

AWARENESS AND UTILIZATION OF INFORMATION BY PREGNANT WOMEN ON MATERNAL HEALTH CARE DELIVERY IN KADUNA STATE

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Abstract

This study investigated awareness and utilization of information by pregnant women on maternal health care service delivery in Kaduna State. Three (3) research questions were formulated and answered concerning the type of information needed by pregnant women; level of awareness of information for maternal health care service among pregnant women and how pregnant women access information resources on maternal health care service in Kaduna State. The survey research method was used for this study. The population of the study consisted of pregnant women attending antenatal clinics in the 30 General Hospitals across 23 Local government areas in Kaduna State. A proportionate stratified random sampling technique was used to select a sample of nine General Hospitals with 262 registered pregnant women. A questionnaire was used to collect data for this study. The data collected were presented and analyzed using Frequency distribution tables, percentages, and histograms. The study reveals that information on general health education; trimester, nutrition, hygiene, child delivery, signs and symptoms of labor, and breastfeeding were the types of information needed by pregnant women in Kaduna State. It was also discovered that friends, spouses, radio, and relatives were the types of media used for creating awareness about information on maternal health care services in Kaduna State. This study concludes that access to information on maternal health care service delivery among pregnant women in Kaduna State could be a thing of the past if only stringent efforts are made to engage all relevant information professionals, including librarians to design a model that will serve as a framework for information awareness and utilization of information on maternal health care service delivery.

Keywords: Awareness, Utilization, Pregnant Women and Maternal Health Care

Introduction

Information is a vital tool that facilitates all activities carried out in our daily business either in government organizations or private institutions; ranging from administration to economic, social, and religious activities. Information is generated and used to accomplish tasks.

Today, information has come to be recognized and accepted as a vital tool for national development. Information is the output that results from analyzing, contextualizing, structuring, interpreting or in other ways processing data. This perspective highlights the transformative process that imbues raw data with meaning and value, facilitating understanding and decision-making. (Jankowska, 2024)

The concept of awareness of information is considered to the state of being knowledgeable about the existence, accessibility, and relevance of information on a particular topic, essentially meaning you are conscious of where to find and how to access information needed for a specific situation, including understanding its accuracy and credibility; in 2023, this concept is particularly important due to the vast amount of information available online, highlighting the need to critically evaluate sources and navigate information effectively. (Nahotko, 2020).

According to recent literature, conducted research on health information awareness primarily focuses on the increasing accessibility of health information through digital platforms, concerns about misinformation and health literacy, disparities in access based on demographics, and the importance of utilizing technology to enhance awareness and promote positive health behaviors; with a significant emphasis on the role of digital media in shaping health information consumption and the need for critical evaluation skills to navigate online health information effectively. (Adetomiwa, 2020)

Awareness of health information in various forms and different locations calls for the need to acquire, process, and make it accessible to those in need. In realization of this, the Federal Government of Nigeria (FGN) established the National Health Information System (NHIS) for planning, monitoring, and evaluating health services at national, state, and local levels, (Komolafe, 2019).

The relevant awareness of Information on Maternal Health care services is also aimed at reducing maternal and neonatal death rates which are at present increasing. Nigeria continues to have one of the highest maternal mortality rates in the world. Recent data indicates a rate of approximately 1,047 deaths per 100,000 live births. Some sources state the rate as "more than 1,000" deaths per 100,000 live births (World Population Review, 2025).

Northern Nigeria accounts for the highest maternal mortality rate in Nigeria. Kaduna State for example has a maternal mortality rate of 1025/100,000 live births (Akhaine, 2018). The evidence also shows that, in Kaduna 4 out of every 5 women give birth at home without skilled birth attendants (NDHS, 2018). This situation is contributing to the high maternal death in the state. Women and girls who get access to skilled birth attendants and at a health facility are more likely to survive.

