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Improving Maternal and Neonatal Health Outcomes of Women Through Deep Antenatal Education Analysis With Health Belief Model

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Abstract: ***This ponder investigates the adequacy of antenatal instruction programs in making strides maternal and neonatal wellbeing results, pivotal measurements for surveying advance towards Economic Improvement Objective 3. Despite restorative progressions, maternal and neonatal horribleness and mortality rates stay concerning, particularly in moo- and middle-income nations. Antenatal instruction programs, planned to prepare hopeful moms with basic information and aptitudes, are proposed interventions. While a few ponders appear stamped enhancements in maternal self-efficacy and infant care hones, others uncover constrained effect on key wellbeing markers. Understanding the components contributing to these results is pivotal. Socially delicate programs custom fitted to populaces and the mode of conveyance impact viability. Integration into broader healthcare models and continuous back encourage upgrades impact.***

A precise survey and blend of existing investigate uncover solid relationships between the number of antenatal sessions gone to and viability scores. Relapse examination underscores the positive relationship between participation and program adequacy, maternal wellbeing results, and neonatal wellbeing results. Expanding the number of antenatal sessions essentially upgrades both maternal and neonatal wellbeing results, with factual examination demonstrating a coefficient of 0.3292 for program adequacy, 0.3433 for maternal wellbeing results, and 0.3283 for neonatal wellbeing results, all with p-values < 0.005. These discoveries offer profitable experiences for policymakers and healthcare suppliers pointing to make strides open wellbeing mediations.

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Keywords: Antenatal Instruction Programs, Maternal Self-Efficacy, Maternal Wellbeing, Neonatal Wellbeing.

1. INTRODUCTION

Maternal and neonatal health outcomes are critical indicators of the efficacy of healthcare systems worldwide. Despite considerable advances in medical technology and healthcare delivery systems, maternal and neonatal morbidity and mortality rates remain a significant concern, especially in low- and middle-income countries (Alkema et al., 2019). Antenatal education programs, which aim to equip expectant mothers with the knowledge and skills required for a healthy pregnancy, labor, and postnatal period, have long been proposed as an effective intervention to improve these outcomes (Gagnon & Sandall, 2020).

According to the United Nations, maternal and neonatal mortality rates are crucial measures for assessing the Sustainable Development Goals (SDGs), specifically Goal 3, which aims to "ensure healthy lives and promote well-being for all at all ages" (United Nations, 2019). Despite considerable advances in medical technology, the World Health Organization, an agency of the United Nations, reports that maternal and neonatal morbidity and mortality rates remain a significant concern (WHO, 2019). Nationally, the Department of Health has also identified the improvement of maternal and neonatal outcomes as one of its strategic priorities (Department of Health, 2019).

However, the impact of antenatal education on maternal and neonatal health is still a subject of much debate. While some studies have shown marked improvements in maternal self-efficacy, reduced anxiety, and better newborn care practices (Barlow et al., 2020), others indicate little to no effect on key health indicators like caesarean section rates, breastfeeding initiation, and neonatal mortality (Spiby et al., 2021).

Further studies have attempted to dissect the elements of antenatal education that contribute to its success or failure. For instance, research has shown that culturally sensitive programs tailored to the population's specific needs better impact maternal and neonatal health (Renkert & Nutbeam, 2019). Moreover, the mode of delivery—whether in-person, online, or through mobile applications—can also influence the effectiveness of antenatal education programs (Chen et al., 2020). Some studies have also suggested that antenatal education programs may have a more significant impact when integrated into a broader healthcare model that includes postnatal education and ongoing support (Brixval et al., 2020).

This paper aims to look through in the literature by systematically reviewing and synthesizing existing research on the effectiveness of antenatal education programs in improving maternal and neonatal health outcomes. Through this analysis, healthcare providers and policymakers can be better informed to make decisions on implementing and improving antenatal education as a public health intervention.

