
Utilization of Safe Motherhood Initiative Services among Women of Childbearing Age Accessing Care at Tertiary Health Facility in Anambra State

¹IFEANYI, Chinyere Nneka Nnamdi Azikiwe University Teaching Hospital, Nnewi

²ILO, Ifeyinwa Clementine Department of Nursing Science, Nnamdi Azikiwe University, Nnewi Campus

doi: 10.51505/ijmshr.2021.5602

URL: <http://dx.doi.org/10.51505/ijmshr.2021.5602>

Abstract

Safe motherhood has been conceptualized as a means of ensuring women's accessibility to needed care through antenatal programme in order to facilitate their safety and optimal health throughout pregnancy and childbirth (Igbokwe and Adama, 2011). This study assessed the utilization of certain safe motherhood initiative services among women of childbearing age that attended a tertiary health institution in Anambra State, Nigeria. Three research objectives and hypotheses were formulated for the study. Sample of 424 participants was drawn from a population of 1060 women accessing care at study area through Taro Yameni formula for sample size calculation. The instrument used for data collection was researcher's structured questionnaire which was validated and tested for internal consistency with reliability index of 0.86. A total of 422 questionnaires were retrieved and analyzed through descriptive and inferential statistics with SPSS version 22. Kruskal-Wallis H Test was used to test the hypotheses at 0.05 level of significance. Findings from the study revealed that greater number of the women of childbearing age utilize safe motherhood initiative services such as antenatal and post natal care. This not with standing there is evidence of poor utilization of family planning services by the women. The study further showed that their age does not significantly influence the utilization of safe motherhood initiative services among the women ($p = 0.789$). Study also revealed a significant difference in the utilization of safe motherhood among women of different educational levels ($p < .001$). Significant difference also exists between age groups of the women in their utilization of safe motherhood initiative services ($P=0.006$). The researchers concluded that being selective of the services to utilize among mothers may at the long run pose challenge in the achievement of reduction of maternal morbidity and mortality through safe motherhood initiative services.

Keywords: utilization, safe-motherhood, initiative, services

Introduction

Background to the Study

Motherhood is a state of being a mother; also motherhood is the state or experience of having or raising a child(Dictionary.com, 2021).Safe motherhood is a way of ensuring that all women receive the care they need to be safe and healthy throughout pregnancy and childbirth (Safe Motherhood, 2006). It is a collective effort by a pregnant woman herself, her immediate and extended family members, her community and all health personnel at the primary, secondary and

tertiary levels of health care system to ensure the safety of the pregnant woman and her baby during pregnancy, delivery and after delivery (Nigeria Partnership for Safe Motherhood Initiative (NPSMI), 2007). It aims at reducing the high number of death and illnesses resulting from complications of pregnancy and childbirth (Taha, 2006) and means of saving the lives of women and improving the health of millions of others (Jatau (2002).

Achieving safe motherhood and reducing maternal mortality requires that all women should have access to contraception to avoid unintended pregnancies, focused antenatal care, skilled care at the time of birth and access to quality emergency obstetric care (Safe Motherhood, 2006). In the drive to reduce maternal mortality, the World Bank, United Nation Population Fund (UNFPA) and the World Health Organization (WHO) organized the Safe Motherhood conference in Nairobi, Kenya in 1987, where a document on future strategies for the improvement of the health of women was adopted (Price, 2012; Key, 2007; Starrs, 2006). This initiative could be achieved through a programme of inter-linked steps which strive to provide family planning services to prevent unwanted pregnancies, prenatal and delivery care at the community level with quick access to referral services for complication, postpartum services, promotion of breastfeeding, immunization and nutrition services (Safe Motherhood, 2006). Services for safe motherhood initiative must be integrated into the healthcare delivery system and necessary inputs made available (Daly, et al, 2013).

The Safe Motherhood Initiative is built on 'six pillars' that is hoped to take care of the five identified causes of maternal mortality. These pillars according to Maternal Health Hand-out (2010) include antenatal care, family planning, obstetric care, postnatal care, post-abortion care and STI/HIV/AIDS control. The pillars will form the basis for the assessment of the safe motherhood initiative utilization among women of childbearing age attending the various safe motherhood clinics in the study area. Nwosu, et al (2012), reported that approximately two-thirds of all Nigerian women and three-quarters of rural Nigerian women deliver outside the health facilities and without medically-skilled attendants present. Data from the Nigerian Demographic and Health Surveys (NDHS, 2013) indicated that among pregnant Nigerian women, only about 64 percent receive antenatal care from a qualified health care provider (Maternal Health Handout, 2010). Ikhioya (2014) opined that nearly 600,000 women between the ages of 15 and 49 years die every year globally as a result of complications arising from pregnancy and childbirth.

