was assessed as acceptable, demonstrating the dependability of the test, thus demonstrating the reliability of the test.

3. RESULTS AND DISCUSSIONS

The results of the study on "Awareness and Readiness in Attending Antenatal Care" were presented, analyzed, and interpreted in this chapter. To address the research problem outlined in the first chapter of this study, the outcomes of the data analysis were collected and processed. It includes tables, frequencies, and percentages that are used in the interpretation of the data that the researchers gathered through the survey questionnaires given to the respondents.

Demographic Profile

The majority of recorded respondents are in the age group of 26-30 years old, which is 23.50% (94) of the total sample size of 400 respondents, and the least respondents are in the age group of 46-49 years old, which is 0.25% (1). According to the study of Alharbi et al. (2023), on The Awareness and Knowledge of Normal and Abnormal Signs and Symptoms of Pregnancy Among Women of Childbearing Age in Saudi Arabia, the majority of women had a decent degree of awareness and knowledge about typical pregnancy signs and symptoms, whereas fewer than half of the women were fully aware of the aberrant signs and symptoms at various stages of pregnancy. People who were older and had a greater level of schooling displayed more knowledge. Their knowledge of the signs and symptoms was moderate, but more awareness of the normalcy of these signals was required[8]. The data gathered showed that most of the respondents are from the high school level, comprising 29.50% (118). The lowest is the elementary level, which is 1.75% (7) of the total sample siz. According to the study by Hegelund et al. (2019), women with low educational attainment had a higher risk of induced abortion, stillbirth, and preterm delivery and a lower risk of spontaneous abortion. Furthermore, women with high educational attainment were not found to differ in risk of preterm delivery according to child protective services in the family of origin.[9] The data gathered showed that most of the respondents are married, 214 or 53.50% (214) of the total number of respondents.

Meanwhile, there were no records of respondents who were annulled and widowed. Most recorded respondents, constituting 72.25% (289) of the total sample size of 400 respondents, have a monthly income of 15,000 below. Conversely, the respondents who have a monthly income of 30,001 and above are the least, at 4% [16]. According to the study of Alharbi et al. (2023),[10] on The Awareness and Knowledge of Normal and Abnormal Signs and Symptoms of Pregnancy Among Women of Childbearing Age in Saudi Arabia, the majority of women had a decent degree of awareness and knowledge about typical pregnancy signs and symptoms, whereas fewer than half of the women were fully aware of the aberrant signs and symptoms at various stages of pregnancy. People who were older and had a greater level of schooling displayed more knowledge.

Based on **Table 1**, pregnant women's awareness in terms of standards on pregnancy showed that they were aware that they garnered a weighted mean score of 2.90. Overall, the findings suggest that pregnant women are aware of the standards of pregnancy. According to the study of Bhowmik et al. (2019), they specify that skilled birth attendance (SBA) during delivery is a crucial policy concerning the prevention of maternal deaths.[11] When pregnant women have access to competent care, more professional care is provided during delivery. Therefore, measures that motivate expectant mothers and heads of households to seek professional treatment during their pregnancy will help achieve the maternal healthcare goal. This table also present the respondents are moderately aware of "Avoid self- aware conditions," supported with a weighted mean score of 2.30. Based on the study of De Guzman and Silao (2022) entitled "Antenatal Care Utilization during the COVID-19 Pandemic: An Online Cross-sectional Survey among Filipino Women" despite the physical and financial barriers to seeking antenatal care, most Filipino women were still able to seek consults for their pregnancies. The majority were seen primarily via face-to-face consultations. [12]

Table 1. "Standards on Pregnancy" and "Avoid The Self-Aware Condition."

AWARENESS		
	Weighted mean	Interpretation
Standard on Pregnancy	2.90	AWARE
Avoid Self-aware Condition	2.30	MODERATELY AWARE

Legend: 4.00-3.26 Fully Aware; 3.25-2.51 Aware; 2.50 - 1.76 Moderately Aware; 1.75- 1.00 Not Aware

Also based on **Table 2**, Overall the data suggest that pregnant women are "sometimes" motivated regarding readiness for pregnancy with weighted mean score of 3.11. Pregnancy is a significant period to promote healthy behaviors, prevent and identify diseases early, and treat them to maximize the health and development of both the woman and her unborn child. A new World Health Organization antenatal care model recommends the initiation of antenatal care visits within the first trimester of gestation.[13] Pregnancy is a significant period to promote healthy behaviors, prevent and identify diseases early, and treat them to maximize the health and development of both the woman and her unborn child. A new World Health Organization antenatal care model recommends the initiation of antenatal care visits within the first trimester of gestation.[13]

Table 2. "Knowledge of Pregnancy" and "Motivation of Pregnant women."