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Statement of the Problem

The study's main purpose will be to determine the Effectiveness of Antenatal Education Programs in Improving Maternal and Neonatal Health Outcomes among pregnant women in Barangay Doongan, Butuan City.

Specifically, it will seek to answer the following questions;

1. What is the demographic profile of the participants in terms of:
1.1 Occupation;
1.2 Pregnancy history;
1.3 Number of Antenatal sessions attended,
1.4 Socio-Economic Status?

2. What is the level of Effectiveness of Antenatal Education Programs in Improving Maternal and Neonatal Health Outcomes among pregnant women in Barangay Doongan Butuan City in terms of:
2.1 Perceived Susceptibility;
2.2 Perceived Severity;
2.3 Perceived Benefits;
2.4 Perceived Barriers
2.5 Cues to Action; and
2.6 Self-Efficacy?

3. Is there a significant impact among pregnant women of antenatal education programs on maternal health outcomes in Barangay Doongan, Butuan City, in terms of:
3.1 Gestational weight gain;
3.2 stress levels, and
3.3 pregnancy-related knowledge?

4. Is there a significant impact of the antenatal education programs affect neonatal health outcomes in Barangay Doongan, Butuan City in terms of:
4.1 birth weight;
4.2 Apgar scores; and
4.3 early breastfeeding initiation?

Significance of the Study

Pregnant Women and Families

The most immediate beneficiaries are the pregnant women and their families. The study can offer insights into the advantages of antenatal education, potentially leading to better pregnancy outcomes and improved newborn health.

Healthcare Providers

Doctors, nurses, and other healthcare providers involved in maternal and neonatal care may use the study's findings to make evidence-based recommendations for antenatal education as a complement to traditional prenatal care.

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Policy Makers and Administrators of BLGU Doongan, Butuan City
Local and national government agencies can use the study's results to guide policy decisions regarding maternal and neonatal health programs. This could include allocating resources or initiating public health campaigns based on the effectiveness of antenatal education.

Medical Researchers in the Locality
This study adds to the existing body of literature on maternal and neonatal health and can be a stepping stone for further research. Academics could use the data to conduct more targeted studies, perhaps focusing on one or more limitations of this initial research.

Scope and Limitations of the Study
The scope of this study is confined to the understanding of antenatal education programs in Barangay Doongan, Butuan City, focusing specifically on their effectiveness in improving maternal and neonatal health outcomes. The research will cover a range of maternal and neonatal health indicators, including but not limited to gestational weight gain, birth weight, Apgar scores, and pregnancy-related complications. Additionally, the study aims to assess the influence of antenatal education on psychological constructs such as perceived susceptibility, severity, benefits, barriers, cues to action, and self-efficacy, as defined by the Health Belief Model. The research will employ quantitative methods, leveraging questionnaires, medical records, and possibly clinical tests to gather data.

Conceptual Framework
The study is anchored on Anuar et al. (2020) Health Belief Model (HBM). The Health Belief Model (HBM) posits that people are likely to engage in health-promoting behavior if they perceive themselves as susceptible to a health problem believe it would have serious consequences, believe that taking a specific action would reduce their susceptibility to or severity of the problem, and believe the benefits of acting outweigh the costs or risks.
The Health Belief Model offers a robust framework for understanding health-related behaviors and can be particularly relevant in studies focusing on antenatal care. Below is a discussion on the application of the HBM constructs to a study on "Improving Maternal and Neonatal Health Care Outcomes of Women Through Deep Antenatal Education Analysis with Health Belief Model."

