

## Utilization of Pre-Natal/Ante-Natal Care Services by Female Teachers in Public Secondary Schools in Enugu State, Nigeria.

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### ABSTRACT

Safe motherhood initiative (SMI) is a vital component of reproductive health and is of prime concern to fertility. It is a worldwide initiative whose aim is to reduce maternal morbidity and infant mortality and also to improve women's reproductive health. The purpose of the study examined the utilization of pre-natal/ant-natal care services by female teachers in public secondary schools in Enugu State. It specifically sought to ascertain the extent of utilization of Ante-natal care services by female teachers in secondary schools in Enugu state based on parity/. Relevant and related literature were reviewed. The study adopted the descriptive survey research design. The population for the study consisted of all the 7419 female teachers in the 291 public secondary schools in Enugu State. A sample of 440 female secondary school teachers were selected using Taro Yamen formula. A self-structured instrument developed by the researcher which was validated by three experts. The instruments reliability coefficient was ascertained using Cronbach Alpha reliability estimate. 440 copies of the instrument were administered to the respondents and collected on the spot. The data collected were analyzed using mean and standard deviation to answer the research question. The hypothesis was tested using t-test statistic. The result obtained showed that pre-natal/ante natal care services are utilized by female teachers in public secondary schools in Enugu state based on parity to a great extent. Hence, the study, by implication, revealed also that location and parity influence the health status of the respondents. Based on the findings, the researcher recommends, among others, that government should ensure the availability of skilled midwives at health centres within the health work force development plan in Enugu State. The researcher suggested that the study be conducted in all the other states of the federation.

Keywords: Safe Motherhood Initiative, Pre-natal Service and Ante-natal Service

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### INTRODUCTION

Many maternal deaths in developing world could be preventable if women are sensitized well enough to utilize prenatal/antennal care services before conception and health care during pregnancy. Antenatal care involves provision of advice and medical service to a pregnant woman by a health professional from the time of pregnancy to delivery and include services such as urine test for albumin and sugar, hemoglobin, blood pressure, fetal auscultation and fetal palpitation. [1] According to [2], antenatal service is the provision of advice and medical services to a pregnant woman by a health professional from the time of conception to delivery.

It is an essential part of safe motherhood practices as pregnant women undergo the following checkups-urine test for albumin and sugar, hemoglobin, blood pressure, fetal auscultation (fetal scope) and fetal palpation. This will help prevent and reduce morbidity and mortality among mothers and children yet to be born. However WHO, and UNICEF in a separate report observed that childbearing mothers do not avail themselves of this service thus putting themselves at risk and that this account for low coverage in Africa (about 34.1%) [3,4]. The delivery service coverage in Africa is put at 22.84% and accounts for the high death rate recorded among safe motherhood (SMI) estimated at 871 mothers out of 100,000

die due to pregnancy and delivery related problems. These statistics are worrisome and justifies the need to investigate safe motherhood initiative utilization among mothers teaching in secondary schools in Enugu state. [5], posited that antenatal service is the provision of advice and medical services to a pregnant woman by a health professional from the time of conception to delivery.

Furthermore, antenatal services and utilization are very necessary for safe motherhood initiatives (SMI) effectiveness. [6], wrote that antenatal care services indirectly save the lives of mothers and babies by promoting and establishing good health before childhood and early post natal period. The author argued that it presents the first contact opportunities for a pregnant woman to connect with health services and an entry point for integrated care. This promotes healthy home practices, influencing care-seeking behaviours and linking women with pregnancy complications to a referral system, thus impacting positively on malarial and fetal health [6]. Consequently, adequate antenatal care is recognized as an important strategy that significantly reduces maternal mortality and morbidity. According to [7], antenatal care provides avenue to pregnant woman with information, treat existing social and medical conditions and screen for risk factors.

A report by [1] maintained that medical check-ups helps mothers to get advices during pregnancy and post-delivery periods. The report specifically singled out activities that should be undertaken during first antenatal visit to include, Registration, age height, weight, last day of menstruation. The report subsequently advised women to be cautious of the some signs of illnesses such as puffiness/oedema of the face especially around the eye, oedema of fingers, consistent nausea and intense vomiting, severe headache, abdominal pain, blurred vision bleeding from the uterus, blood like vaginal discharge, fever, and voluminous yellowish or white vaginal discharge. If teaching mothers who are pregnant regularly receive antenatal care

services, they could be adequately informed on some life-threatening signs and symptoms they should possibly avoid during pregnancies. [8], in a study on safe pregnancy practices and knowledge of safe motherhood among women in rural communities in Northern Nigeria and the implications for material mortality reduction reported that majority of the respondents from Kano and Kaduna States have poor knowledge and utilization of safe motherhood initiative. Findings of the study also showed that safe motherhood initiatives are strongly associated with antenatal attendances, being employed or acquiring some level of education, as well as the number of deliveries by mothers.