Young women (and men) who know more about reproduction, fertility, birth control, and the consequences of unprotected sex can make better choices for themselves. Family planning information can prevent unplanned pregnancy and unsafe abortions (Alkema, Chou, Hogan, et al, 2016). Certain characteristics of mothers such as mother's psychological characteristics, preferences, socioeconomic status, place of residence, religion, and household characteristics and attitude towards utilization of health care services could be correlated with her utilization of safe motherhood initiatives (Dube, 2012). Parity is the number of times a woman has been pregnant. The chances of having an issue with pregnancy or problems during childbirth are a little higher in a first pregnancy. The odds are less in a second pregnancy. But, after five or more pregnancies the risk grows once again (Ndiaye, *et al.* 2018). Some authors agree that receiving of health care services during antenatal and post-natal period has very positive impact on the survival of the

mother and child (Hill, 2011; Hossain,2010) Kwast(2011) in his study found a significant relationship between the place of delivery and pregnancy outcome.

Statement of the Problem

Record has it that about 295,000 women died during and following pregnancy and childbirth in 2017 and majority of these deaths (94%) occurred in low-resource settings, most of which could have been prevented (WHO, 2019). Sub-Saharan Africa and Southern Asia accounted for approximately 86% (254 000) of the estimated global maternal deaths in 2017 but Sub-Saharan Africa alone accounted for roughly two-thirds (196 000) of maternal deaths(WHO, 2019). Despite its very high MMR in 2017, sub-Saharan Africa, as a sub-region, achieved a substantial reduction in MMR of nearly 40% since 2000 (WHO, 2019). The Nigeria Demographic and Health Surveys (NDHS) revealed a national MMR of 576 deaths per 100,000 livebirths and 545 deaths per 100,000 in 2013 and 2008 respectively (NDHS, 2013).

Despite the above seeming achievement, the researchers wondered why greater achievement cannot be attained especially in the study area. This drew their attention to whether the services of the safe motherhood are being utilized as appropriate by women of childbearing age or is there some challenges faced by these women in the utilization of these services. Based on this premise, the researchers embarked on this study to ascertain the utilization of safe motherhood initiative services among women of childbearing age in a tertiary health facility in Anambra State, Nigeria.

Objectives of the Study include to:

1. determine the extent of utilization of Antenatal Care Services among the women of childbearing age
2. assess the extent of utilization of Family Planning Services by women of childbearing age
3. determine the extent of utilization of Postnatal Care Services by women of childbearing age

Hypotheses

The researchers hypothesized that:

1. There is no significant difference in the utilization of safe motherhood initiative services between women of different ages.
2. There is no significant difference between the utilization of safe motherhood initiative services between women of different levels of education.
3. There is no significant difference between the utilization of safe motherhood initiative services between women with different number of children.

Materials and Methods

Research Design

The cross sectional survey design was employed in the study. Ngussie, et al (2004) used this design to assess the safe delivery service utilization among women of child bearing age in North, Gondar zone, Northwest Ethiopia. The researchers therefore considered this design appropriate

for this study.

Area of Study

This study was conducted in Nnamdi Azikiwe University Teaching, a Federal tertiary health facility located in Nnewi, an industrial and commercial city in Anambra State, Nigeria. It is a referral, baby friendly designated hospital that offers maternal, child health and other specialty services with about five (5) states as its catchment areas.

Population for the Study

The population of the study consists of all women of childbearing age (15-49 years) who assess safe motherhood services in the NAUTH, Nnewi and they are those who had the capacity of utilizing the safe motherhood initiative service. A total of 1060 women of childbearing age comprised the population for this study.

Inclusion and exclusion criteria

The study captured only women of childbearing age (15-49 years) who have assessed antenatal, postnatal and family planning services in the hospital for not less than six months by the time of this study and was willing to participate in the study. Childbearing mothers who were not within the specified criteria were excluded from the study.

Sample Size

In view of the estimated population, a sample of 442 respondents was drawn from the study population through Taro Yameni formula for sample size calculation.