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Schematic Diagram

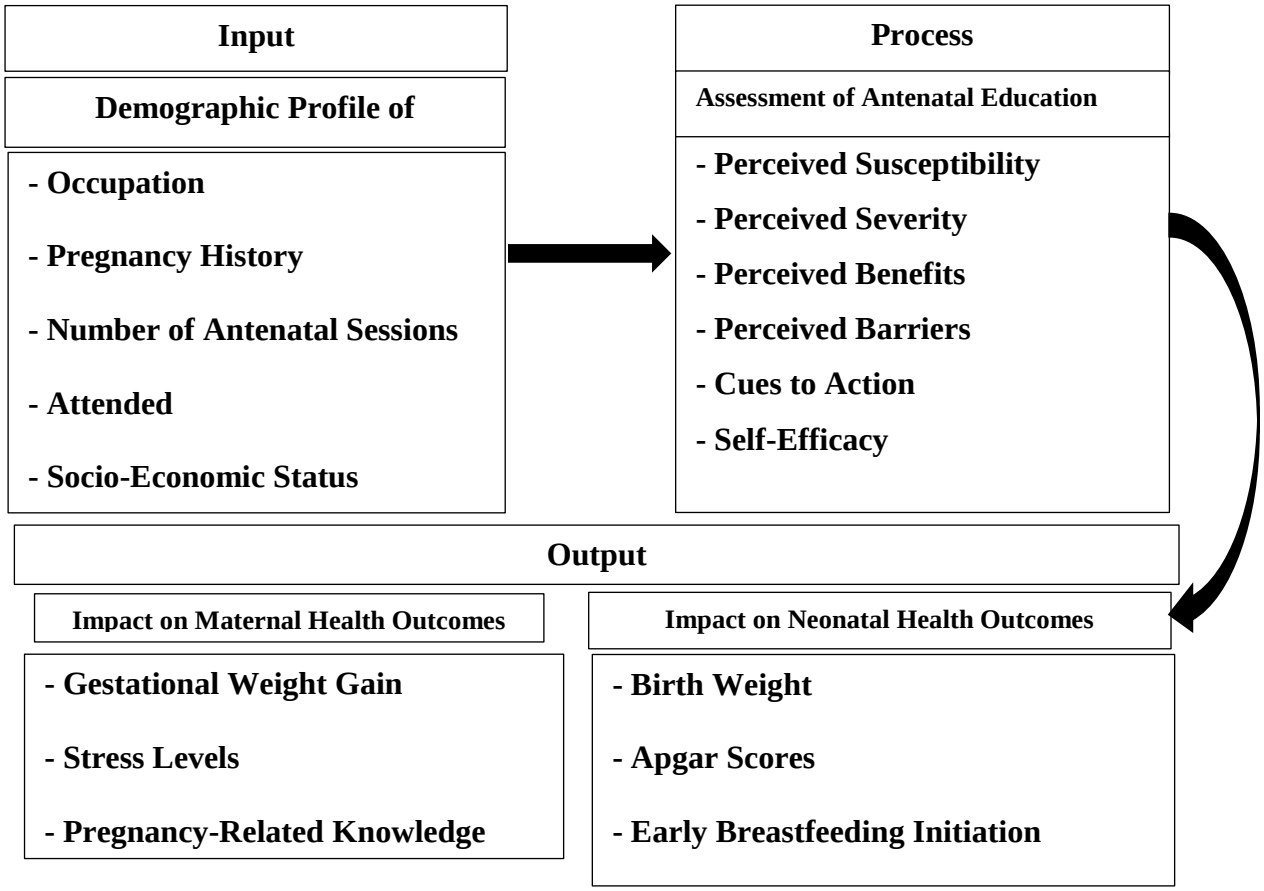

Figure 1 shows the interplay of the variables of the study.

Definition of Terms

Apgar Scores - Refers to the standardized assessment used to evaluate the physical condition of a newborn immediately after birth, based on criteria such as heart rate, respiratory effort, muscle tone, reflex irritability, and color.

Antenatal Education Programs - Refers to the educational initiatives designed to provide information and support to expectant mothers during pregnancy.

Cues to Action - Refers to the factors or stimuli that prompt individuals to take specific actions, such as those related to maternal and neonatal health.