	READINESS	
	Weighted mean	Interpretation
Knowledge on pregnancy	3.11	SOMETIMES
Motivation of a pregnant Women	3.11	SOMETIMES

Legend: 4.00-3.26 Always; 3.25-2.51 Sometimes; 2.50 - 1.76 Seldom; 1.75-1.00 Never

Table 3 findings suggest that age significantly influences awareness regarding antenatal care services among pregnant women. Thus, the researchers reject the null hypothesis and conclude that there is a significant difference between the groups concerning the variable under evaluation. The correlation coefficient of 3.35184E-15 further underscores the strength of this relationship. These findings suggest that age significantly influences readiness regarding antenatal care services among pregnant women. According to the study of Barr and Marugg (2019), as Americans accept having a child and getting married before being married, a lot of them also think the father can assist the mother even if the parents aren't married. [14] Their study showed married women had a lower risk of preterm delivery, a small for gestational age baby, and a neonatal intensive care admission. Women who were married were more likely to have a vaginal delivery and to initiate breastfeeding. hus, the researchers reject the null hypothesis and conclude that there is a significant difference between the groups regarding the variable under evaluation. This also presents the correlation between educational attainment and awareness of pregnant women.

Table 3. Significant Relationship of Socio-demographic Profile and Awareness on Pregnancy

Profile	Awareness and Readiness on Pregnancy		
Variables	Awareness		Interpretation
Age	r=	0.31	Significant
	p =	1.3549E-10 or 0.00000000013549	
Educational	r=	0.26	
attainment	p =	1.0482E-07 or 0.00000010482	Significant
Marital	r=	0.4	
status	p =	5.3028E-17 or 0.00000000000000053028	Significant
Monthly	r=	0.22	
income	p=	8.5528E-06 or 0.0000085528	Significant

Note: A p-value measures the probability of obtaining the observed results, assuming the null hypothesis is true. The lower the p-value, the greater the statistical significance of the observed difference. A p-value of 0.05 or lower is generally considered statistically significant.

The associated p-value obtained from the test is 1.0482E-07. This result suggests a statistically significant difference between the educational attainment and awareness of pregnant women, with a p-value less than 0.05. As a result, the researchers found a significant relationship between the groups based on the variable under test, rejecting the null hypothesis. This table also presents the data regarding the correlation between educational attainment and readiness of pregnant women. The associated p-value obtained from the test is 2.03414E-09. This result suggests that there is a statistically significant difference between the educational attainment and readiness of pregnant women, with a p-value less than 0.05. As a result, the researchers found that there was a significant relationship between the groups based on the variable under test, rejecting the null hypothesis.

Table 3 provides information on the correlation between marital status and awareness of pregnancy, which shows a significant relationship with the marital status of the respondents, with a correlation coefficient of 5.3028E-17. The associated p-values obtained of less than 0.05, which means that these factors are statistically significant. Therefore, the researchers reject the null hypothesis and conclude that there is a significant difference

between the groups based on the variable being tested. According to Geltore and Anore (2021), good Antenatal Care for pregnant women has become an essential component of the safe motherhood program, which aims to enhance pregnancy outcomes for both mother and newborn. [15] Antenatal care provides pregnant women with information, treats existing social and medical conditions, and screens for risk factors.[16]

Table 4 provides information on the correlation between marital status and readiness for pregnancy, which shows a significant relationship between the marital status of the respondents, with a correlation coefficient of 2.27864E-24. The associated p- values obtained are less than 0.05, meaning these factors are statistically significant. Therefore, the researchers reject the null hypothesis and conclude that there is a significant difference between the groups based on the variable being tested. This also provides information on the correlation between the monthly income and awareness of pregnancy. Upon analyzing each correlation, the researchers can say that "Awareness" shows a significant relationship on the monthly income of the respondents, with the highest correlation coefficient of 8.55284E-06. In addition, it obtained p-values of less than 0.05, which means these factors are highly statistically significant. Therefore, the researchers reject the null hypothesis and conclude that there is a significant difference between the groups based on the variable being tested. According to the study of MaryJoy Sande (2022) entitled "Antenatal Care Utilization of Mothers in Selected Cities in Bicol Region: Not all pregnant women in the nation seek out ANC services even though they are readily available. [17]

