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STRATEGIES FOR IMPROVING PROVISION OF ANTENATAL CARE BY HEALTH-CARE PROVIDERS IN HEALTH-CARE FACILITIES IN ILORIN, KWARA STATE

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Abstract
The objectives are to examine if availability of health equipment; skilled health personnel; health education and promotion, and accessibility and affordability are perceived as strategies for improving provision for antenatal care among health care providers in primary health care centers in Ilorin, Kwara State. Descriptive research design of survey type was adopted for the study. The population comprised all health practitioners at government owned health care facilities in Ilorin metropolis. Multistage sampling technique of purposive, proportionate and simple random was used to select one hundred and eighty (180) respondents, and researcher designed structured questionnaire, validated by experts and tested for reliability through test- retest method was used to ascertain the reliability of the instrument and a correlation coefficient 0.68r was obtained using Pearson Product Moment Correlation (PPMC). Descriptive statistics of frequency counts and percentage was used to analyzed the demographic data of the respondent while inferential statistics of Chi-square was used to test the postulated null hypotheses at 0.05 level of significance. The result revealed that all the four postulated null hypotheses were rejected because all the calculated Chi-Square values were greater than the table values. Based on the findings, the study concluded that, availability of health equipment skilled health personnel, health education and promotion, and accessibility and affordability are strategies for improving provision of antenatal care among health care providers in primary health care centers in Ilorin metropolis. The researcher recommended among others, that functioning obstetric facilities and equipment should always be available 24 hours more qualified health practitioner should be deployed to antenatal sections in every health care centers.

Keywords: ***Health equipment; Skilled health personnel; Health education, Accessibility and Antenatal care***

Introduction

Antenatal care is an umbrella term used to describe medical care and procedures that are carried out during pregnancy. It is the care a woman receives throughout her pregnancy and during child birth. It is important in helping her to enjoy a healthy pregnancy state and safe child delivery. Therefore, the main objective of antenatal care is to ensure that every pregnancy results in the delivery of a healthy baby without impairing the health of the mother. Antenatal care as a phenomenon cannot be over emphasized because, Storeng and Behague, (2017) reported in a research that maternal mortality is a major health indicator globally. Antenatal care (ANC) utilization rate in Nigeria as a developing country, is actually low with about 61% of pregnant women visiting a skilled health provider during their pregnancy in comparison with the documented average of 79% for all developing countries. Antenatal care manages effective management of pre-natal morbidities, and may facilitate institutional delivery and postpartum care, thereby improving maternal and new-born health outcomes. In Nigeria, 41% of women who utilized skilled ANC did not deliver in a healthcare facility (Dahiru & Oche, 2015). With just 2.45% of the global population, Nigeria accounts for 19% of maternal mortality. Many developing countries have successfully reduced maternal mortality by expanding maternal service utilization through policy innovations (Powell-Jackson, Mazumdar & Mills, 2015).

Promoting optimum health for women and reducing maternal and childhood mortalities have remained a significant interest for the international community for decades. The unique interest was demonstrated by the high priority accorded maternal and child health care in the Millennium Development Goals (MDGs), and more recently, the Sustainable Development Goals (SDGs) (Adewuyi, Zhao & Lamichhane, 2017). In between 1990 and 2015, appreciable gains were documented in the global maternal-child-health care with 43.9% and 48% reduction in Maternal Mortality Ratio (MMR) and under-five mortality rate (U5MR), respectively (Alkema, et al., 2016). With all these impressive achievements, the challenges related with maternal, neonatal and other childhood mortalities remain considerably high in several developing countries with wide-ranging disparities between and within different population groups. Pregnant women, within the age range of 15-49, known to constitute more than one-fifth of the world's population, are

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consistently exposed to pregnancy and childbearing risk. Antenatal care is a precise and systematic assessment and follow-up care which includes education, counseling, screening, and treatment that is provided for pregnant women to ensure the best possible health of a mother and her fetus. Antenatal care (ANC) services are important for maternal health, even in developing countries. In 2016, the World Health Organization (WHO) introduced a new recommendation that pregnant women with uncomplicated pregnancies should attain at least eight ANC contacts (WHO, 2016a). Previously, World Health Organization (WHO) recommended that pregnant women are expected to visit the antenatal clinic 4-5 times before delivery for any medical problems; three antenatal visits as the minimum recommendation.