Gestational Weight Gain - Refers to the amount of weight a pregnant woman gains during her pregnancy, which can impact both maternal and neonatal health outcomes.

Maternal Health Outcomes - Refers to the overall health and well-being of pregnant women, which may be influenced by factors such as gestational weight gain, stress levels, and pregnancy-related knowledge.

Neonatal Health Outcomes - Refer to the health and well-being of newborn infants, including factors like birth weight, Apgar scores, and early breastfeeding initiation.

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2. RELATED WORKS

The Effectiveness of Antenatal Education Programs

Improving Maternal and Neonatal Health Care Outcomes of Women Through Deep Antenatal Education Analysis with Health Belief Model remains a subject of scholarly debate, and the literature presents an equivocal landscape. For instance, Gagnon and Sandall's work (2019) in The Cochrane Database of Systematic Reviews suggests that antenatal programs significantly alleviate maternal anxiety, especially among first-time mothers.

Studies such as Gao et al. (2019) in the "International Journal of Nursing Studies" indicate that antenatal education contributes to improved maternal behaviors like diet and exercise. Yet, the longitudinal impact of these behaviors post-childbirth is not adequately substantiated.

Effect on Maternal Anxiety and Mental Health

Maternal anxiety and mental health are critical elements in the trajectory of both the prenatal and postnatal periods, affecting mothers and their babies. Antenatal education programs have emerged as a strategy aimed at addressing these concerns. One key area where these programs have shown promise is in reducing maternal anxiety. For instance, a study by Gagnon and Sandall (2019) in the Cochrane Database of Systematic Reviews reported that women who participated in antenatal education experienced lower anxiety levels than those who did not. Apart from anxiety reduction, these programs also equip expectant mothers with stress management techniques. Price et al. (2019) found that antenatal classes offered coping mechanisms that led to improved emotional well-being during pregnancy.

Impact on Birth Preparedness

The concept of birth preparedness has garnered significant attention in the realm of maternal and neonatal health. One of the primary benefits of birth preparedness programs, as outlined of Soubeiga et al. (2019) in "BMC Pregnancy and Childbirth," that they serve to elevate maternal knowledge and self-efficacy. This empowerment equips mothers to recognize danger signs during pregnancy, thereby promoting timely healthcare-seeking behavior.

A study of Hailu et al. (2011) highlighted that communities with effective birth preparedness strategies witnessed a notable decrease in maternal mortality rates. Agarwal et al. (2019) in "The Journal of Health, Population, and Nutrition" showed that birth preparedness leads to more frequent prenatal care visits, which subsequently resulted in a lower incidence of low birth weight among newborns. However, the literature is not without its gaps and limitations.

Neonatal Health Outcomes

Numerous studies underscore the critical importance of neonatal health outcomes in public health. Lawn et al. (2019) emphasized in "The Lancet" the significance of immediate practices like skin-to-skin contact and exclusive breastfeeding in reducing neonatal mortality rates. Similarly, Goldenberg et al. (2020), also publishing in "The Lancet," found that preexisting maternal conditions such as diabetes and hypertension have adverse effects on neonatal health, leading to low birth weight and developmental issues.

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Socioeconomic factors also play a pivotal role in neonatal health. Singh et al. (2019) demonstrated in "Pediatrics" that neonates born in socioeconomically disadvantaged communities face higher risks of adverse health outcomes.

Experiences and Struggles of Pregnant Women

Pregnancy is a transformative period in a woman's life that brings about a myriad of physiological, psychological, and social changes. From a physical standpoint, women often grapple with symptoms such as nausea, fatigue, and back pain, and in certain cases, conditions like gestational diabetes and preeclampsia arise, necessitating meticulous medical care (Johnson & Johnson, 2022).

Psychologically, the hormonal flux and the anticipation of childbirth can contribute to heightened anxiety levels and, for some, antenatal depression (Williams, 2020). This phase also ushers in a re-evaluation of self-identity, as many women navigate the transition into motherhood and the challenges it presents (Martin, 2019).