More to the above, immunization is recognized as an essential component of child care services, an evidence of practice of safe motherhood. [1] described immunization as the process by which an individual's immune system becomes fortified against an agent (immunogen). The report identified T cells, B, cells, antibodies B cells is important elements of the immune system that are improved by immunizations. There is abundant body of literature on the health benefits of immunization to childbearing mothers. According to [9], immunization is the most powerful cost effective means of preventing some of the deadly diseases of childhood and important components of primary health care (PHC). A mother or a child who is immune to disease is protected against the disease by means of antibodies. The prevention of disease by immunization, a conventional public health measure is today the best known, practical, low cost, community based way of protecting children against the major killer childhood diseases. Notable vaccines according to [10] include BCG (given at birth) the pentavalent vaccine (five vaccines in one) combing the DTP, hematite B and Hibuaccines (Haemophilus influenzae type B). To ensure highest level of effectiveness, these vaccines should be administered according to the [10], schedule thus;

|             |   |  |
|-------------|---|--|
| At delivery | - | Vitamin A to the mother  |
| At birth    | - | BCG (Bacillus-Calmette Geurin and Polio O                      |
| 6 weeks     | - | DPT <sub>1</sub> (Diphtheria, Pertussis and tetanus) and Polio |
| 10 weeks    | - | DPT <sub>2</sub> and Polio2                                    |
| 14 weeks    | - | DPT <sub>3</sub> and Polio 3                                   |
| 9 months    | - | Measles, yellow fever and vitamin A (first dose)               |
| 15 months   | - | Vitamin A- second doses [10]                                   |

Improved vaccination coverage may dramatically reduce infant deaths. This is because diseases such as measles, poliomyelitis, pertussis, tuberculosis, tetanus and diphtheria which cause mortality among infants in many developing countries such as Nigeria today are reduced to barest minimum through immunization [11]. [4], stated that immunization alone would save three million lives a year.

From the above literature, there are indications that maternal morbidity and mortality (MMM), globally every year, reaches over half a million [11]. Most of the deaths from pregnancy related conditions occur in rural and urban areas of developing countries [12]. As at 2012, Nigeria maternal morbidity ratio was reportedly put at 630/100,000 live births making it the 10<sup>th</sup> worst country in the world [13]. In Nigeria, report has it that an average of 630 women die out of every 100,000 women who bring forth a life birth. Despite the observation that traditional societies appear to have accepted the high MMM as unavoidable, researchers have shown that MMM and other pregnancy related problems are preventable [14]. In the same vein many researchers have analyzed the, issue of MMM, and problems attributed to childbearing both in developed and developing countries and the conclusions are that they are preventable. That possibly suggests that safe motherhood is realizable. Thus, in a bid to find a lasting solution to increasing rate of maternal mortality and morbidity (MMM). Safe Motherhood Initiatives which has pre-natal/ant-natal care service as a component offers a unique and unprecedented opportunity to review and amend existing clinical practices to reflect current evidence-based management guidelines in a non-primitive setting; access to expert opinions and tools to

understand important nomenclature for pre-natal/antenatal care services [15]. [16], described it as a global effort to reduce MMM in developing countries. According to the report, the programme aims at empowering pre-natal/antenatal care services teams to share, assess and implement strategies to reduce problems associated pregnancy. It has been claimed that most of the pregnancy complications and problems being experienced are deeply rooted in improper utilization of SMI component such as prenatal care service [17].

Many maternal deaths in developing world could be preventable if women are sensitized well enough to utilize prenatal/antennal care services before conception and health care during pregnancy. Again in Enugu State, observations and chemical records have shown that maternal deaths toll is on the high side. This [12], attributed to the notion held by mothers of child bearing age that it is no use availing themselves of ante-natal services before their pregnancy is five months old or utilizing post-natal services except their baby(s) are not feeling fine or they have challenge.

Antenatal care involves provision of advice and medical service to a pregnant woman by a health professional from the time of pregnancy to delivery and includes services such as urine test for albumin and sugar, haemoglobin, blood pressure, fetal auscultation and fetal palpitation [2]. Literatures show that routine pre-natal/antenatal care has three main components: education and promotion of healthy attitudes, the monitoring maternal and fetal progress, the identification of women at high risk of complications followed by treatment or referrals to appropriate equipped and staffed facilities [18].