High maternal and prenatal mortality is reported to be associated with lack of, or inadequate skilled health personnel to give maternal healthcare during pregnancy and childbirth particularly in sub-Saharan Africa where half (50.4%) of all maternal deaths occurrence. The life time risk of maternal death for a woman in sub-Saharan Africa is 332 times higher compared to a woman in the developed countries (Ekpenyong, Bond & Matheson, 2019). Antenatal care may reduce and/or eliminate maternal morbidity and mortality directly through the early detection and treatment of pregnancy-related or intercurrent illnesses, or indirectly through the detection of women at increased risk of complications of delivery and ensuring that they deliver in suitably equipped health facilities (Rosemary & Justina, 2018). Maternal health is the health of women during pregnancy, childbirth and the postpartum period and maternal health care services are antenatal care (ANC), delivery care and postnatal care (PNC) services (WHO, 2016). Maternal health has been become a global concern because the lives of millions of women in reproductive age can be saved through maternal health care services. Despite efforts that have been made to strengthen maternal health care services, maternal mortality is still high in most of the developing countries.

The observed disparities in reproductive health outcomes and utilization are partly attributable to wealth. Evidence shows that the most vulnerable - the poor - are at a disadvantage, which prevents equal access to health care. There is evidence to suggest that the poor have peculiar characteristics. For example, illiteracy, inefficient and insufficient exposure to the reproductive health information on mass media, which affect their use of health care services in general (Abekah-Nkrumah, 2018). This applies to the use of maternal health care services as well. While several studies have shown that better-off women have easier access to maternal health care, other studies have demonstrated that socio-demographic factors such as marital status, education, occupation, residence typology, attitude of health workers, and distance to health facility also contribute to the inequality in the use of reproductive health care among women (Ogundele, Pavlova & Groot, 2018). In addition, it is unclear to what extent these determinants explain the use of reproductive health care and contribute to the differences between the groups. In view of this evidence, a policy that aims to reduce inequality and helps to attain universal coverage of maternal health care services should target the poorest people most in need of healthcare but should also take into account other determinants than wealth (Ogundele, Pavlova & Groot, 2020). The study conducted by Sholeye et al. on pregnant women from rural and urban communities in Ogun state, south western Nigeria indicated that the mean energy, vitamin A, folic acid, calcium, iron and sodium intake of both rural and urban respondents were below the recommended nutrient intake values.

Women were reported to initiate antenatal care late owing to the perceived bad quality of service at the healthcare facility. The women's criticisms were related mainly to lack of services, citing reasons such as being sent home without receiving services due to insufficient skilled staff, and having to purchase drugs, cards or diagnostic tests, in fact the service was supposed to be free. One of the strong facility level predictor for skilled maternal care utilization is the performance of health facilities. Lack of antenatal care by a specialized personnel have been clearly linked with increased perinatal morbidity and mortality. While poor utilization of prenatal services is no longer an issue in most developed countries, low- and middle-income nations still grapple with the adverse pregnancy outcomes related to poor antenatal care (Awoleke & Olofinbiyi, 2020). Access to quality maternal health services through antenatal care and skilled birth attendance improves maternal and neonatal health and reduces maternal and perinatal mortalities as the health of the mother and the newborn are closely linked. It is usually assumed that the provision of high-quality maternal health services will encourage uptake of such services by women (UNICEF, 2015). According to the Nigeria Demographic and Health Survey, among women who had a live birth in the five years preceding the survey, 61% received antenatal care from a skilled provider, while 51% of the pregnant women reportedly made at least four antenatal visits during the pregnancy. This poor utilization of prenatal service occurs commonly in developing countries (Onwuhafua, Ozed-Williams,

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Kolawole & Adze, 2016), but the predictors and barriers to accessing the minimum number of antenatal visits have not been fully explored in our setting, all these can be properly address by well skilled health personnels.