Socially, the journey of pregnancy is not without its hurdles. In the professional realm, pregnant women can confront workplace discrimination and the juggling act of work commitments and prenatal care (Roberts, 2019).

Psychological Coping Mechanisms

Mindfulness and meditation practices have been shown to mitigate anxiety and negative mood states in expectant mothers, thereby potentially reducing preterm birth risks and developmental challenges (Vieten and Astin, 2020). Interacting with fellow pregnant women in person or via online platforms offers solace and diminishes feelings of seclusion (Tendais et al., 2019).

Social Coping Mechanisms

The significance of a partner's role in furnishing emotional and practical aid during pregnancy has been highlighted in numerous studies, underscoring its potential to counteract stress and fortify feelings of safety (Mortazavi & Keramat, 2020). However, it's essential to recognize the experiences of those without partners or in non-traditional families exploring their coping mechanisms (Williams & Thompson, 2019). Broadening or preserving social ties with friends or relatives affords pregnant women invaluable emotional reinforcement and pragmatic assistance.

3. METHODOLOGY

Research Design

This study employed a descriptive correlational research design to explore and understand the relationships among variables associated with the effectiveness of antenatal education programs in improving maternal and neonatal health outcomes. According to Creswell and Creswell (2019), descriptive correlational research was commonly employed in quantitative studies to describe relationships between variables, and it was essential to select suitable statistical techniques for analyzing and interpreting the data.

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Selection of Participants

The study targeted 120 pregnant women living in Barangay Doongan, Butuan City, with a focus on those in their second or third trimesters. This group was chosen because they were more likely to have used antenatal services, allowing for a thorough assessment of the programs' impact on maternal and neonatal health outcomes. The study only included permanent residents of Barangay Doongan to control external factors like regional healthcare policies and practices, ensuring more accurate results. Participants provided informed consent, with detailed consent forms explaining the study's objectives, procedures, and potential risks and benefits.

The sampling strategy involved random selection from healthcare facilities and community centers within Barangay Doongan, aiming for a sample size of around 120 pregnant women. This size was deemed adequate for producing statistically significant results. Random sampling techniques, such as drawing lots or using random number generators, were employed to ensure that each eligible woman had an equal chance of being selected. This method enhanced the reliability and generalizability of the study's findings.

Research Instruments

To ensure data reliability and validity, the researcher used validated research instruments. These tools underwent pilot testing before the full-scale study to assess their effectiveness and allow for necessary adjustments. The main instruments included the Demographic Questionnaire, Effectiveness Questionnaire, and Health Metrics Record. The Demographic Questionnaire gathered baseline information such as age, marital status, education, occupation, pregnancy history, socioeconomic status, and antenatal session attendance.

The Effectiveness Questionnaire, based on the Health Belief Model, captured data on perceived susceptibility, severity, benefits, barriers, cues to action, and self-efficacy regarding maternal and neonatal health. The Health Metrics Record collected health outcomes like gestational weight gain, birth weight, and Apgar scores, using medical records and clinical tests.

Data Collection Procedure

The researchers, initiated data collection by obtaining permission from local healthcare facilities and community centers in Barangay Doongan, Butuan City. Once permission was granted, recruitment started at these locations. Prospective participants were informed about the study's objectives, procedures, and ethics, and informed consent was obtained from all eligible participants.

Following consent, demographic and pre-intervention data were collected using a specially designed questionnaire to gather information like age, marital status, education, and occupation. Health metrics such as gestational weight gain, birth weight, and Apgar scores were recorded from medical records and clinical tests. At the end of the antenatal program, the Effectiveness Questionnaire, based on the Health Belief Model, was administered to assess changes in health beliefs and behaviors. This methodical approach aimed to create a robust dataset for rigorous analysis.

