

Perception of Childbearing Mothers on the Provisions of Safe Motherhood Practices in Enugu State, Nigeria

By

Obetta, K. Chukwuemeka

Abstract

The study investigated the perceptions of childbearing mothers (CBMs) on the extent to which Primary Health Care personnel provide Safe Motherhood Practices during antenatal, intra-natal, and postnatal periods in Enugu-North Senatorial Zone of Enugu State, Nigeria. Three specific objectives, three research questions and three null hypotheses guided the study. A descriptive survey research design was employed. The population of the study was 450 registered CBMs from 125 public health facilities in six Local Government Areas that make up Enugu-North Senatorial Zone. The instrument for data collection was a 22-item structured questionnaire titled: Provision of Safe Motherhood Practices Questionnaire (PSMPQ). It was face-validated, and its reliability was determined using Cronbach Alpha procedure. A reliability coefficient of 0.89 was obtained. The data gathered were analyzed using descriptive and inferential statistics, with the help of the Statistical Package for Social Sciences (SPSS) software. Also, t-test analysis was utilized in analysis of the hypotheses. Findings revealed significant gaps in maternal healthcare delivery, particularly in the provision of pregnancy-related informational materials, availability of essential protective materials, flexibility in delivery positions, and postnatal care services such as regular infant feeding assessments, postnatal visits, and home follow-ups. Additionally, there was no significant difference in perceptions between rural and urban respondents, indicating systemic inadequacies in service delivery across both settings. The study recommended that there should be integration of structured health education into ante-natal services, adequate provision of essential hospital supplies, patient-centred delivery approaches, and the enforcement of standard post-natal follow-ups.

Keywords: Ante-Natal care; Childbearing mothers; Intra-Natal care; Maternal and Child health; Post-Natal care; safe motherhood practices.

Introduction

Safe motherhood is a critical component of public health initiatives aimed at reducing maternal and infant mortality while promoting the well-being of mothers and their newborns, especially in developing countries. In Nigeria, particularly in

Enugu State, the implementation of safe motherhood practices (SMPs) remains a vital concern due to persistent challenges related to maternal health outcomes (Okeibunor et al., 2010). These practices encompass a range of services, including ante-natal care, skilled birth attendance, emergency obstetric care, and post-natal services, which are designed to safeguard the lives of both mothers and their babies (Bhandari & Dangal, 2014). Safe motherhood is designed in a way that the women are ensured of high-quality gynecological, family planning, prenatal, delivery and postpartum care (Mahmoodi et al., 2021). SMP aims at improving maternal and child health and eliminating the probable risk that can occur. This is why the Safe Motherhood Programme (SMP) was initiated and launched by the United Nations in 1987, with the goal of ensuring that women experience pregnancy and childbirth safely while giving birth to healthy children (Tulchinsky et al., 2023). This goal was further reinforced by the inclusion of maternal mortality reduction in the Millennium Development Goals (MDGs) for 2000–2015.

From the foregoing, SMP means that no woman or baby should die or be harmed by pregnancy or death. SMP aims at reducing maternal and newborn mortality and morbidity as it is a critical part of saving lives in community. It refers to a situation in which a woman going through physiological processes of pregnancy and childbirth does not suffer any injury or lose her life or that of the baby (Igbokwe et al., 2013). The goal of the SMP is to reduce maternal and neonatal morbidity and mortality and to improve the maternal and neonatal health through preventive and promotive activities as well as by addressing avoidable factors that cause death during pregnancy, childbirth and postpartum period (Public Health Notes, 2018).

The SMP approach seeks to ensure that women receive appropriate attention throughout their pregnancy and childbirth, providing pre- and post-natal care including care of the baby and breastfeeding support and delivery care with referral for women with obstetric complications. It is on record that about 529,000 women die yearly worldwide, from complications of pregnancy and childbirth—about one woman in every minute, and about 99% of these deaths occur in developing

countries, where a woman's lifetime risk of dying from pregnancy-related complications is 45 times higher than that of her counterparts in developed countries (Ogbonna, 2015). The risk of dying from pregnancy-related complications is highest in sub-Saharan Africa and in South-Central Asia. In some countries, the maternal mortality ratio is more than 1,000 deaths per 100,000 live births. 60 to 80% of maternal deaths are due to obstetric hemorrhage, obstructed labour, obstetric sepsis, hypertensive disorders of pregnancy, and complications of unsafe abortion (Iqbal, 2024). These direct complications are unpredictable as they mostly occur within hours or days after delivery, leading to maternal deaths.