Utilization of Health Information is one of the vital tools that help in achieving effective Maternal Health Care Services, this information is in 2 ways, the first one is the right information received by doctors, traditional birth attendants, nurses, and midwives educating them about the communities profile that will enable them to know the way they should extended the services to

the pregnant women during consultation and health talk and house to house health campaign. Information is passed to women in the community on how to go about taking care of themselves and their pregnancy, they also be educated and informed on how they should go about if there are any complications. Yet there is a clear indication that the maternal mortality rate is always increasing due to non-compliance by women in rural areas in the country. This situation necessitated the Federal Government of Nigeria in conjunction with the National Primary Health Care Development Agency (NPHCDA) in collaboration with the Nursing and Midwifery Council of Nigeria (NMCN) in (2019) update the Midwives Service Scheme (MSS) to improve their services in meeting up the Millennium Development Goals (MDGs)

According to 2006 census figures published by the National Population Commission (NPC), Kaduna state has a total population of six million, one hundred and thirteen, five hundred and three (6,113,503). Three million and ninety thousand, four hundred and thirty-eight (3,090,438) are males, while three million twenty-three thousand and sixty-five (3,023,065) are females. And there were 340,000.00 expected pregnant women per annum. Also, according to the NPC projection, by 2015 the population of the State will increase to eight million sixty-eight thousand, seven hundred and sixty-one (8,068,761).

Kaduna State, in Northwest Nigeria, has a population of 7.7 million. The state boasts a functional Primary Health Facility in every ward. The immunization coverage is 25% and antenatal visit attendance has improved from 30% in 2008 to 43.8% in 2017. The contraceptive prevalence rate is 24.10% while the unmet need for family planning is 22%. (USAID, 2017)

Furthermore, Kaduna State has ten (10) Pre-health training institutions, five (5) are private while two (2) belong to the State Government, including three (3) schools owned by the Federal Government. All these schools are engaged in producing trained nurses and midwives in the State. According to the Kaduna State Ministry of Health and Nigerian's National Health Management Information System (NHMIS), (2020), there are four hundred and fifty-nine (459) private hospitals and clinics within the Local Government Areas. Also, the State has a total number of thousand, three hundred six (1,306) nurses and midwives distributed within thirty (30) General and Specialist Hospitals and One Thousand and Ten (1,010) Primary Health Care Facilities run by the local government areas in the state.

However, since making available accurate and current information supports and stimulates research activities and innovation, it is necessary to compare, contrast, and evaluate channels of information and communication or models of awareness of information from time to time to create awareness for effective utilization of maternal health care information among women of childbearing age to enhance their patronage to maternal health services delivery in Kaduna State.

Statement of the Problem

Information on maternal health care services is very important because it gives women room to be aware of the existence of services and make maximum utilization of such services in government hospitals. It will also prevent serious and hard-to-predict complications during or

immediately after delivery. Information passed by health professionals in any medium to women or those attending antenatal clinics through (health talk) or advice by health professionals during community or house visitation is very important because it gives women insight on how to go about taking care of themselves and the pregnancy, it also gives them insight on how to avert related pregnancy problems. The service will also save the lives of millions of women and newborn babies.

Information generated by government and health institutions in various forms has yet to reach the grassroots in the country. And are not able to make women and pregnant women aware of the availability of such services, and talk less of utilizing the services by the pregnant women. These needs call for reorganizing information on maternal health care service delivery should be made aware to those in needs and for effective utilization.

More so, information on maternal health care services has the potential to reduce the rate of Maternal and Morbidity death. Information on free medical care to newborn babies and children of fewer than five years that are available in state government hospitals can be of great value if women of childbearing age are aware and utilizing the services. But despite these privileges women and babies are dying in large numbers.

However, in 2020, the maternal mortality rate (MMR) in Kaduna State was 1,025 deaths per 100,000 live births. This means that 1 in 13 women in Kaduna State have an increased risk of dying from pregnancy-related complications. And the factors contributing to high MMR is Lack of skilled personnel and training, poor logistics management system, Stock outs of contraceptive commodities, and Lack of support for existing policies. In the same vain it was observed that Maternal Health Care Service delivery does not meet the desired goals, because according to the National Demographic and Health Survey, (2018), only 16% of total pregnant women delivered their babies in hospitals in Kaduna state, while 84% delivered at home. These bring Maternal and Morbidity death rates in the state to remain constant since 2003, especially in rural areas.