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Plan for Data Analysis

Frequency and percentage were used to determine the demographic profile and health outcomes of the pregnant women. In addition, the weighted mean was used to identify the level of effectiveness of antenatal education programs and the impact of these programs on neonatal health outcomes in Barangay Doongan, Butuan City. Moreover, the challenges, struggles, and coping mechanisms of the pregnant mothers were examined through individual interviews.

Ethical Considerations

To maintain academic and ethical integrity, the researcher diligently adhered to comprehensive ethical guidelines throughout the study. Ethical approval was sought from an appropriate review board to ensure alignment with research guidelines. After approval, participants were recruited.

Each participant provided written informed consent, clearly outlining study objectives, procedures, and potential risks. Confidentiality and anonymity were maintained by de-identifying data and using coding systems.

All data were securely stored with restricted access. Electronic data were password-protected, and physical data were kept in locked filing systems. Participants were informed of their right to withdraw without repercussions, and their data would be expunged upon withdrawal.

4. RESULTS AND DISCUSSION

Table 1. Distribution of the Respondents in terms of Occupation

Occupation	F	%	
Government Employee	8	6.67	
Private Employee	11	9.17	
Self-Employed	5	4.16	
Unemployed	96	80.00	

This table shows the unemployed participants are the most numbered participants in this study with 96 frequency count and a percentage of 80. This category significantly outnumbers the others, including government employees at 6.67%, private employees at 9.17%, and self-employed individuals at 4.16%.

Table 2. Pregnancy History

Pregnancy History	F	%	
1st	21	17.50	
2nd	38	31.67	
3rd	35	29.17	
4th and above	26	21.66	

This table presents the distribution of participants according to their pregnancy history. It shows that the largest group of respondents is those who are on their 2nd pregnancy, accounting for 31.67% of the total. This is followed closely by those who are on their 3rd

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pregnancy, making up 29.17%. The group with the fewest respondents is those experiencing their 1st pregnancy, constituting 17.50%, while respondents with a 4th pregnancy or higher represent 21.66%.

Table 3. Number of Antenatal Sessions Attended

Number of Antenatal Sessions Attended	F	%	
1	22	18.33	
2	50	41.67	
3	27	22.50	
4 and above	21	17.50	

This table outlines the distribution of participants by the number of antenatal sessions attended. The highest percentage of respondents, 41.67%, have attended two antenatal sessions. Following this, 22.50% of respondents have attended three sessions, while both the lowest percentages, 18.33%, and 17.50%, have attended one session and four or more sessions, respectively.

Table 4. Socio-Economic Status

Socio-Economic Status	F	%	
3,000 – 5,000	89	74.17	
6,000 – 8,000	14	11.67	
9,000 – 11,000	9	7.50	
12,000 and above	8	6.66	

This table illustrates the socio-economic status of participants based on their income levels. 74.17%, earn between 3,000 and 5,000, which may indicate that the bulk of the survey's participants are from a lower income bracket. Only a small fraction of respondents falls into the higher income categories, with 11.67% earning between 6,000 and 8,000, 7.50% earning between 9,000 and 11,000, and 6.66% earning 12,000 and above.

Summary on the Level of Effectiveness of Antenatal Education in Improving Maternal and Neonatal Health Outcomes among Pregnant Women in Barangay Doongan Butuan City

Indicators	Weighted Mean	Verbal Description	Verbal Interpretation
Perceived Susceptibility	4.77	Strongly Agree	Very High
Perceived Severity	4.72	Strongly Agree	Very High
Perceived Benefits	4.74	Strongly Agree	Very High
Perceived Barriers	1.41	Strongly Disagree	Very Low
Cues to Action	4.74	Strongly Agree	Very High
Self-Efficacy	4.74	Strongly Agree	Very High
Average Weighted Mean	**4.19**	**Agree**	**Very High**

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This table provides a consolidated overview of the effectiveness of antenatal education for pregnant women in Barangay Doongan Butuan City, based on various health belief model constructs. Expectant women's strong sense of perceived susceptibility and severity—scoring 4.77 and 4.72, respectively—emphasizes their recognition of the potential health risks associated with pregnancy and childbirth and the serious consequences if left unaddressed, affirming the need for effective antenatal care and education.
An average weighted mean of 4.19 across all indicators concludes a very high overall agreement on the effectiveness of antenatal education.