Health knowledge is an important factor. It enables women to be aware of their rights and health status in order to seek appropriate health services educated women tend to have a greater awareness of the existence of antenatal care services and the advantages of using such services. It is argued that educated women are more aware of health problems, the availability of health care services is well known to them, and tends to utilize the information more effectively than non-educated women. Moreover, higher levels of formal education tend to have positive effect on health-seeking behaviours, and educational knowledge may increase a woman's control over her pregnancy (Efendi, Chen, Kurniati, & Berliana, 2016). Access to midwife-led ANC can offer appreciable benefits of improving maternal health. Improving ANC is essential and has been pertinent toward attaining the Millennium Development Goals (MDGs), now Sustainable Development Goals (SDGs). Antenatal care is a key element of maternal health and consists of a varied range of activities with recognizable potential benefits for favorable pregnancy outcomes (Aliyu & Dahiru, 2017).

Objective of the Study

The main objective of the study is to determine whether provision of equipment, skilled health workers, health counseling and accessibility at affordable cost of antenatal care is perceived as strategies for improving antenatal care.

Research Hypotheses

The following hypotheses were postulated for the study;

- Availability of health equipment will not significantly be perceived as a strategy for improving antenatal care among health care providers in primary health care facilities in Ilorin metropolis.
- Availability of skilled health personnel will not significantly be perceived as a strategy for improving antenatal care among health care providers in primary health care facilities in Ilorin metropolis.
- Health education and promotion will not significantly be perceived as a strategy for improving antenatal care among health care providers in primary health care facilities in Ilorin metropolis.
- Accessibility and affordability of antenatal care services will not significantly be perceived as a strategy for improving provision for antenatal care among health care providers in primary health care center in Ilorin metropolis.

Methodology

The descriptive research design of survey method was used for this study. The population of this study covered all the health practitioners at the 78, government owned health care facilities in Ilorin metropolis. A multistage sampling technique of purposive, proportionate and quota sampling techniques were used to select the respondents for the study. Purposive sampling technique was used to select only the public Primary Health Care Centers in the 3 local government areas. Proportionate sampling technique of 12% was used to select PHCC in each LGA. simple random sampling technique was used to select a total of one hundred and eighty (180) respondents used for the study.

Table 1: Sample distribution from the selected Primary Health Care Centers

S/N	Ilorin Metropolis	12% Selected Public Primary Health Care Centres	Sample Selected for the Study
1.	Ilorin East	Oke – Ose	16
		Okelele Health Centre	24
		PHCC Ojagboro	32
		Marafa Health Centre	8
2.	Ilorin South	Tanke Ileiwe BHC	10
		Ero - Omo Health Centre	30
		Oke - Ogun Health Centre	20
3.	Ilorin West	Oko - Erin Health Centre	14
		Ago Market Health Centre	26
	Total		**180**

Source: Researcher's developed

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A researcher designed structured questionnaire was used for data collection. The instrument consists sections A and B. Section A contained questions on the demographic information of the respondents, while section B focused on postulated hypotheses. The questionnaire was validated by experts in the field and tested for reliability through test- retest method. The results of the two sets of instruments were correlated using the Pearson Product Moment Correlation (PPMC). A correlation coefficient of 0.68r was obtained. This was considered high enough for the study. The researcher with two (2) guided research assistants administered the questionnaires. The data collected were analyzed using descriptive statistics of frequency counts and percentage for demographic data while inferential statistics of Chi-square was used in establishing the basis for accepting or rejecting the postulated hypotheses at 0.05 alpha level.

Results

Frequency count and percentage were used to describe the demographic characteristics of the respondents sampled stated below.