Immunization during antenatal visits by women prevents and control childhood diseases. [9], asserted "immunization is the most powerful cost effective means of preventing some of the deadly diseases of childhood and an important component of primary health care (PHC). Some notable vaccines include BCG (given at birth, the pentavalent vaccine (five vaccines in one combining DTP, hermatite B and Hibuaccines (Haemophilus influenza type B) [10]. Female teachers in public secondary schools in Enugu State utilization of prenatal/antenatal care services could be a hindrance to effective realization of safe motherhood initiatives goals.

The responsibilities as well as the privileges of a female teacher in secondary school are great and could be a matter of positive disposition in issues relating to the utilization of SMI. Perhaps the number of deliveries by a female teacher in secondary school could be the determining factor to the utilization of SMI bundles irrespective of its usefulness. Parity relates to the number of deliveries by a woman which may be primiparous (one delivery) or multiparous (more than one delivery). [12], shows that parity is a strong predictor of SMI utilization by women. [19], observed that women undergoing first pregnancy utilized skilled services more than multiparous mothers living in rural Bangladesh. However in a contrast report [20], found that women living in Ntchisi district of Malawi who were multiparous utilized health facilities at a low rate. This possibly suggests that SMI utilization in that region of the country is low and could be improved by encouraging women in both rural and urban settings.

The place of residence of the female teachers in public secondary schools may be a factor in the utilization of SMI components. A study by [19], observed that pregnant women in the rural district of Kenya combine antenatal visits with the use of herbs which they bathe and drink or sit-in during pregnancy, childbirth and immediately after birth. According to the report, women in that region share the opinion that these

practices prevent clot of blood after delivery. Perhaps, the utilization of SMI may be low among women of that region. It has not been established if female teachers in public secondary schools in Enugu state utilize SMI bundles as they may be deeply involved in traditional practices. [21], reported that pregnant women in Orlu urban of Imo state had low utilization of child care services, but their nutritional practices were efficient. [22], observed that child bearing mothers (CBMs) in rural Bangladesh received health care services from village doctors, and attributed this disposition to financial insolvency. Corroborating, [23], earlier report affirmed that in most rural settings, there are challenges. This may be because the decisions that lead women to utilize the services seem to occur within the context of their marriage and family.

In Enugu State, pre-natal and ante-natal care services seems to be elusive. It has been claimed that most of the pregnancy complications and problems being experienced are deeply rooted in poor utilization of pre-natal and ante-natal care services. Poor utilization of qualitative health service continues to contribute to maternal morbidity and mortality in Enugu State [24, 25]. When expectant women arrive at the hospital, certain preparations are made to make the delivery safe. This also means that pre-natal and ante-natal care services are carried out by the nurses. The desire and confidence to continue the utilization of nurses and midwives as well as other health personnel may be largely dependent on these health personnel. This possibly suggests that utilization of these personnel by the female/teachers mothers may be high or low with far reaching health implications. Perhaps, understanding the preferences of the people and the various factors that influence their preferences will help to improve the utilization of pre-natal and ante-natal care services and thereby reduce unnecessary loss of lives. As a result of the foregoing, the researcher is poised to ascertain the extent pre-natal/ante-natal care services are utilized

by female teachers in public secondary

schools in Enugu State, Nigeria.

### Statement of the Problem

Complications of pregnancy and childbirth are the leading causes of maternal mortality and morbidity in women in developing countries of the world. Observations of women in rural and urban settings of Enugu State revealed that some of them appear to patronize traditional birth attendants (TBAs) more than having to seek expert advice in Maternal Care Hospital (MCH); maternities and hospitals. This invariably means that some aspects of SMI- pre-natal/ante-natal care are neglected by female teachers teaching in public secondary schools in Enugu State as such increases mortality rate. However, it has not been established whether women are differentiated in attendance to these

facilities by any recognizable criteria. It is therefore likely that such criteria may be based on attitudinal inclinations. For instance, could the preference to use any health facility of choice be based on location or parity or could it be that the more the inclination to utilize it, the more pre-natal/ante-natal care service are prevalent? Recent report indicates that Nigeria is one of the six countries of the world that account for 50% of global maternal deaths [3]. These observations are indeed the motivation or problem and crux of this study. The problem of this study, posed as a question, is: what is the extent of utilization of pre-natal/ante-natal care service by female teachers in public secondary schools in Enugu State?

### Purpose of the Study

The study sought to examine the utilization of Pre-natal/ante-natal care services by female teachers in public secondary schools in Enugu State. Specifically, the study sought to;

- i. ascertain the extent of utilization of pre-natal/ante-natal care services by female teachers in public secondary schools in Enugu State.