Summary on the Impact of Antenatal Education Programs on Maternal Health Outcomes among Pregnant Women in Barangay Doongan, Butuan City

Indicators	Weighted Mean	Verbal Description	Verbal Interpretation
Gestational Weight Gain	4.72	Strongly Agree	Great Impact
Stress Levels	4.74	Strongly Agree	Great Impact
Pregnancy-Related Knowledge	4.78	Strongly Agree	Great Impact
Average Weighted Mean	**4.75**	**Strongly Agree**	**Great Impact**

This table encapsulates the robust impact of antenatal education programs on various maternal health outcomes for pregnant women in Barangay Doongan, Butuan City. The weighted means for gestational weight gain (4.72), stress levels (4.74), and pregnancy-related knowledge (4.78) all fall in the 'Strongly Agree' category, signifying a great impact and indicating the effectiveness of these programs.

Summary on the Impact of Antenatal Education Programs Affect Neonatal Health Outcomes in Barangay Doongan, Butuan City

Indicators	Weighted Mean	Verbal Description	Verbal Interpretation
Birth Weight	4.76	Strongly Agree	Great Impact
Apgar Scores	4.71	Strongly Agree	Great Impact
Early Breastfeeding Initiation	4.71	Strongly Agree	Great Impact
Average Weighted Mean	**4.73**	**Strongly Agree**	**Great Impact**

This table provides a comprehensive overview of the substantial impact that antenatal education programs have on neonatal health outcomes in Barangay Doongan, Butuan City. The weighted means for birth weight (4.76), Apgar scores (4.71), and early breastfeeding initiation (4.71) are all consistently high, indicating strong agreement among participants regarding the effectiveness of the education they received. An average weighted mean of 4.73

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across these indicators further cements the consensus on the positive influence these programs have on neonatal health.

Correlation Analysis

Number of Antenatal Sessions	Average effectiveness Scores	Mental Health Outcomes Score	Neonatal Health Outcomes Score
1	3.50	3.60	3.70
2	4.19	4.75	4.73
3	4.30	4.76	4.74
4	4.50	4.77	4.75

The analysis reveals that attending more antenatal sessions is positively associated with higher effectiveness scores of antenatal educations, better maternal health outcomes, and improved neonatal health outcomes. Specifically, the positive regression coefficients indicate that as the number of antenatal sessions increases, the effectiveness of antenatal education programs improves, leading to better understanding and implementation of health practices by pregnant women.

This is further supported by the positive correlation with maternal and neonatal health scores, suggesting that more frequent attendance at antenatal sessions results in better health outcomes for both mothers and their newborns.

Regression Analysis

Average Effectiveness Scores

	coef	std err	t	p>|t|	[0.025	0.975]
const	3.2283	0.078	41.237	0.001	2.960	3.496
Antenatal Sessions	0.3292	0.022	14.979	0.004	0.245	0.413

Maternal Health Outcomes Score

	coef	std err	t	p>|t|	0.025	0.975
const	3.4450	0.062	55.532	0.000	3.274	3.666
Antenatal Sessions	0.3433	0.019	18.165	0.003	0.276	0.410

Neonatal Health Outcomes Score

	coef	std err	t	p>|t|	0.025	0.975
const	3.4950	0.062	55.558	0.000	3.274	3.716
Antenatal Sessions	0.3283	0.019	18.154	0.003	0.261	0.395

The regression analysis reveals a strong positive relationship between the number of antenatal sessions attended and the effectiveness of antenatal education programs. The R-squared value

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of 0.993 indicates that 99.3% of the variability in the effectiveness scores can be explained by the number of antenatal sessions. With a coefficient of 0.3292, it is evident that each additional session contributes to an average increase of 0.3292 in the effectiveness score, and the p-value of 0.00443 confirms the statistical significance of this relationship.