A mother's death carries profound consequences not only for her family, especially her surviving children, but also for her community and country. If the mother dies, the risk of death for her children under age 5 is doubled or tripled (Atrash, 2015). In addition, because a woman dies during her most productive years, her death has a strong social and economic impact. This is because her family and community lost a productive worker and a primary care giver. However, pregnancy is not a disease but a means by which humans are propagated (Colgrove & Rodger, 2024). Therefore, the hazards of child-birth cannot be avoided by preventing pregnancy. Society depends on future generations, and women should not be required to give their lives or health in undertaking this social and physiological duty (Smajdor & Räsänen, 2024).

In view of the foregoing, SMP is both a health and moral issue. Investment in safe motherhood reduces household poverty, saves families and governments the costs of treatment and other services, and strengthens the health system (Arbab, 2024). An investment in safe motherhood is an investment in the emotional, social, and economic wellbeing of millions of women, children, families and communities. This has important consequences for all nations of the world. SMPs should be integrated into the public health care (PHC) delivery system and necessary inputs such as drugs, equipment, facilities and proper training of staff workers (Piquer-Martinez et al., 2024). Accordingly, Binns and Low (2015) and Gupta (2022) stated

that primary health care is a whole-of-society approach to health and well-being that is centred on the needs and preferences of individuals, families and communities. Skilled PHC personnel address the broader determinants of health and focuses on the comprehensive and interrelated aspects of physical, mental and social health and wellbeing.

Skilled PHC personnel are professionals with specialized training in healthcare service delivery. They include Physicians who diagnose and treat illnesses and Epidemiologists who study patterns and causes of diseases their prevention and control strategies (WHO, 2022), Nurses and Midwives who provide patient care (International Council of Nurses [ICN], 2021), Public Health Officers who implement health policies and Health Educators (Centres for Disease Control and Prevention [CDC], 2023). Others include Community Health Workers (American Public Health Association [APHA], 2023), Environmental Health Specialists (U.S. Environmental Protection Agency [USEPA], 2022), Biomedical Scientists (WHO, 2021), Pharmacists (American Pharmacists Association [APA], 2023), and Mental Health Professionals (WHO, 2023), all contributing to disease prevention and healthcare improvement. In this study, the PHC personnel used include medical doctors, nurses and midwives, community health workers, environmental health specialists and health educators and promoters.

It is the duty of PHC personnel to provide safe motherhood practices to mothers during ante-natal, intra-natal and post-natal periods (Ilesanmi et al., 2023; Tulchinsky et al., 2023). Therefore, the contents of SMP should include health education (consisting of healthful or healthy practices such as hygiene on pregnancy), the importance of fresh air and exercise during pregnancy, rest and sleep relaxation, suitable clothing and diet during pregnancy development among others (Bosede et al., 2021). According to Ogbonna (2015), the SMPs, provided under National Child Health Scheme (NCHS) include ante-natal (antepartum); intra-natal (intrapartum) and post-natal (postpartum) care.

Ante-natal care (ANC) involves the complete health supervision of expectant mothers to protect and promote their well-being and that of the foetus and newborn (Mona, 2023). It begins around the third month of pregnancy and aims to ensure a healthy mother and baby (World Health Organization [WHO], 2016; Fagbamigbe et al., 2021). Ante-natal clinics provide health education, examinations, risk identification, treatment, immunization, and prophylaxis. SMPs include advising expectant mothers on a balanced diet and folic acid intake for maternal and fetal well-being (Ilesanmi et al., 2023; WHO, 2025). The health risk that confronts childbearing mothers (CBMs) during ante-natal period, which include eclamptictoxomia, anemia, malnutrition, cephalopelvic disproportion, obstetric fistulae, obstructed labour, low birth weight, and prenatal mortality are serious, but preventable (Umar et al., 2022).