### Research Question

The following research question were raised to guide this study.

- i. To what extent do female teachers in public secondary

school utilize Pre-natal/Ante-natal care services in Enugu State?

### Research Hypothesis

The following null hypothesis was formulated and tested at .05 level of significance

H<sub>01</sub> There is no significant difference between the mean ratings of primiparous and multiparous

female teachers in public secondary schools in Enugu State regarding their extent of utilization of pre-natal and ante-natal care services.

### Methodology

The study adopted a descriptive survey design. The area of the study was Enugu State, Nigeria. The population for the study consisted of 7419 female teachers in the 291 public secondary schools in Enugu State. In all, we have 4491 female teachers are in urban public secondary schools and 2928 serve in rural public secondary schools. In accordance with parity, 1307 female secondary school teachers are primiparous (those that have given birth only once) while 2112 are multiparous (those that have given birth more than once). A total of 440 female

teachers in public secondary schools in Enugu state were used for the study. The sample size was determined using Taro Yamane formula. The sample size consisted of 264 urban and 176 rural female teachers in public secondary schools in Enugu State. In accordance with parity, the sample size was 153 for primiparous (ie those that have given birth only once) and 287 for multiparous (ie those that have given birth more than once) female secondary school teachers in public secondary schools in Enugu State. The instrument used for data collection

was a 9 items questionnaire called Pre-Natal /ante-natal care Services of Female Teachers (PACS-FT). The instrument had a 4-point response scale with response category of very great extent (VGE 4Points), great extent (GE-3 points), little extent (LE-2) and very little extent (VLE-1 Point). The instrument was validated by three experts; two from Health Education Department and one from measurement and evaluation, all from Faculty of Education Foundation, Enugu State university of Science and Technology (ESUT), Enugu. The internal consistency of the instrument was determined using Cronbach Alpha reliability estimate and it yielded a reliability coefficient of .82. The study was carried out among the female secondary school teachers in all the secondary schools in the six education zones of Enugu state. The researcher and the research assistants administered the

Very great extent (VGE)----4 points  
 Great extent (GE)-----3 points  
 Low Extent (LE)-----2 points  
 Very little extent (VLE)---1 point

The decision rule for the null hypothesis is that if t-calculated is equal to or greater than t-critical at the chosen confidence level (.05) and degree of freedom ( $n_1 + n_2 - 2$ ) the null hypothesis is rejected; if on

#### Presentation of Results

This section presents the results of the study according to the research question that guided the study.

#### Analysis of Data

The data analyzed was presented in Tables 1

**Research Question 1:** To what extent do female teachers in public secondary

questionnaire to the female secondary school teachers. The administered copies of the questionnaire were collected on the spot. This helped to minimize interference which may substantially influence the outcome of the study. Through this a 100% return rate was recorded.

Data collected were analyzed using mean, standard deviation and grand mean. The mean rating numerical value was added up and divided by the number of response items. This is referred to as the cut-off point which the researcher used to make inferences for the study. For the research question, any item below 2.50 signifies low extent while items equal to or above 2.50 signifies high extent.

The hypothesis was analyzed using the t-test. Nominal values were assigned to different scaling options as follows;

the other hand, the calculated t-value is less than the value of the t-critical from the table value, then the null hypothesis is accepted.

schools utilize Pre-natal/Ante-natal care services in Enugu State?

**Table1: Mean (X̄) Ratings of the Extent to which Female Teachers in Public Secondary Schools Utilize the Pre-natal/ Ante-natal Care Services in Enugu State**

|                   |   | N= 440 |     |     |             |             |                 |          |
|-------------------|---|--------|-----|-----|-------------|-------------|-----------------|----------|
| S/N               | Items   | VGE    | GE  | LE  | VLE         | X           | SD <sub>3</sub> | Decision |
| 1.                | I go for medical check-up during pregnancy in the hospital/health centre          | 213    | 119 | 57  | 51          | 3.12        | 1.03            | GE       |
| 2.                | Present myself for immunization during pregnancy                                  | 187    | 97  | 83  | 73          | 2.90        | 1.12            | GE       |
| 3.                | When pregnant, I insisted on getting care from specialists during hospital visits | 143    | 117 | 99  | 81          | 2.73        | 1.10            | GE       |
| 4.                | I take balanced diet  | 171    | 113 | 79  | 77          | 2.85        | 1.11            | GE       |
| 5.                | I adhere to antenatal health tips given during health education talks             | 73     | 91  | 99  | 177         | 2.13        | 1.12            | LE       |
| 6.                | I try to obtain folic acid supplements from a pharmacy                            | 81     | 99  | 117 | 143         | 2.26        | 1.10            | LE       |
| 7.                | When pregnant I go for antenatal visits Regularly                                 | 191    | 157 | 48  | 44          | 3.40        | 0.76            | GE       |
| 8.                | I go to traditional birth attendants when pregnant                                | 77     | 91  | 133 | 139         | 2.24        | 1.08            | LE       |
| 9.                | Child Delivery was at obstetric hospital  | 141    | 123 | 101 | 75          | 2.75        | 1.08            | GE       |
| <b>Grand Mean</b> |   |        |     |     | <b>2.71</b> | <b>1.06</b> | <b>GE</b>       |          |