It is in line with the aforementioned problems that this study was conceived is to determine the awareness and utilization of information on maternal health care service delivery in Kaduna state.

Research Questions:

1. What type of information is needed by pregnant women for maternal health care service in Kaduna State?
2. What is the level of awareness of information for maternal health care services among pregnant women in Kaduna State?
3. How do pregnant women utilize information for maternal health care services in Kaduna State?

Review of the Related Literature

Maternal health is a pressing concern in Nigeria, particularly in Kaduna State, where maternal mortality rates remain among the highest globally. This review explores the awareness

and utilization of information by pregnant women regarding maternal health care services, highlighting key factors that influence these aspects.

Awareness of Maternal Health Services

Awareness of maternal health services is crucial for improving health outcomes. Studies indicate that while many women in Kaduna State are aware of antenatal care (ANC) services, knowledge about other critical aspects, such as postnatal care and family planning, is often lacking. For instance, a recent survey revealed that only 60% of women were aware of the availability of postnatal care services (Nigeria Demographic Health Survey, 2023). This gap in awareness can lead to underutilization of essential health services, contributing to high maternal and neonatal mortality rates.

Information Sources and Accessibility

The sources of information significantly affect women's awareness and utilization of maternal health services. Traditional birth attendants, family members, and community health workers are often primary sources of information for pregnant women in Kaduna State. However, the reliability of information varies, and misconceptions about maternal health can persist (Obin & Nwadike, 2023). Digital platforms and mobile health (mHealth) initiatives have emerged as effective tools for disseminating accurate health information, yet access to these technologies remains uneven, particularly in rural areas (UNFPA, 2020).

Barriers to Information Utilization

Several barriers hinder the effective utilization of maternal health information. Socioeconomic factors, such as poverty and low educational levels, limit women's ability to seek and use health services. In Kaduna State, financial constraints are a significant barrier, with many women unable to afford transportation or medical fees (TY Danjuma Foundation, 2023). Geographical distance to health facilities further exacerbates this issue, particularly for women living in remote areas (Nigeria Health Watch, 2025).

Cultural beliefs also play a critical role in shaping health-seeking behaviors. Some women may prefer traditional practices over medical care, influenced by societal norms and the advice of family members (Uju & Toli, 2019). Addressing these cultural barriers is essential for improving the uptake of maternal health services.

Impact of Awareness on Health Outcomes

Improving awareness and utilization of maternal health information is vital for reducing maternal and neonatal mortality rates. Evidence suggests that women who are informed about available services are more likely to seek timely medical assistance, thereby reducing the risk of complications during pregnancy and childbirth (Federal Ministry of Health, 2021). Community-based interventions that focus on health education and awareness campaigns have shown promise in increasing service utilization (Nigeria Health Watch, 2022).

Research Methodology

A survey research method was employed in selecting participants for the study. The population of the study constituted a total number of thousand Nine Hundred Twenty (1920) pregnant women attending antenatal clinics in the 30 General Hospitals across 23 local governments in Kaduna State. The study used the proportionate stratified random sampling to determine the sample size. However, Three (3) General Hospitals were drawn from each zone which constituted the total number of Nine (9) General hospitals representing 30% number of the population namely; Zaria, Ikara, and Sabon Gari from Zone One. Kaduna South, Giwa, and Birnin Gwari from the Central zone while, Kauru, Zangon Katab, and Jama'a were selected from Zone Three. This is to ensure a wider coverage of the selection of the participants. A total of 226 pregnant women were selected for the study. The questionnaires were filled in anonymity to gain the confidence of the participants. Data was presented in tables and frequency charts.