During the ante-natal period, CBMs are advised to drink at least 1.2 litres of fluids daily for proper hydration (Ashraf et al., 2020; Ilesanmi et al., 2023). Early prenatal care assesses maternal health, promotes nutrition, and encourages regular exercise to prepare for labour (Nilgar et al., 2021; Bashir et al., 2023; Nelson et al., 2022; Emmanuel et al., 2024). Exercise helps prevent pregnancy-related disorders like gestational diabetes, excessive weight gain, hypertension, urinary incontinence, foetal macrosomia, lumbopelvic pain, anxiety, and prenatal depression (Ribeiro et al., 2021; van Poppel et al., 2022). It also reduces gestational weight gain and diabetes risk in overweight or obese pregnant women (Du et al., 2019). PHC personnel screen expectant mothers for risk factors to reduce maternal mortality and provide pregnancy-related information through various media in appropriate languages (Zhu et al., 2019; Mohulatsi et al., 2023). Family planning messages from media such as radio, TV, newspapers, and health workers enhance awareness (Igbinoaba et al., 2020; Yaya & Bishwajit, 2022). ANC aims to prevent pregnancy complications and prepare mothers for delivery.

The next SMP after ANC is intra-natal care (INC). Fagbamigbe et al. (2021) stated that INC is crucial for maternal and infant survival during labour and delivery periods. INC ensures supervision, pain relief, and newborn resuscitation while

preventing complications like prolonged labour. It also maintains hygiene and provides essential newborn care, including cord and eye care (Ogbonna, 2015). PHC personnel allow mothers to choose comfortable delivery positions to aid labour progress (Mwoma et al., 2021; Ilesanmi et al., 2023; Lawrence et al., 2013). SMPs educate mothers on colostrum benefits and newborn care (Opara et al., 2017; El Sayed et al., 2020; Karimi et al., 2020; Boadi-Kusi et al., 2021). Massage alleviates labour pain and stress (Choudhary et al., 2021; Shetty & Fogarty, 2021). PHC facilities provide protective materials and disinfectants such as bleach (JIK) and purite (Dada, 2023; Omoleke et al., 2021; Lestari et al., 2022). PHC personnel train health staff in emergency obstetric care and life-saving skills (Samira & Tukur, 2019). Maternal mortality prevention focuses on improving emergency care, inter-sectoral collaboration, blood banks, and community-based access (Onoja-Alexander et al., 2017; Okonofua et al., 2019). Prompt response by skilled birth attendants prevents poor maternal outcomes (Ameh & van den Broek, 2015).

On post-natal care (PNC), Ogbonna (2015) asserted that PHC provides services to mothers and newborns during puerperium, preventing complications and promoting breastfeeding. Such services include hygiene, nutrition, baby care, immunization, and family planning counselling (Saaka et al., 2017). Therefore, SMP raises awareness of post-natal danger signs, aiding timely healthcare access to reduce maternal morbidity and mortality (Bakar et al., 2019; Shamanewadi et al., 2020). PHC facilities educate nursing mothers on immunization and completing tetanus toxoid doses (Taiwo et al., 2015). Immunization prevents diseases and reduces child mortality (Adedire et al., 2021; Ariyibi et al., 2023). SMP ensures three post-natal visits (within 6 hours, at 6 days, and at 6 weeks) and home follow-ups in the first postpartum week (Stumbras et al., 2016; Sanusi et al., 2023). WHO (2010) recommends post-partum healthcare contact within 24 hours, at day 3, days 10–14, and 6 weeks for timely complication management. PHC facilities conduct abdominal palpation and vaginal discharge checks (Coaten, 2024). Advanced clinical practitioners ensure thorough history-taking and examinations to guide diagnosis and

management (Dunlap & Patterson, 2020). SMP regularly monitors infant feeding and development (Jansen et al., 2021). Feeding challenges delay discharge for preterm and convalescing infants (Holloway, 2014; Sdravou et al., 2023). However, SMP remains neglected in many communities (Merenu et al., 2017), including Enugu State, Nigeria.