Table 4. Significant Relationship of Socio-demographic Profile and Readiness on Pregnancy Awareness and Readiness on Pregnancy

Awareness and Readiness on Pregnancy			
Profile			
Variables		Readiness	Interpretation
Age	r=	0.38	Significant
	p =	3.35184E-15 or	
	r=	0.00000000000000335184	
Educational attainment		0.29	Significant
	p =	2.03414E-09 or 0.00000000203414	
Marital status	r=	0.48	Significant
	p =	2.27864E-24 or	
		0.00000000000000000000000227864	

Note: A p-value measures the probability of obtaining the observed results, assuming the null hypothesis is true. The lower the p-value, the greater the statistical significance of the observed difference. A p-value of 0.05 or lower is generally considered statistically significant.

This is due to the fact that the mothers were young adults with little education who were members of impoverished little nuclear families with their partners. It also provides information on the correlation between monthly income and readiness for pregnancy. Upon analyzing each correlation, the researchers can say that "Readiness" shows a significant relationship on the monthly income of the respondents, with the highest correlation coefficients of 1.93364E-07. Therefore, the researchers reject the null hypothesis and conclude that there is a significant difference between the groups based on the variable being tested. The study conducted by Ijang et al. (2019) in the Bamenda Health District, Cameroon, found that being prepared for birth and complications can significantly decrease the rates of maternal and newborn mortality. Being in the middle age group.[18]

Increases the number of antenatal care utilization, according to Arefaynie et al. (2022) [19] and good Antenatal Care for pregnant women has become an essential component of the safe motherhood program, which aims to prepare for pregnancy outcomes for both mother and newborn.[20]

Table 5 presents the data regarding the significant difference between awareness and readiness of expectant mothers. The t-test result using ANOVA in Excel yielded a test statistic (T) of 33.45, greater than the critical value. Therefore, the researchers reject the null hypothesis and conclude that there is a significant difference between the groups based on the variable being tested. According to a study by Alharbi et al. (2023), most Saudi Arabian women were reasonably aware of pregnancy's common signs and symptoms. In the study conducted by Ijang et al. (2019) on the "Awareness and Practice of Birth Preparedness and Complication Readiness among Pregnant Women in the Bamenda Health District, Cameroon," the findings indicated that both birth preparedness

and complication readiness play crucial roles in reducing maternal and neonatal mortality rates and being prepared guarantees that women can receive expert delivery care when labor begins. This reduces the delays when women have obstetric complications by guaranteeing the availability and timely utilization of competent obstetric and infant services. Prompt monitoring and care by trained medical professionals can be the difference between life and death for both the mother and the unborn child.

Table 5. Significant Difference Between Awareness and Readiness of Expectant Mother

Variables			t-computed	t-critical	Interpretation
Awareness	x =	2.6	33.45	1.97	Significant
	s^2 =	0.257			
Readiness	x =	3.11			
	s^2 =	0.316			

Decision Rule
If the computed value is greater than the critical value, reject Ho. If the computed value is less than the critical value, accept Ho.

Table 6 provides information on the correlation between attending antenatal care and readiness for pregnancy. Upon analyzing each correlation, the researchers can say that "Awareness" shows a significant relationship when the respondents attend antenatal care, it obtained p- values of less than 0.05, which means these factors are highly statistically significant. Thus, these findings reject the null hypothesis and conclude that there is a significant relationship between awareness and the variable being tested. According to Geltore & Anore (2021), good Antenatal Care for pregnant women has become an essential component of the safe motherhood program, which aims to enhance pregnancy outcomes for both mother and newborn. Antenatal care provides pregnant women with information, treats existing social and medical conditions, and screens for risk factors.[16]

Table 6. Significant Relationship Between Attending Antenatal Care on The Awareness and Readiness of a Pregnant Women

Tests	Awareness		Interpretation
Pretest/Post-Test	r =	0.24	Significant
	p =	7.92E-07	

Note: A p-value measures the probability of obtaining the observed results, assuming the null hypothesis is
true. The lower the p-value, the greater the statistical significance of the observed difference. A p-value of
0.05 or lower is generally considered statistically significant.