Table 1 shows that of the 9 items on the extent to which female teachers in public secondary schools utilize pre-natal/ante-natal care services in Enugu State, the respondents agreed with 6 items 1, 2, 3, 4, 7 and 9 as they recorded mean scores of (3.12, 2.90, 2.73, 2.85, 3.40 and 2.75) which are above the cut-off point of 2.50. They however disagreed with 3 of the items (5, 6 and 8) with a mean score of (2.13, 2.26 and 2.24). The standard deviation for all the items are small signifying that there is homogeneity in

the responses of the respondents. The table also shows that the respondents grand mean score of the extent to which female teachers in public secondary school utilize pre-natal/ ante-natal care services in Enugu State is 2.71. Based on the decision rule for the interpretation of the respondents' data, the answer to research question 1 is that female teachers in public secondary schools utilize pre-natal/ante-natal care services in Enugu State to a great extent.

**Hypothesis 1**

There is no significant difference between the mean ratings of primiparous and multiparous female teachers in public

secondary schools in Enugu State regarding their extent of utilization of pre-natal and ante-natal care services.

**Table 2: t-test Analysis of the Difference Between the  $\bar{X}$  Mean Scores of Primiparous and Multiparous Female Teachers in Public Secondary Schools in Enugu State regarding their Extent of Utilization of Pre-natal and Ante-natal Care Services.**

| Parity      | N   | $\bar{X}$ | SD   | df  | t-cal | t-crit     | Decision               |
|-------------|-----|-----------|------|-----|-------|------------|------------------------|
| Primiparous | 153 | 2.97      | 1.01 | 338 | 1.04  | $\pm 1.96$ | NS                     |
| Multiparous | 287 | 2.90      | 0.96 |     |       |            | Do not reject $H_{01}$ |

Significant at  $P < .05$ ,  $df = 338$ , critical t-value =  $\pm 1.96$

The t-test analysis in table 2 above indicates that the calculated t-value is 1.04 while the critical t-value is  $\pm 1.96$  at .05 level of significance. This implies that the calculated t-value is less than the critical t-value. Thus, going by the decision rule, there is no significant

difference between the mean ratings of primiparous and multiparous female teachers in public secondary schools in Enugu State regarding their extent of utilization of pre-natal and ante-natal care services.

**DISCUSSION OF FINDINGS**

For the discussion of the findings inherent in this study, research question and research hypothesis that are related will be treated together. A major finding of this study showed that female teachers in public secondary schools utilize pre-natal/ante-natal care services in Enugu State to a great extent. The first and the second research hypothesis ascertained if there was a significant difference in the pre-natal/ante-natal care services utilization by female teachers in public secondary schools in Enugu State based on parity/location. The analysis showed that there is no significant difference in the pre-natal/ante-natal care services utilization by female teachers in public secondary schools in Enugu State based

on parity/location. The findings is at variance with those of [3], In a separate report, they observed that childbearing mothers do not avail themselves of this service thus putting themselves at risk and that this account for low coverage in Africa (about 34.1%). The findings are consistent with those of [8], who found that majority of the respondents from Kano and Kaduna States have poor knowledge of safe motherhood initiative. Findings of the study also showed that safe motherhood initiatives are strongly associated with antenatal attendance, being employed or acquiring some level of education, as well as the number of deliveries a mother had.

**CONCLUSION**

Conclusively from the above analysis and interpretations done and the information from related literature, it implies that

female teachers in Enugu State secondary schools utilize pre-natal/ante-natal care services to a great extent.

**Educational Implication of the Finding**

This study has revealed that Ministry of Health is to be commended for the outstanding accomplishments made to date in the establishment of relevant, appropriate, and forward-

looking policy in relation to the health of mothers and children, in general, and to Safe Motherhood specifically prenatal/ante-natal care services.



## RECOMMENDATIONS

At the end of the study, the study recommended that:

- i. State government should ensure the availability of

skilled midwives at health centers within the health work force development plan in Enugu State, Nigeria.

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