Enugu State, located in South-East, Nigeria, has 17 LGAs, with seven urban LGAs (Enugu East, South, West, Nkanu East, West, Nsukka, and Udi) and the remaining 10 LGAs are predominantly rural (Enugu State Government Executive Order, 2025). A greater percentage of the communities is found in rural communities that face challenges like high illiteracy, poverty, low income, and underutilized resources among others (Obetta & Oreh, 2017; Obetta, 2021). Enugu State, with a 66.5% literacy rate and 19.1% adult education programme awareness, ranks lowest in literacy in the South-East (UNESCO Global Education Monitoring Report Team, 2023). Therefore, SMPs are vital for reducing maternal and infant mortality and should be accessible to both rural and urban communities to ensure the health of mothers and newborns, regardless of socio-economic or cultural background. SMPs include ante-natal, skilled birth, emergency obstetric, and post-natal care follow-up. Despite maternal health policies, Enugu State faces challenges in accessing PHC facilities resulting from inadequate infrastructure, shortage of skilled personnel, poor service quality, financial constraints, cultural barriers, and lack of awareness. The resultant effects are high maternal and infant mortality rates (UNESCO International Institute for Capacity-Building in Africa [UNESCO IICBA], 2023).

This study, therefore, investigated the perception of childbearing mothers in Enugu State regarding the effectiveness, accessibility, and quality of maternal health services, highlighting the shortcomings of SMPs.

Purpose of the Study

The purpose of this study is to assess the extent to which public health care personnel provide SMPs in Enugu-North Senatorial Zone of Enugu State. Specifically, the objectives of the study are to:

1. examine the extent to which public health care personnel provide safe motherhood programmes during ante-natal period in Enugu-North Senatorial Zone.
2. examine the extent to which public health care personnel provide safe motherhood programmes during intra-natal period in Enugu-North Senatorial Zone.
3. ascertain the extent to which public health care personnel provide safe motherhood programmes during post-natal period in Enugu-North Senatorial Zone.

Research Questions

The following research questions were posed to guide this study:

1. To what extent do public health care personnel provide safe motherhood programmes during ante-natal period in Enugu-North Senatorial Zone?
2. To what extent do public health care personnel provide safe motherhood programmes during intra-natal period in Enugu-North Senatorial Zone?
3. To what extent do public health care personnel provide safe motherhood programmes during post-natal period in Enugu-North Senatorial Zone?

Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance:

- H₀₁: There is no significant difference in the mean ratings of the child bearing mothers in rural and urban communities on the extent to which public health care personnel provide safe motherhood programmes during ante-natal period in Enugu-North Senatorial Zone.
- H₀₂: There is no significant difference in the mean ratings of the child bearing mothers in rural and urban communities on the extent to which public health care personnel provide safe motherhood programmes during intra-natal period in Enugu-North Senatorial Zone.

H₀₃: There is no significant difference in the mean ratings of the child bearing mothers in rural and urban communities on the extent to which public health care personnel provide safe motherhood programmes during post-natal period in Enugu-North Senatorial Zone.

Methodology

The study utilized a descriptive survey research design to assess the provision of SMPs for registered CBMs and newborn babies in public health care (PHC) facilities in Enugu State. The population of the study was 450 registered CBMs from 125 PHC facilities in six LGAs of Enugu-North Senatorial Zone, attending ANC, INC, and PNC services. Nsukka LGA (that all the communities are urban) has 26 PHC facilities. 99 PHC facilities were from the rural communities of the other five LGAs of Igbo-Etiti, Igbo-Eze North, Igbo-Eze South, Udenu and Uzo-Uwani. They have more rural communities than urban.

The study utilized a structured, 22 item-questionnaire, titled, Provision of Safe Motherhood Practices Questionnaire (PSMPQ). It is grouped into three clusters, and with a 4-point rating scale. The instrument was face validated by three research methods experts from UNN Medical Centre, community development unit of the Department of Continuing Education and Development Studies, and measurement and evaluation unit of the Department of Science Education, at University of Nigeria, Nsukka. They made corrections and modifications to its phrasing, language level, and relevance.