Table 7 provides information on the correlation between the respondent's antenatal care visits and readiness for pregnancy with the highest correlation coefficient of 0.013329. In the study on the Awareness and Practice of Birth Preparedness and Complication Readiness among Pregnant Women in the Bamenda Health District, Cameroon, by Ijang et al. (2019), birth and complication readiness both reduce maternal and neonatal mortality. [18] This concept, devised by United Nations agencies, allows pregnant women and their families to seek health care as soon as possible in the event of obstetric difficulties or delivery. Thus, the researchers reject the null hypothesis based on these findings. Therefore, the researchers reject the null hypothesis and conclude that there is a significant relationship between the readiness and the variable being tested.

Table 7. Significant Relationship Between Attending Antenatal Care on the Awareness and Readiness of a Pregnant Women

Tests	Readiness		Interpretation
Pretest/Post-Test	r =	0.12	Significant
	p =	0.013329	

Note: A p-value measures the probability of obtaining the observed results, assuming the null hypothesis is true. The lower the p-value, the greater the statistical significance of the observed difference. A p-value of
0.05 or lower is generally considered statistically significant.

4. CONCLUSIONS

The majority of recorded respondents are in the age group of 26-30 years old, which is 23.50% (94) of the total sample size of 400 respondents, and the least respondents are in the age group of 46-49 years old, which is 0.25%. The data gathered showed that the majority of the respondents are from the high school level, comprising 29.50% (118). The lowest is the elementary level, which is 1.75% (7) of the total sample size. The data gathered showed that most of the respondents are married, 214 or 53.50% (214) of the total number of respondents. Meanwhile, there were no records of respondents who were annulled and widowed. Most recorded respondents, constituting 72.25% (289) of the total sample size of 400 respondents, have a monthly income of 15,000 below. Conversely, the respondents who have a monthly income of 30,001 and above are the least, at 4% (16). The pregnant women's awareness in terms of "standards on pregnancy" showed that they were aware that they garnered a weighted mean score of 2.90.In general, the respondents are moderately aware of "Avoid self-aware conditions," supported with a weighted mean score of 2.30.

Overall, the findings suggest that pregnant women sometimes have "knowledge regarding readiness for pregnancy" with mean score of 3.11.Overall, the data suggest that pregnant women are sometimes "motivated regarding readiness for pregnancy" with mean score of 3.11. Pearson's correlation test showed a significant relationship between the respondents' socio-demographic profile and their awareness and readiness for pregnancy. The correlation coefficient were less than 0.05, which concluded that there is a significant relationship between the demographic profile of the pregnant women and awareness, readiness on pregnancy. The t-test result using ANOVA in Excel yielded a test statistic (T) of 33.45, more significant than the critical value. Thus, this indicates a statistically significant difference between awareness and readiness. Therefore, the researchers reject the null hypothesis and conclude that there is a significant difference.

The findings indicate that awareness shows a significant relationship when the respondents attend antenatal care, with the highest correlation coefficients of 7.92E-07, which means that these factors are highly statistically significant. Thus, these findings reject the null hypothesis and conclude that there is a significant relationship between awareness and the variable being tested—the correlation between the respondent's antenatal care visits and readiness for pregnancy. The findings suggest that readiness, which has a correlation coefficient of 0.013329, shows a significant relationship with the respondents' antenatal care visits. As a result, the researchers conclude that there is a significant relationship between the tested variable and readiness, rejecting the null hypothesis.

Recommendation

After the analysis of data and information collected and based on the conclusions drawn, the researchers recommended the following:

The City Health Center (CHC) is encouraged to focus on assessing the awareness and readiness of first-time pregnant women while emphasizing the importance of family planning. To support this, researchers recommend creating an information, education, and communication pamphlet with essential guidelines to prevent misinformation and misconceptions. This pamphlet, based on the study's key findings, should also be converted into an audio-visual presentation format for better engagement and convenience, allowing mothers to access it anytime and anywhere. Additionally, the City Government, with the help of CHC and Barangay Officials, should consider launching livelihood projects targeting respondents with a monthly income of 15,000 pesos or below. A thrift box system is also recommended to help these individuals save for future financial needs. Furthermore, researchers suggest that the CHC implement symposiums and assessment tests to evaluate the awareness and preparedness of expectant mothers, especially those experiencing pregnancy for the first time. Future researchers are encouraged to expand the study's locale to examine the relationship between attending antenatal care and pregnant women's awareness and readiness. This study can also serve as a valuable reference for future research, particularly in exploring the readiness of women who have experienced preterm births or miscarriages in previous pregnancies. Utilizing the thrift box and audio-visual presentation in future studies is also advised.

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