Results and Discussion

The first research question was aimed at identifying the information on maternal health care service delivery needed by pregnant women in Secondary Health Care Facilities in Kaduna State. To answer this question, a list of information was provided for the respondents to tick as many as possible. Table 1 presents the relevant data.

Table 1: Type of information needed by the pregnant women

S/N	Type of information needed	Response
1	General health education on pregnancy	√
2	Trimester information	√
3	Second-trimester information	√
4	Third-trimester information	√
5	Nutritional information	√
6	Information on hygiene	√
7	Information on signs and symptoms of labor	√
8	Information on child delivery	√
9	Information on exclusive breastfeeding	X
10	Medication information	√

Source: Researcher's Field Survey, 2025

Key

- √ Needed
X Not needed

Table 1 indicates that pregnant women in Kaduna State needed information on general health education, trimester, nutrition, hygiene, child delivery, signs and symptoms of labor, and general medication information. On the other hand, the table further indicated that pregnant women in Kaduna State do not need information on exclusive breastfeeding. This finding

showed that pregnant women prioritized their need for information. This is perhaps why information on exclusive breastfeeding was not needed because the information is needed most postnatal.

The second research question was aimed at identifying sources of information on maternal health care service delivery by pregnant women in Secondary Health Care Facilities in Kaduna State. To answer this question, a list of sources of information was provided for the respondents to tick as many as possible.

Table 1 and Fig. 1 present the relevant data.

Table 2: Awareness of Information on Maternal Health Care

S/N	Responses	Frequency	Percentages
1	Yes	168	83.2
2	No	34	16.8
3	Total	202	100%

Source: Researcher's Field Survey, 2025

Table 2 & fig. 1 shows that a majority of the pregnant women in Kaduna State, 168(83.2%) indicated that they were aware of information on maternal health care delivery in their locality, while 34(16.8%) of the same respondents indicated that they were not aware of any information on maternal health care delivery in their respective locality within Kaduna State. This perhaps might be due to the level of education and background of the pregnant women in the study area.

Based on this finding, the researcher deduced that a majority of pregnant women attending antenatal clinics in Kaduna State were aware of information on maternal health care delivery in their locality.

A follow-up question was raised to identify the various media the pregnant women got information about the existence of maternal health care service delivery. To do this, a list of media was provided for the respondents to tick as many options as applicable as shown in Table 3 & fig. 2:

Table 3: Types of Media Used for Creating Awareness

S/N	Type of Media	Frequency	Percentages
1	Radio	197	14.5
2	Newspapers	105	7.7
3	Posters	126	9.2
4	Handbills	10	0.7
5	Telephones	135	9.9
6	Internet	127	9.3
7	Community meetings	10	0.7
8	House visitation by health workers	15	1.1
9	Friends	198	14.5

10	Relatives	197	14.5
11	Spouse	198	14.5
12	Libraries/information centers'	45	3.5
13	Total	1363	100%

Source: Researcher's Field Survey, 2025

Table 3 & fig. 2 shows the responses of the respondents on the media used for creating awareness on information on maternal healthcare delivery in Kaduna State. An observation of the table revealed that friends, and spouses with 198(14.5%) scores each were the type of media used for creating awareness with the highest frequencies. This is followed by radio and relatives with 197 (14.4%) each.

However, handbills and meetings with 10(0.7%) scores each recorded the least frequencies. This is followed by house visitation by the health workers with 15(1.1%) scores. The use of telephone recorded 9.9% response scores. This finding indicated that several pregnant women do not use telephones (mobile phones and landlines) to make necessary inquiries about maternal health care service delivery in their respective localities. This might be due to either the hospitals in Kaduna State do not provide telephone hotlines for necessary inquiries or due to the assertion made by Mssgati, (2020) that the use of cell phone networks in healthcare in developing countries is largely unexplored due to their level of socio-economic development.