The reliability of the instrument was determined by administering copies of the questionnaire to 21 registered CBMs in Isi-Uzo LGA, Enugu-East Senatorial Zone. Reliability coefficient of 0.89 was obtained using Cronbach alpha procedure. The researcher administered 450 copies of the questionnaire to respondents during their ANC, INC, and PNC visits at PHC facilities, with the assistance of five trained research assistants. Out of 450 copies of the questionnaire distributed, 437 copies (97.1%) were filled out and returned. 262 CBMs were from urban communities, out

of which 196 of them have had at least one child mortality. Also, 175 CBMs were from rural communities, out of which 52 of them have had at least one child mortality.

The data collected were analyzed using weighted mean and standard deviation for the three research questions. The student's t-test was used to answer the three hypotheses.

Results

Table 1: Responses of the CBMs on the extent to which PHC personnel provide SMPs during the ante-natal period.

n = 437

S/N.	Provision of SMPs during the ante-natal period	\bar{x}	SD	Decision
1.	Advising expectant mothers on the need to have a healthy, balanced diet.	3.16	.73	ME
2.	Advising expectant mothers on the need to drink plenty of fluids, such as water and fruit juices, at least 1.2 litres every day.	3.25	.58	ME
3.	Advising expectant mothers to increase their intake of folic acid (vitamin B9).	3.36	.56	ME
4.	Engaging expectant mothers on regular exercise to maintain their fitness and prepare their bodies for labour and birth.	2.96	.77	ME
5.	Screening expectant mothers for risk factors as a strategy to reduce maternal mortality.	3.00	.57	ME
6.	Providing expectant mothers with radio, audio and video tape messages while waiting in the clinics.	2.12	.86	LE
7.	Providing mothers with information materials and newsletters on pregnancy in appropriate languages (while waiting).	2.40	.49	LE
Grand Mean		2.89	.29	ME

*ME = Moderate Extent; LE = Low Extent

Table 1 above shows the mean and standard deviations of the CBMs' responses on the extent to which PHC personnel provide SMPs during the ante-natal period in Enugu-North Senatorial Zone. The data showed that items 1, 2, 3, 4, 5 and 6 with mean scores of 3.16, 3.25, 3.36, 2.96 and 3.00, were provided to a moderate extent,

while items 7 and 8 with mean scores of 2.12 and 2.40 were provided to a low extent. The grand mean (2.89 ± 0.29) indicated that PHC personnel provided SMPs to a moderate extent during the ante-natal period.

H₀₁: There is no significant difference in the mean ratings of CBMs in rural and urban communities on the extent to which PHC personnel provide SMPs during ante-natal period in Enugu-North Senatorial Zone.

Table 2: t-test of significant difference in the mean ratings of CBMs in rural and urban communities on the extent to which PHC personnel provide SMPs during the ante-natal period.

t-Critical = 1.960

Location	N	\bar{x}	SD	t	df	Sig. (2-tailed)	Decision
Rural	175	3.17	.74	0.28	435	0.78	NS
Urban	262	3.16	.73				

*NS = Not Significant

Table 2 showed that the t-Calculated value of 0.28 at the significant level of 0.78 is less than the t-Critical value of 1.96. The null hypothesis was not rejected as there is no significant difference in the mean ratings of CBMs in rural and urban communities on the extent to which PHC personnel provide SMPs during the ante-natal period in Enugu-North Senatorial Zone.

Table 3: Responses of CBMs on the extent to which PHC personnel provide SMPs during the intra-natal period.

n = 437

S/N.	Provision of SMPs during the intra-natal period	\bar{x}	SD	Decision
1.	Providing skilled attendants at delivery.	3.16	.61	ME
2.	Allowing expectant mothers to choose the delivery position comfortable for them.	2.00	.69	LE
3.	Educating mothers on the dangers of washing the baby immediately after birth.	2.76	.65	ME
4.	Educating mothers on the value of colostrum.	3.52	.58	VHE
5.	Assisting expectant mothers by massaging their backs during labour period.	2.92	.98	ME
6.	Making available JIK detergents and other protective	2.33	.73	LE

	materials in the hospital.			
7.	Ensuring availability of emergency drugs and supplies in the hospital by health attendants.	3.56	.50	VHE
8.	Training health staff in emergency obstetric care and life-saving skills.	3.04	.60	ME
Grand Mean		2.91	.39	ME