Sampling Technique

Purposive sampling technique was applied in the selection of the participants for the study. The researchers based decision for participation on the inclusion/exclusion criteria for which those included have in one way or the other accessed antenatal, postnatal and family planning services in the hospital.

Instrument for Data collection

Researcher-structured questionnaire with five sections were used for data collection. The items were structured in close ended format.

Validity and reliability of the Instrument

The instrument used for data collection was validated by experts in Measurement and Evaluation, specialists in Maternal and Child Health, and Medical-Surgical Nursing. It was pilot tested for internal consistency in another health institution and data generated was analyzed through Cronbach Alpha which yielded reliability index of 0.86.

Ethical considerations

Ethical approval for the study was obtained from the Research and Ethics Committee of Nnamdi Azikiwe University Teaching Hospital Nnewi (Ref: NAUTH/CS/66/VOL.10/181.2017.094).

Confidentiality of information obtained from the respondents was maintained and only women who met the inclusion criteria and were willing to participate in the study were enlisted and their informed consent obtained before the commencement of the study.

Procedure for Data Collection

The approval from the REC of the institution was used to obtain permission from the unit heads of the service areas used for the study. The Unit Heads of the respective units introduced the researchers to the women in attendance on each day of data collection. The researchers explained the aim of the study to the women on each occasion and obtained their consent before administering the instrument. Only those that met the inclusion criteria were included in the study. The researchers ensured that no woman had the instrument administered twice to her all through the six months the study lasted.

Method of Data Analysis

Out of the 424 questionnaire administered 422 were correctly filed, retrieved and analyzed. Descriptive and inferential statistics were applied in data analysis with SPSS Version 22.

Kruskal-Wallis H Test was used to test the hypotheses following the non-normality of utilization score at 5% level of significance; hence significant difference existed at p-value $p < 0.05$.

Results

Table 1: Demographic Characteristics of the respondents n = 422

Variable	Frequency	Percent(%)
Age		
- 15-24	83	19.7
- 35-44	107	25.4
- 25-34	180	42.7
- 45 and above	46	10.9
- No response	6	1.4
Highest educational level		
- Non-formal	14	3.3
- Primary	16	3.8
- Secondary	95	22.5
- Tertiary	293	69.4
- No response	4	0.9
Number of children		
- 1-3	197	46.7
- 4-6	172	40.8
- 7-9	16	3.8
- 10 and above	1	0.2
No responses	36	8.5

Table 1 presents the demographic characteristics of the respondents. Majority of the women 180(42.7%) were within 25-34 years of age; 293(69.4%) of them had tertiary education and greater number 197(46.7%) have between 1-3 children

Objective 1

To determine the trend of utilization of antenatal care services among the respondents

Table 2: Antenatal Care Services Utilization among the Women **n = 422**

Antenatal Services	Never (%)	Occasionally (%)	Always (%)
- Health education	10(2.37)	105(24.88)	307(72.75)
- Physical examination	20(4.82)	112(26.99)	290(68.88)
- Blood analysis	26(6.16)	225(53.32)	171(40.52)
- Urine analysis	22(5.21)	161(38.15)	239(56.64)
- Routine drugs	10(2.37)	89(21.09)	323(76.54)
- Malaria drugs	14(3.32)	173(41.00)	235(55.69)

Table 2 shows that all the respondents utilized the diverse antenatal care services in one way or the other. The most accessed services were: routine drugs [323(76.54%)] health education [307(72.75%)] physical examination[290(68.88%)]and urine analysis [239(56.64%)]. Blood analysis had lesser number of respondents that accessed the service always117(40.52%). Generally, antenatal care services utilization was above average (2.67±0.30).

Objective 2

To assess the utilization of family planning services by women of childbearing age

Table 3: Family Planning Services Utilization among the Women **n = 393**

Family planning services	Never (%)	Occasionally (%)	Always (%)
- Family planning counselling	10(2.54)	108(27.48)	275(69.97)
- Coitus interruptus	136(34.61)	118(30.03)	139(35.37)
- Vasectomy	369(93.89)	24(6.11)	0(0.00)
- Tubal ligation	344(87.53)	49(12.47)	6(1.53)
- Injectable family planning	273(69.47)	12(3.05)	108(27.48)
- Pills	198(50.38)	126(32.82)	69(17.56)
- Diaphragm and cervical caps	273(69.47)	88(22.39)	32(8.14)
- Male condom	194(49.36)	135(34.35)	64(16.28)
- Fertility awareness {safe method}	76(19.34)	114(29.01)	203(51.65)
- Foaming tablets, gels and creams	281(71.50)	81(20.61)	31(7.89)
- IUCD / Copper T	244(62.09)	88(22.39)	61(15.52)