Also, the researcher asked the respondents to indicate the frequency of their antenatal clinic attendance. A list of options was outlined for the pregnant women to tick only one appropriate option as indicated in Table 5 & fig. 4:

Table 4: Frequency of Attending Antenatal Clinics

S/N	Periods	Frequency	Percentages
A	Weekly	47	23.3
B	Monthly	50	24.8
C	Fortnightly	20	9.9
D	Quarterly	0	0
E	When the need arises	85	42.1
F	Total	202	100%

Source: Researcher's Field Survey, 2025

Table 4 & fig. 3 reveals a classical variation in the period/days pregnant women attend antenatal clinics in Kaduna State. A cursory look at the table indicated that a majority of the respondents representing 85(42.1%) attended their antenatal clinics most when the need arose. This means that they did not have a definite period in which they attended antenatal clinics. This perhaps might be attributed to the fact that pregnant women usually attend the clinics anytime they experience any changes in their body system.

On the other hand, 50 (24.8%) and 47(23.3%) of the respondents identified that they attended antenatal clinics monthly and weekly respectively. This is expected because some

segments of pregnant women were usually given appointments to attend antenatal clinics concerning their state of pregnancies. This is in line with World Health Organization (WHO) recommends a minimum of eight antenatal contacts to reduce perinatal mortality and improve women's experience of care (WHO, 2022)

The researcher further asked the respondents to state their reasons for attending antenatal clinics. To achieve this, a list of reasons was provided for the pregnant women to tick as many as possible as shown in Table 6:

Table 5: Reasons for Attending Antenatal Clinics

S/N	Reasons	Responses
A	Promoting my health status	√
B	Safeguard me from safe delivery	√
C	To obtain advice on health problems	√
D	To get medication for minor complaints	√
E	To prepare me psychologically for pregnancy and delivery	√
F	Develop good relationships between healthcare providers and clients.	X

Source: Researcher's Field Survey, 2025

Table 5 sought to find out the reason for attending antenatal clinics for pregnant women in Kaduna State. It was discovered that out of the six (6) reasons identified, the respondents indicated that all except one were their reasons for attending antenatal clinics in Kaduna State. These reasons were: to promote their health status; safeguard their safe delivery; obtain advice from health professionals; get the right medication for minor complaints; and prepare the pregnant women psychologically for pregnancy and delivery. However, developing a good relationship between the health workers and the clinic does not constitute a reason for attaining antenatal clinics. This is in line with Nair et al., (2021) contribution that ANC helps reduce fear and anxiety about childbirth. The discussions and interactions during ANC are crucial for promoting maternal health and preparing families for the arrival of the baby.

Extent of Utilization of Information on Maternal Health

This question aimed at determining the extent of utilization of information by pregnant women attending antenatal clinics in Kaduna State. In doing this, the researcher provided the respondents with the list of types of information using the Likert scale of measurement with the options of Mostly Used (MU), Moderately Used (MU), and Not Used (NU) respectively. Table 4.5 & fig. 3 depicts the responses of the respondents about the research question:-

Table 6: Extent of Utilization of Information

S/N	Type of Information	Mostly Used	Moderately Used	Not Used
1	Information for General health education on	120(59.4)	62(30.6)	20(10.0)

	pregnancy			
2	Trimester information	122(60.4)	40(19.8)	40(19.8)
3	Second-trimester information	120(59.4)	60(29.7)	22(10.9)
4	Third-trimester information	124(61.4)	70(34.7)	08(3.9)
5	Nutritional information	108(53.5)	62(30.6)	32(15.9)
6	Medicational information	20(10.0)	22(10.9)	160(79.2)
7	Information on hygiene	122(60.3)	60(29.7)	20(10.0)
8	Information on minor complaints in pregnancy	120(59.4)	62(30.6)	20(10.0)
9	Information on signs and symptoms of labor	122(60.4)	48(23.8)	30(14.8)
10	Information on child delivery	130(64.4)	50(24.8)	22(10.9)
11	Information on exclusive breastfeeding	180(89.1)	82(40.6)	40(19.8)

Source: Researcher's Field Survey, 2025

Table 6 & fig. 4, it was discovered that information on general health education on pregnancy, trimester, hygiene, child delivery, signs and symptoms of labor, and breastfeeding was the type of information mostly utilized for maternal health care delivery in Kaduna State. This finding is in agreement with that of Esarada & Okolo, (2019) who also discovered trimester, labor, and breastfeeding to be the most utilized type of information for family planning and maternal health.