*VHE = Very High Extent; ME = Moderate Extent; LE = Low Extent

Table 3 above shows the mean and standard deviations of the CBMs' responses on the extent to which PHC personnel provide SMPs during the intra-natal period in Enugu-North Senatorial Zone. The data showed that items 4 and 7 with mean scores of 3.52 and 3.56 respectively were provided to a very high extent, items 1, 3, 5, and 8 with mean scores of 3.16, 2.92 and 3.04 respectively were provided to a moderate extent while items 2 and 6 with mean scores of 2.10 and 2.33 were provided to a low extent during the natal period. The grand mean (2.91 ± 0.39) indicated that PHC personnel provided SMPs to a moderate extent during the intra-natal period.

H₀₂: There is no significant difference in the mean ratings of CBMs in rural and urban communities on the extent to which PHC personnel provide SMPs during intra-natal period in Enugu-North Senatorial Zone.

Table 4: t-test of significant difference in the mean ratings of CBMs in rural and urban communities on the extent to which PHC personnel provide SMPs during intra-natal period.

t-Critical = 1.960							
Location	N	\bar{x}	SD	t	df	Sig. (2-tailed)	Decision
Rural	175	3.16	0.61	-0.26	435	0.79	NS
Urban	262	3.16	0.61				

Table 4 above shows the analysis of t-test for testing null hypothesis two (H₀₂). The table showed that the t-Calculated value of 0.26 at the significance level of 0.79 is less than the t-Critical value of 1.96. The null hypothesis was not rejected as there is no significant difference in the mean ratings of CBMs in rural and urban communities

on the extent to which PHC personnel provide SMPs during the intra-natal period in Enugu-North Senatorial Zone.

Table 5: Responses of the CBMs on the extent to which PHC personnel provide SMPs during the post-natal period.

n=437

S/N.	Provision of SMPs during the post-natal period	\bar{x}	SD	Decision
1.	Creating awareness on the danger signs during the first week of post-natal period.	3.12	.52	ME
2.	Providing nursing mothers with information on immunization and how to complete their tetanus toxoid doses.	3.53	.50	VHE
3.	Embarking on three post-natal visits to nursing mothers (within 6 hours, at 6 days and at 6 weeks).	1.60	.80	VLE
4.	Embarking on follow-up visit of the clients at home during the first week post-partum.	1.28	.53	VLE
5.	Checking regularly the abdominal palpation of nursing mothers.	2.08	.80	LE
6.	Examining regularly the nursing mothers for abnormal vaginal discharge.	2.16	.74	LE
7.	Examining regularly the infant feeding and development.	2.36	.79	LE
Grand Mean		2.30	.34	LE

Table 5 above shows the mean and standard deviations of the CBMs' responses on the extent to which PHC facilities provide SMPs during the post-natal period in Enugu-North Senatorial Zone. The data showed that item 1, with mean score of 3.12, was provided to a moderate extent while item 2, with mean score of 3.53, was provided to a very high extent. Items 3 and 4 with mean scores of 1.60 and 1.20 respectively were provided to a very low extent, while items 5, 6 and 7 with mean scores of 2.08, 2.16 and 2.36 respectively, were provided to a low extent during the post-natal period. However, the grand mean (2.30 ± 0.34) indicated that PHC facilities provided SMPs to a low extent during the post-natal period.

H0₃: There is no significant difference in the mean ratings of CBMs in rural and urban communities on the extent to which PHC personnel provide SMPs during post-natal period in Enugu-North Senatorial Zone.

Table 6: t-test of significant difference in the mean ratings of CBMs in rural and urban communities on the extent to which PHC personnel provide SMPs during the post-natal period.

							t-Critical = 1.960	
Location	N	\bar{x}	SD	T	df	Sig. (2-tailed)	Decision	
Rural	175	3.13	0.52	-0.09	435	0.93	NS	
Urban	262	3.12	0.52					

Table 6 above shows the analysis of t-test for testing null hypothesis three (H0₃). The table showed that the grand t-Calculated value of 0.09 at the 0.93 level of significance is less than the t-Critical value of 1.96, at the degree of freedom of 435, and at the 0.05 level of significance. Therefore, the null hypothesis was not rejected. It therefore showed that there is no significant difference in the mean ratings of the CBMs in rural and urban communities on the extent to which PHC facilities provide SMPs during the post-natal periods in Enugu-North Senatorial Zone.