Table 2: Showing Demographic Distribution of Respondents by Age Range, Religion, Sex, Years of Experience and Specialty.

Variables		Frequency	Percentage
Age Range	20-25 years	24	13.3%
	26-30 years	89	49.5%
	31 years and above	67	37.2%
	TOTAL	**180**	**100.0%**
Religion	Islam	117	65.0%
	Christianity	63	35.0%
	Traditional	0	0.0%
	TOTAL	**180**	**100.0%**
Years of Experience	1-3 years	49	27.2%
	4-6 years	77	42.8%
	7 years and above	54	30.0%
	TOTAL	**180**	**100.0%**
Sex	Male	50	27.8%
	Female	130	72.2%
	TOTAL	**180**	**100.0%**
Specialty	Nurse	112	62.2%
	Doctor	23	12.8%
	Pharmacist	18	10.0%
	Lab Technician	27	15.0%
	TOTAL	**180**	**100.0%**

Table 2 presents the distribution of the respondents by demographic data. It revealed that respondents within 26-30 years of age have the highest responses with 89 (49.5%) while those within 20-24 years have the least response with 24 (13.3%). The religion of majority of the respondents was 117 (65.0%) muslims while there was none from Traditional religion. The table also showed the distribution of the respondents based on years of experience, 77 (42.8%) were within 4-6 years and they constitute the largest population of the respondents, while 54 (30.0%) have experience of 7 years and above. As for the sex of the respondents, the table revealed that 50 (27.8%) were male while 130 (72.2%) of the respondents were female, which shows that there are more female respondents than male respondents. Based on specialty, the respondents vary, nurse, doctor, pharmacist and lab technician obtained 112 (62.2%%), 23 (12.8%%), 18 (10.0%), and 27 (15.0%) respectively.

Hypotheses Testing

Hypothesis One: Availability of health equipment will not significantly be perceived as a strategy for improving antenatal care among health care providers in primary health care centers in Ilorin metropolis.

Table 3: Chi-square (X^2) analysis showing availability of health equipment as a strategy for improving antenatal care

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S/N	STATEMENT	SA	A	D	SD	Df	Cal. Value	Table Value	Remarks
5.	Receiving antenatal care from a well-equipped health care center will lower the risk of pregnancy complication	170 (94.4%)	9 (5.0%)	1 (0.6%)	0 (0.0%)				
6.	Adequate provision of facilities and equipment is an important strategy in improving antenatal	120 (66.7%)	33 (18.3%)	21 (11.7%)	6 (3.3%)				
7.	Modern antenatal care is better than traditional antenatal care due to the availability of technological equipment	101 (56.1%)	65 (36.1%)	10 (5.6%)	4 (2.2%)	**9**	**171.985**	**16.92**	**Ho2 rejected**
8.	Outcome of an antenatal care can be determined by the level of equipment possess at any health care Centre	59 (32.8%)	69 (38.3%)	39 (21.7%)	13 (7.2%)				
	Column Total	**450**	**176**	**71**	**23**				

P< 0.05

Table 3 above showed that the critical value of 171.985 is greater than the table value of 16.92 at 0.05 alpha level at the degree of freedom of 9. The null hypothesis two which stated that availability of health equipment will not significantly be perceived as a strategy for improving antenatal care among health care providers in primary health care centers in Ilorin metropolis is rejected.

Hypothesis Two: Availability of skilled health personnel will not significantly be perceived as a strategy for improving antenatal care among health care providers in primary health care centers in Ilorin metropolis.