Findings

Based on the data collected and analyzed for this study, the following are the major findings:

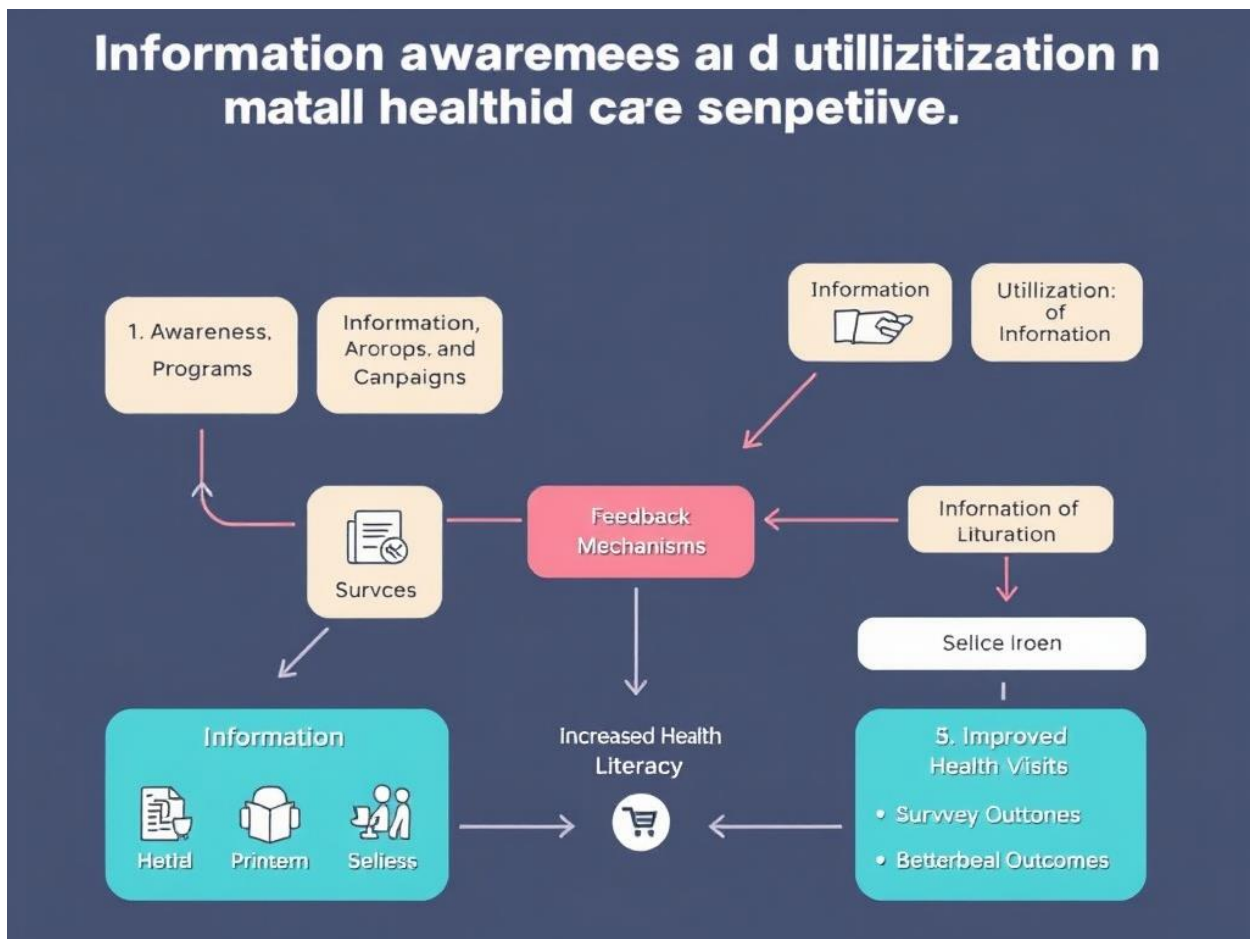
1. Information on general health education, trimester, nutrition, hygiene, child delivery, signs and symptoms of labor, and breastfeeding were the types of information needed by pregnant women in Kaduna State.
2. A majority of the pregnant women in Kaduna State, 168(83.2%) indicated their awareness of information on maternal health care delivery in their locality.
3. Friends, spouses, radio, and relatives were the type of media used for creating awareness with information on maternal health care in Kaduna State.
4. Information on general health education on pregnancy, trimester, hygiene, child labor, child delivery, signs and symptoms of labor, and breastfeeding was the type of information mostly utilized for maternal health care delivery in Kaduna State.