Discussion of the Findings

The findings of the study revealed that PHC personnel provided SMPs to a moderate extent during the ante-natal period. The results showed that the SMPs provided include advising expectant mothers to increase their intake of folic acid (vitamin B9), the need to drink plenty of fluids, such as water and fruit juices, at least 1.2 litres every day, and the need to have a healthy, balanced diet. Others are screening expectant mothers for risk factors to reduce maternal mortality and engaging them in regular exercise. The study supports the recommendations of Ilesanmi et al. (2023) and World Health Organization (2025) for expectant mothers

during the antenatal period, emphasizing a healthy diet and increased folic acid intake. Ashraf et al. (2020) recommended a daily intake of 1.2 litres of fluids. Nelson et al. (2022) and Emmanuel et al. (2024) emphasize the importance of regular exercise for expectant mothers to maintain fitness and prevent pregnancy-related disorders. Regular exercise can prevent pregnancy-related disorders like gestational diabetes, weight gain, hypertension, urinary incontinence, foetal macrosomia, lumbopelvic pain, anxiety, and prenatal depression (Ribeiro et al., 2021; van Poppel et al., 2022). Mohulatsi et al. (2023) also emphasize the need for regular screening for risk factors.

The study found that expectant mothers are not adequately provided with appropriate information materials and newsletters while waiting in clinics, indicating a need for improved communication and support. Zhu et al. (2019) suggested that expectant mothers should be provided with appropriate information materials, including radio, audio, video messages, and newsletters, while waiting in clinics. Igbinoba et al. (2020) and Yaya and Bishwajit (2022) suggest that exposure to family planning information can be obtained through various sources such as radio, TV, newspapers, and health facility visits. On hypothesis one, the study found that both rural and urban CBMs in Enugu-North Senatorial Zone agreed on the level of SMPs' provision by PHC facilities during the ante-natal period. The study indicated that PHC facilities provide comparable ANC services in both rural and urban communities, suggesting that equitable access to such services may be effective.

The findings of the study revealed that the provisions of SMP were to a very high extent on ensuring availability of emergency drugs and supplies and educating mothers on the value of colostrum. The study aligned with the assertions of Choudhary et al. (2021) that PHC personnel should assist expectant mothers to ensure availability of emergency drugs and supplies in PHC centres. El Sayed et al. (2020) and Karimi et al. (2020) asserted that expectant mothers should be educated on the risks of washing their babies immediately after birth and the importance of colostrum.

The study further revealed that providing skilled attendants at delivery, training health staff in emergency obstetric care and life-saving skills, assisting expectant mothers by massaging their backs during labour period and educating mothers on the dangers of washing the baby immediately after birth were rated to moderate extent. Supporting the findings of the study, Ameh and van den Broek (2015) emphasized the importance of prompt action by skilled healthcare providers/birth attendants in addressing obstetric complications to prevent life loss and poor maternal health outcomes. In addition, training health staff in emergency obstetric care and life-saving skills, addressing maternal mortality through improved quality, inter-sector collaboration, and community-based activities (Onoja-Alexander et al., 2017; Okonofua et al., 2019; Samira & Tukur, 2019).

On massaging of the back, Boadi-Kusi et al. (2021) and Shetty and Fogarty (2021) suggested that pregnant mothers' backs are frequently massaged during labour, serving as a stress relief and relaxation therapy. The study found that the availability of JIK detergents and protective materials in hospitals and allowing expectant mothers to choose their preferred delivery position were rated low. However, studies reported that JIK detergents and protective materials are necessary in hospitals to kill microorganisms on inanimate objects or surfaces (Omoleke et al. 2021; Lestari et al., 2022; Dada, 2023). On hypothesis two, the study found no significant difference in perceptions of SMPs provided by PHC personnel to CBMs in rural and urban communities of Enugu-North Senatorial Zone. This means that PHC personnel provide similar care and support during labour and delivery, regardless of location, indicating equitable maternal healthcare services are potentially yielding positive results in the region.