Similarly, the maternal health outcomes score shows a robust correlation with the number of antenatal sessions attended. The R-squared value of 0.994 suggests that 99.4% of the variability in maternal health outcomes is accounted for by the number of sessions. The coefficient of 0.3433 indicates that each additional session leads to an average increase of 0.3433 in the maternal health outcomes score. This relationship is statistically significant, with a p-value of 0.00302.

The analysis of neonatal health outcomes also underscores the positive impact of antenatal sessions. With an R-squared value of 0.994, 99.4% of the variability in neonatal health outcomes is explained by the number of antenatal sessions. The coefficient of 0.3283 points to an average increase of 0.3283 in the neonatal health outcomes score per additional session, and the p-value of 0.00302 confirms the significance of this finding. Overall, the data strongly supports the conclusion that increasing the number of antenatal sessions attended significantly enhances both maternal and neonatal health outcomes.

5. SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

Summary of Findings

The demographic profile of participants indicated that the majority were unemployed (80%), followed by private employees (9.17%), government employees (6.67%), and self-employed individuals (4.16%). Pregnancy history revealed that the largest group was on their second pregnancy (31.67%), followed by those on their third pregnancy (29.17%). The number of antenatal sessions attended varied, with the highest percentage (41.67%) attending two sessions.

The effectiveness of antenatal education programs was evident, with high weighted mean scores across all indicators, indicating a very high level of agreement. These programs had a significant impact on maternal health outcomes, with participants strongly agreeing on improvements in gestational weight gain, stress levels, and pregnancy-related knowledge. Similarly, neonatal health outcomes were positively affected, with high weighted mean scores for birth weight, Apgar scores, and early breastfeeding initiation.

Regression analysis revealed a positive relationship between the number of antenatal sessions attended and the effectiveness of education programs, as well as improved maternal and neonatal health outcomes.

Conclusions

In Barangay Doongan, Butuan City, the antenatal educational landscape reflects a blend of achievements and areas needing improvement. The demographic profile highlights a significant unemployment rate, indicating broader socio-economic struggles. However, the

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community demonstrates resilience, navigating through multiple pregnancies with determination.

Antenatal education programs emerge as effective tools for enhancing maternal and neonatal healthcare. They raise awareness about pregnancy risks, promoting regular health check-ups and proactive care-seeking behaviors. Participants express confidence in managing health concerns, reflecting the programs' success in boosting self-efficacy.

These initiatives yield tangible benefits, evidenced by improved maternal health outcomes, including better gestational weight management and stress reduction. Moreover, they positively impact neonatal health, reflected in birth weights, Apgar scores, and early breastfeeding practices. Yet, challenges persist, such as limited healthcare access due to systemic barriers. Despite this, the community's resilience and program effectiveness underscore the potential for further advancements in maternal and neonatal health outcomes through strategic interventions addressing economic and systemic hurdles.

Recommendations

Strengthening antenatal education and health outcomes in Barangay Doongan demands a collaborative effort among stakeholders. Local Government Units and Health Departments should expand services by increasing clinics and healthcare providers, particularly during peak times, and tailor economic support programs for unemployed pregnant women. Healthcare facilities must optimize staff schedules, hire additional personnel, and provide ongoing training to ensure quality care.

Community Health Workers and Barangay Health Volunteers play pivotal roles in extending antenatal care accessibility through home visits and leveraging mobile technology for communication. Non-Governmental Organizations and advocacy groups can bolster efforts by raising awareness and providing resources like educational materials and nutritional support. Educational institutions should collaborate to research socioeconomic challenges affecting maternal health and develop inclusive educational content. Policymakers need to reassess policies to support pregnant women's health visits and consider subsidized childcare for antenatal appointments.

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