Conclusion

It can be concluded that pregnant women in Kaduna State have recognized the significance of health information on maternal health care in their daily lives. This is evident considering their

patronage/attendance of antenatal clinics for the safe delivery of their pregnancies. Consequently, to keep pregnant women aware and informed with relevant information on maternal health care, concerted efforts have to be made to engage the information services of all information professionals including library and information providers to create awareness and strengthen the awareness and utilization of maternal information among the pregnant women.

Below is the Model developed by the researcher for Information Awareness and Utilization on Maternal Health Care Delivery that will serve as a framework for effective information and utilization of information on maternal health care by pregnant women positive knowledge impute and sharing



Model of Information Awareness and Utilization on Maternal Health Care Delivery

1. Awareness Programs:

- i. Workshops and Seminars: Conduct regular sessions to educate pregnant women about maternal health.
- ii. Media Campaigns: Use radio, TV, and social media to disseminate information.

2. Information Sources

- i. Healthcare Providers: Encourage regular visits to doctors and midwives for personalized advice.
 - ii. Printed Materials: Distribute brochures and pamphlets on maternal health topics.
3. Utilization of Information
- i. Antenatal Care Visits: Promote the importance of attending antenatal clinics regularly.
 - ii. Health Education: Teach women about nutrition, exercise, and recognizing warning signs during pregnancy.
4. Feedback Mechanisms
- i. Surveys and Questionnaires: Gather feedback from women on the effectiveness of information provided.
 - ii. Focus Groups: Conduct discussions to understand barriers to accessing maternal health information.
5. Expected Outcomes
- i. Improved Health Literacy: Women gain a better understanding of maternal health.
 - ii. Increased Antenatal Visits: Higher attendance at antenatal clinics.
 - iii. Better Health Outcomes: Reduction in maternal and infant morbidity and mortality rates.

Implementation Strategy

- i. Collaboration: Partner with local health departments, NGOs, and community leaders.
- ii. Monitoring and Evaluation: Regularly assess the effectiveness of programs and make necessary adjustments.

The model aims to empower women with the knowledge and resources needed for safe and healthy pregnancies.

Recommendations

Arising from the findings of this study, the following recommendations were made:

1. Community radios and local information centers should be established to disseminate information on maternal health care in the language of the immediate environment.
2. Seminars and meetings should be organized for pregnant women to educate them on available safety measures to be taken concerning their pregnancies.
3. Hospital libraries should champion the crusade for informing and educating pregnant women attending antenatal clinics via posters, pamphlets, handbills, and oral presentations.
4. Government and hospital management should empower the library staff with adequate information resources, equipment, and facilities to effectively discharge their information role.
5. Telephone hotlines should be created to allow for emergency consultations between pregnant women and the hospital.
6. Non-governmental organizations (NGOs) should be given a more free and open hand to contribute allots because they serve as a basic and reliable source of information because

of their wide coverage and research they conducted in various parts of the country, they provide such information to all level of government to guide women on maternal health care delivery services.

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