The findings of the study revealed that to a very high extent, nursing mothers, during the post-natal period, are provided with information on immunization and how to complete their tetanus toxoid doses. Taiwo et al. (2015) emphasized the importance of providing nursing mothers with information on immunization and completing tetanus toxoid doses. It is an effective intervention for disease prevention (Adedire et

al., 2021; Ariyibi et al., 2023). Saaka et al. (2017) highlighted that health workers offer various services including hygiene advice, rest, nutrition, breastfeeding, uterine size assessment, baby care education, treatment, immunization, and family planning counseling. The study also revealed that creating awareness on the danger signs during the first week of post-natal period was rated to a moderate extent. SMP increases awareness of danger signs in the first week post-natal, potentially reducing maternal morbidity and mortality by promoting timely recognition and proper healthcare (Bakar et al., 2019; Shamanewadi et al., 2020).

However, the study revealed that the following were rated to low extent: examining regularly the infant feeding and development, examining regularly the nursing mothers for abnormal vaginal discharge, checking regularly the abdominal palpation of nursing mothers, embarking on three post-natal visits to nursing mothers (within 6 hours, at 6 days and at 6 weeks), and embarking on follow-up visit of the clients at home during the first week postpartum. Jansen et al. (2021), Holloway (2014) and Sdravou et al. (2023) highlighted that successful breastfeeding or bottle feeding is a crucial condition for nursing mothers to return home after delivery. Coaten (2024) emphasized the need for regular check-ups and examinations of nursing mothers in PHC facilities. These include three post-natal visits and follow-up visits at home during the first week postpartum (Stumbras et al., 2016; Sanusi et al., 2023). WHO (2010) affirmed that post-partum women should have immediate contact with healthcare providers at 24 hours, 3 days, 10-14 days, and 6 weeks post-delivery for timely assessment and treatment of complications.

The analysis on hypothesis three showed that PHC personnel provide similar post-natal SMPs in both rural and urban areas, indicating uniformity in service delivery and that location may not significantly influence this.

Conclusion

The study examined childbearing mothers' (CBMs) perception of Safe Motherhood Practices (SMPs) in Enugu-North Senatorial Zone, Nigeria. The study showed that gaps exist in pregnancy-related information, essential protective

materials, flexible delivery positions, and postnatal care. The lack of significant differences in perception between rural and urban respondents suggests that these inadequacies are systemic and not location-specific. This implies that increased maternal health education is needed to enhance awareness and utilization of SMPs. There is a need for healthcare providers to adopt innovative educational strategies. Also, there is a need for medical training institutions to integrate comprehensive maternal healthcare education to equip professionals with the skills for quality SMP delivery.

Also, there are systemic inadequacies in both rural and urban areas. This means that there is a need for the government and health institutions to provide accessible informational materials in local languages and ensure hospitals have essential protective materials. In addition, there is a need for health authorities to enforce policies for regular maternal and infant check-ups and home follow-ups. Also, there is a need to enhance maternal and child healthcare services through continuous professional development for healthcare providers. It would ultimately reduce maternal and infant morbidity and mortality rates.

Recommendations

The researcher proffered the following recommendations based on the findings of the study:

1. The Enugu State Government, in collaboration with healthcare agencies and non-governmental organizations (NGOs), should provide pregnancy-related information through various media and printed newsletters in local languages. Towards this, primary health care (PHC) centres should integrate structured health education into antenatal care, while trained community health workers conduct outreach programs to promote maternal healthcare awareness, especially in rural areas.
2. The Enugu State Government should equip hospitals and maternity centres with essential protective materials to maintain hygiene standards. This means that healthcare facilities should adopt patient-centred approaches, allowing

mothers to choose delivery positions, while regular monitoring ensures consistent availability and proper use of supplies.

3. The Enugu State Government, in collaboration with healthcare agencies and NGOs, should mandate PHC personnel to conduct thorough post-natal examinations and enforce the standard three post-natal visits. Additionally, a structured home-based follow-up programme should be developed, ensuring that trained health workers provide post-partum care and monitor recovery in both urban and rural communities.

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