Out of the 422 participants, only 393 accessed family planning services for which 275(69.7%) accessed family planning counselling always. Teachings on fertility awareness had a good number 203(51.65%) that accessed the services always. Injectables family planning measures had 108(27.43%) that accessed it while coitus interruptus also had substantial number of respondents 139(35.37%) that accessed it always.

Other services such as vasectomy and tubal ligation had greater number of respondents that never accessed them [369(93.89%) and 344(87.53%)] respectively.

Objective 3

To determine the utilization of post-natal care services by women of childbearing a

Table 4 Utilization of Post-natal Care Services the Women n = 350

Post-natal Care Services	Never (%)	Occasionally (%)	Always (%)
- Checking for bleeding	45(12.86)	89(45.53)	216(61.71)
- Checking temperature	23(6.57)	27 (7.71)	300(85.71)
- Checking breast to prevent swelling	36 (10.29)	65 (18.57)	249(71.14)
- Managing anaemia	56(16.00)	137(39.14)	157(44.86)
- Promoting nutrition	7(2.00)	10(2.56)	333(95.14)
- Promoting insecticide bed nets	34(9.71)	37(10.57)	279(79.71)
- Giving Vitamin A supplement	31(8.87)	105(26.72)	214(68.86)
- Completed Tetanus Toxoid	39(11.14)	120(34.29)	191(54.57)

Table 4 shows that out of the 422 respondents, only 350(82.93%) accessed post natal care services in the institution. This notwithstanding, there was indication of high level of utilization among those that did. Majority of the respondents 300(85.71%) had their body temperature checked always. Majority of them 333(95.14%) accessed nutrition promoting services always and 279(79.71%) accessed services on the use of insecticide treated nets. Despite these, managing anaemia recorded low number of respondents that accessed the services always [157(44.86%)].

Ho 1: There is no significant difference in the utilization of safe motherhood initiative services between women of different ages.

Table 5: Utilization of Safe Motherhood Initiative Services between Different Age Groups

Age	M±SD	Mean Rank	Kruskal-Wallis H	p-value
- 15-24	2.17±0.39	198.31	1.050	.789
- 25-34	2.22±0.33	211.29		
- 35-44	2.22±0.33	207.24		
- 45+	2.25±0.34	218.91		

The rated utilization from highest to least for the different ages was thus distributed: 45 years and above (2.25±0.34), 35-44 years (2.22±0.33), 25-34 years (2.22±0.33) and 15-24 years (2.17±0.39). The comparison revealed no significant difference (p = .789). Utilization hence was comparable among the women irrespective of age.

Ho 2: There is no significant difference in the utilization of safe motherhood initiative services between women of different levels of education.

Table 7: Utilization of Safe Motherhood Initiative Services between Different Educational Levels

Educational level	M±SD	Mean Rank	Kruskal-WallisH	p-value
- Non-formal	1.94±0.14	94.28	54.698	< .001
- Primary	2.19±0.13	210.68		
- Secondary	2.03±0.33	146.49		
- Tertiary	2.29±0.33	236.17		

Table 7 rated utilization from highest to least for the different levels was thus distributed: tertiary (2.29±0.33), primary (2.19±0.13), secondary (2.03±0.33) and non-formal (1.94±0.14). The comparison revealed a significant difference (p < .001). Specifically, test indicated that utilization was significantly higher among those with tertiary education than those with primary and secondary education. Also, utilization was significantly higher among those with primary education than those with non-formal education. Utilization between the groups was comparable.

Ho 3: There is no significant difference in the utilization of safe motherhood initiative services between women of different number of children.