Table 4: Chi-square (X^2) analysis showing availability of skilled health personnel as a strategy for improving antenatal care

S/N	STATEMENT	SA	A	D	SD	Df	Cal. Value	Table Value	Remarks
9.	Increasing the number of Health personnel will improve antenatal care delivery	87 (48.3%)	65 (36.1%)	24 (13.3%)	4 (2.2%)	**9**	**105.482**	**16.92**	**Ho3 rejected**
10.	Providing periodic seminar/workshop to improve the skills of Doctors and nurses	111 (61.7%)	56 (31.1%)	10 (5.5%)	3 (1.7%)				

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	will improve health care delivery for pregnant women								
11.	Employing more pharmacist and opening many locations for collection of recommended drugs will improve antenatal care delivery system	92 (51.1%)	69 (38.3%)	15 (8.3%)	4 (2.2%)				
12.	Lack of skilled health personnel can lead to increase prevalence of mortality rate of pregnant women	168 (93.3%)	12 (6.7%)	0 (0.0%)	0 (0.0%)				
	Column Total	**458**	**202**	**49**	**11**				

P< 0.05

Table 4 above showed that the critical value of 105.482 is greater than the table value of 16.92 at 0.05 alpha level at the degree of freedom of 9. The null hypothesis three which stated that availability of skilled health personnel will not significantly be perceived as a strategy for improving antenatal care among health care providers in primary health care centers in Ilorin metropolis was rejected.

Hypothesis three: Health education and promotion will not significantly be perceived as a strategy for improving antenatal care among health care providers in primary health care centers in Ilorin metropolis.

Table 5: Chi-square (X^2) analysis showing health education and promotion as a strategy for improving antenatal care

S/N	STATEMENT	SA	A	D	SD	Df	Cal. Value	Table Value	Remarks
13.	Health educating pregnant women about the do's and don'ts during pregnancy can improve the standard of antenatal care	167 (92.8%)	12 (6.7%)	1 (0.5%)	0 (0.0%)				
14.	Enlightening pregnant women on the implications that can result from the act of ignorance towards medical advices during pregnancy will improve their antenatal health behaviour	134 (74.4%)	36 (20.0%)	9 (5.0%)	1 (0.6%)	**9**	**54.147**	**16.92**	**Ho4 rejected**
15.	Educating pregnant women about the sign and symptoms of pregnancy complications can go a long way to reducing fatalities from pregnancy complications	122 (67.8%)	54 (30.0%)	3 (1.7%)	1 (0.5%)				

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16.	Health education focused on nutrition, hygiene and drug usage will improves antenatal care provisions	157 (87.2%)	21 (11.7%)	2 (1.1%)	0 (0.0%)				
	Column Total	**580**	**123**	**15**	**2**				

P< 0.05

Table 5 above shows that the critical value of 54.147 is greater than the table value of 16.92 at 0.05 alpha level at the degree of freedom of 9. The null hypothesis four which stated that health education and promotion will not significantly be perceived as a strategy for improving antenatal care among health care providers in primary health care centers in Ilorin metropolis was rejected.

Hypothesis Four: Accessibility and affordability of antenatal care will not significantly be perceived as a strategy for improving provision for antenatal care among health care providers in primary health care center in Ilorin metropolis.

Table 6: Chi-square (X^2) analysis showing accessibility and affordability of antenatal care as a strategy for improving provision for antenatal care

S/N	STATEMENT	SA	A	D	SD	Df	Cal. Value	Table Value	Remarks
17.	Stationing hospitals and health care centers at places where people will find it easy to access, can improve antenatal care	109 (60.6%)	61 (33.9%)	8 (4.4%)	2 (1.1%)				
18.	Pregnant women with inadequate means of transportation are more likely to miss antenatal care to those with adequate means of transportation	162 (90.0%)	18 (10.0%)	0 (0.0%)	0 (0.0%)				
19.	Rendering antenatal care at low or no cost can be used to strengthen the desire of pregnant women for antenatal visit	103 (57.2%)	73 (40.6%)	4 (2.2%)	0 (0.0%)	**9**	**67.898**	**16.92**	**Ho5 rejected**
20.	Pregnancy related complications can be reduced and eradicated if antenatal care services are brought closer to the pregnant women	123 (68.3%)	56 (31.1%)	0 (0.0%)	1 (0.6%)				
	Column Total	**497**	**208**	**12**	**3**				

P< 0.05

In table 6 the critical value of 67.898 is greater than the table value of 16.92 at 0.05 alpha level at the degree of freedom of 9. The null hypothesis four which states that accessibility and affordability of antenatal care will not significantly be perceived as a strategy for improving provision for antenatal care among health care providers in primary health care center in Ilorin metropolis was therefore rejected.