Table 8: Utilization of Safe Motherhood Initiative Services between Women of Different number of children

No. of children	M±SD	Mean Rank	Kruskal-Wallis H	p-value
- 1-3	2.46±0.40	264.82	10.350	.006
- 4-6	2.23±0.29	201.12		
- 7-9	2.16±0.35	180.69		

Table 8 rated utilization from highest to least for the different groups was thus distributed: 1-3 children (2.46±0.40), 4-6 children (2.23±0.29) and 7-9 children (2.16±0.35). Significant difference exists between age groups of the women in their utilization of safe motherhood initiative services (P=0.006). The comparison revealed a indicated that utilization was significantly higher among those with 1-3 children than those with 4-6 children and 7-9 children. Difference in utilization between those with 1-3 children and 4-6 children was marginal.

Discussion

Study revealed that women of childbearing age accessing care at tertiary health facility in Anambra State Nigeria utilize the antenatal care services in the institution and the most utilized services are: routine drugs (76.54%), health education (72.75%), and physical examination (68.88%). This agrees with Merenu *et al*, (2017) who revealed that the utilization of the different pillars of safe motherhood such as antenatal care (90.05%), essential obstetric care (90.94%), post natal care (94.31%). Alternatively, Kadham, Salma and Jihad (2016) in their study, demonstrated no statistically significant relationship between the demographic variables and antenatal care utilization practices.

Study revealed that the family planning services were poorly accessed except: family planning counseling (69.97%) and fertility awareness programme (51.65%). This poor utilization may be connected to religious belief and culture of the people in the region where low tolerance to family planning and abortion is often the source of concern. This agrees with Onwurah (2013), where family planning services utilization was low among the study population. This finding agrees with the findings of Merenu *et al*, (2017), where the use of family planning methods was found to be low (22.99%) among their study population.

Study revealed that women of childbearing age utilize all the antenatal care services always especially nutrition promotion (95.14%), body temperature check (85.71%) and promoting insecticide bed nets (79.71%). This also agrees with Merenu *et al*, (2017), that utilization of post natal care was high (94.31%).

Study revealed no significant difference in the utilization of safe motherhood initiative services and the ages of the women attending health care services at tertiary health facility in Anambra State ($p = 0.789$). This disagrees with the findings of Smith (2010) that pointed out that the age of the mother will determine the level of knowledge and practice of safe motherhood as age is one of the factors that are associated with safe motherhood.

Study revealed a significant difference ($p < .001$) in the utilization of safe motherhood among women of different educational levels. Specifically, test indicated that utilization was significantly higher among those with tertiary education than those with primary and secondary education. Also, utilization was significantly higher among those with primary education than those with non-formal education. Utilization between the groups was comparable. This is in line with the Okereke, et al (2013) and NDHS (2008).

Findings from the study showed that utilization was significantly higher among those with 1-3 children than those with 4-6 children and 7-9 children. Difference in utilization between those with 1-3 children and 4-6 children was marginal.

Conclusion

Safe motherhood initiative is built on “six pillars” that is hoped to take care of the identified causes of maternal mortality. The findings of this study made the researchers to conclude that the study population and possibly other women elsewhere may not have embraced the safe motherhood initiative services. Being selective of the services to access may at the long run pose challenge in the achievement of reduction of maternal morbidity and mortality.

Implication of the Study

From the findings, the women were accessing antenatal and postnatal services but had low level of access to family planning. This does not spell well for study population and this developing nation with possible population explosion and its attendant negative implications. The negative implications will affect the citizens’ health, economic, social status and lives.

Recommendations

The researchers recommend that:

- Intensifying Family Planning campaigns to ensure that couples have the information and services to achieve the timing, number and spacing of pregnancies and child birth.
- Safe motherhood principle and component should be taught in schools and both International and Non-Governmental Organizations should be involved to increase their safe motherhood practice advocacy to various socio-economic, religious, and cultural institutions in and around Anambra State and Nigeria in general.
- Laws and policies related to critical important problems that affect safe motherhood, such as early marriage, unsafe abortion and women reproductive rights should be enacted by the National Assembly.

Limitations of the Study

This study had the following limitations:

The findings of this study cannot be truly generalized because of the nature of the design used.

Administration and retrieval of the instrument were achieved without ease as some of them were skeptical in responding to the family planning item in the instrument thereby constituting delay in the study progress of the study.

Suggestions for Further Studies

Despite high utilization of safe motherhood initiative services in this study, the use of family planning commodities for child spacing and post-abortion care services were low. Further studies should be done on the knowledge and utilization of family planning commodities and abortion care services among women of child bearing age in Anambra State.

Conflict of interest

There was no conflict of interest among the researchers. Synergy and mutual understanding potentiated the team work of the researchers.

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