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Discussion

Hypothesis one: The result revealed that availability of health equipment is significantly perceived as a strategy for improving antenatal care among health care providers in primary health care centers in Ilorin metropolis. This result corroborates the report of Ali, Dero, Ali and Ali (2018), which says that women were reported to initiate antenatal care late owing to the perceived bad quality of service at the healthcare facility. The women's criticisms were related mainly to lack of services due to unavailability of sufficient facilities and equipment.

Hypothesis two: The result revealed that availability of skilled health personnel is significantly perceived as a strategy for improving antenatal care among health care providers in primary health care centers in Ilorin metropolis. This is in-line with a report by Awoleke and Olofinbiyi, (2020) who found out that, women who attend prenatal care are most likely to have facility-based deliveries, also return for postnatal care. On the contrary, lack of antenatal care by a specialized, personnel have been clearly linked with increased perinatal morbidity and mortality. Ugo (2016) also reported that the shortage and inequitable distribution of skilled birth attendants such as midwives and doctors in Nigeria affects the utilization of services by women.

Hypothesis three: The result revealed that health education and promotion is significantly perceived as a strategy for improving antenatal care among health care providers in primary health care centers in Ilorin metropolis. This is inline with the report of Efendi, Chen, Kurniati, and Berliana (2016), which says that educated women are more aware of health problems, the availability of health care services is well known to them, and tends to utilize the information more effectively than non-educated women. Moreover, higher levels of formal education tend to have positive effect on health-seeking behaviours, and educational knowledge may increase a woman's control over her pregnancy. Also inline with Ali, et al., (2018), who affirmed that the odds of utilizing antenatal care were more than three times for those with better knowledge of danger signs of pregnancy than those with poor knowledge.

Hypothesis four: The result revealed that accessibility and affordability of antenatal care is significantly perceived as a strategy for improving provision for antenatal care among health care providers in primary health care center in Ilorin metropolis. This is in-line with the report of EBCOG Scientific Committee (2015) who affirmed that access to affordable antenatal care, especially in early pregnancy, many diseases such as prematurity, fetal growth restriction, congenital abnormalities or asphyxia can be prevented or anticipated. The accumulation of non-medical risks, particularly social and mental problems, as well as inadequate access to appropriate care, are all contributory. It's also inline with a study by Nwankwo and Ezenwaka, (2020), who affirmed that Nigerian women who had no access to antenatal care during pregnancy have greater risk of complications during delivery or maternal death.

Conclusion

Based on the findings of the study, the following conclusions were made:

i. Making necessary drugs available for pregnant women is a strategy for improving antenatal care among health care providers in primary health care centers in Ilorin metropolis.
ii. Providing adequate health equipment is a strategy for improving antenatal care among health care providers in primary health care centres in Ilorin metropolis.
iii. Availability of skilled health personnel is a strategy for improving antenatal care among health care providers in primary health care centres in Ilorin metropolis.
iv. Health education and promotion is a strategy for improving antenatal care among health care providers in primary health care centres in Ilorin metropolis.
v. Accessibility and affordability of antenatal care is a strategy for improving provision for antenatal care among health care providers in primary health care center in Ilorin metropolis.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Non-governmental organizations should be encouraged to donate drugs for pregnant women in order to reduce the prevalence of maternal related complications.
2. Functioning obstetric facilities and equipment should always be made available and these should be properly maintained

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3. More skilled health care personnels should be recruited to every healthcare facility by the Government.
4. Pre-natal health counselling should be made compulsory at every level of pregnancy for pregnant women.
5. More health facilities should be built strategically to cater for easy accessibility for pregnant women. Also government should subsidise charges to make it affordable by all and sundry.

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