SJIF Impact Factor: 5.464

WORLD JOURNAL OF ADVANCE HEALTHCARE RESEARCH

ISSN: 2457-0400
Volume: 4.
Issue: 6.
Page N. 153-164
Year: 2020

Original Article www.wjahr.com

PREGNANT WOMEN'S PERCEPTION OF EQUITABILITY, EFFICIENCY AND PEOPLE-CENTEREDNESS OF ANTENATAL SERVICES PROVIDED BY MIDWIVES, AND THE ASSOCIATIONS BETWEEN THEIR PERCEPTIONS AND SATISFACTION WITH THE SERVICES

Kanikwu Phoebe Nwamaka and *Chiejina Edith Nkechi

Department of Nursing Science, Faculty of Health Sciences and Technology, Nnamdi Azikiwe University, Nnewi Campus, Anambra State Nigeria.

Received date: 25 September 2020 **Revised date:** 15 October 2020 **Accepted date:** 05 November 2020

***Corresponding author: Chiejina Edith Nkechi**
Department of Nursing Science, Faculty of Health Sciences and Technology, Nnamdi Azikiwe University, Nnewi Campus, Anambra State Nigeria.

ABSTRACT

Background: Pregnant women's experiences with the care they receive influence their perceptions and compliance with the care. Assessing Pregnant women's perception of the care they receive and their satisfaction with the care, can expose the lapses in the quality of antenatal services and necessitate improvement in the services provided by the midwives. **Objectives**: The objectives of this study were to determine the perception of pregnant women about the equitability, efficiency and people-centeredness of the antenatal services provided by midwives, and the associations between their perceptions and satisfaction with the services in government-owned health care facilities in South-South, Nigeria. **Materials and Methods:** The study was a cross sectional survey research design carried out in the antenatal clinics of 30 government-owned health facilities in the South-South geopolitical zone of Nigeria. A total of 1500 respondents were selected for the study using multi-stage sampling technique. Questionnaire on Equitability, Efficiency and People-Centeredness of the Antenatal Services Provided by Midwives and Patient Satisfaction Questionnaire were the instruments used for data collection. The reliability of the instruments were established through the test-retest method using Cronbach's Alpha which yielded co-efficients of 0.806 and 0.709 respectively. Data collected were analyzed using frequencies, percentages, mean and Factorial Analysis of Variance to determine the objectives of the study. **Results:** The result showed means of 3.67±1.19, 3.89±0.98, 3.52±1.24, for pregnant women's perceived equitability, efficiency and people-centeredness respectively of the antenatal services provided by midwives. There were significant associations between the satisfaction expressed by pregnant women and their perceived equitability (F = 25.267, *p-value*=0.000), perceived efficiency (F = 8.501, *p-value* = 0.000) and perceived people-centeredness (F= 18.763,p-value= 0.000) of antenatal services provided by midwives. **Conclusion:** Pregnant women had positive perception about the equitability, efficiency and people-centeredness of the antenatal services provided by midwives in health care facilities in South-South Nigeria. Midwives in government-owned health care facilities should organize regular forum with their clients to get feedback from pregnant women regarding their perceptions of the antenatal services provided by midwives.

KEYWORDS: Antenatal services, Efficiency, Equitability, Midwives, People-Centredness, Perception, Pregnant women, Satisfaction.

INTRODUCTION

Nigeria, with maternal mortality ratio (MMR) of 814 per 100,000 live births compared to global average of 210,[1] undoubtedly, needs an improved antenatal care (ANC) coverage as well as high quality antenatal service delivery. Studies have documented the fact that ANC coverage has improved in Nigeria.[2] This has been attributed to free antenatal services rendered in some parts of the country.[3] Regrettably, it has been noted that increased ANC coverage has not translated to quality antenatal service delivery in Nigeria.[1] As researchers seek for etiologies and interventions to improve this distressing status, it has been recognized that every pregnancy carries a risk of complications, and some pregnancies even carry more risks than others.[4,5] Some opinions have it that antenatal services remain

indispensable for early identification and proper management of complications in pregnancy as well as in assuring healthy pregnancy outcomes.[6]

WHO defined quality of care as the extent to which health care services provided to a client or patient improves desired health outcomes.[7] In order to achieve this, health care must among other several qualities, be equitable, efficient and people-centred.[8] Equitability of antenatal service is the broad principle that addresses the concept of dignity and autonomy among pregnant women.[9] Although, everyone accessing antenatal services has the right to have their dignity recognized, not all pregnant women have dignified care experiences.[10] Pregnant women have reported dissatisfaction with the quality of antenatal services received because provider behavior was marred by abusive language, rudeness, scolding, lack of privacy, stigmatization, intimidation, lack of empathy, physical assault, marginalization, exclusion and delay or denial of services.[11] as well as disregard for the active participation of pregnant women in their care and in decision making regarding their care.[10]

Efficient antenatal care implies high quality services which is essential care. The essential functions of a midwife which are efficacious in improving pregnancy outcomes include counseling of the pregnant woman on recognition of danger signs and where to seek help, birth preparedness and complication readiness, use of insecticide treated bed nets, adequate diet, HIV/AIDS, antenatal exercise, care of the newborn and exclusive breast feeding,[12] surveillance of a pregnant woman and her fetus (es), offering prophylactic treatments such as iron supplementation and IPTp, preventive measures like immunization (especially tetanus toxoid), screening for underlying conditions such as anaemia, malaria, STIs including syphilis and HIV, mental health problems, symptoms of stress or domestic violence, treatment of concurrent illnesses or diseases in pregnancy, and management of pregnancy related complications.[13] However, the existence of maternal health services which include antenatal services do not guarantee their use by women; neither does the use of maternal health services guarantee optimal outcomes for the women.[14] An important aspect of care that has been highlighted to explain why women either do not access services at all, access them late or suffer an unavoidable adverse outcome despite timely presentation, relates to the efficiency of the care.[15]

An alarming rate of poor patient experiences in developing countries has given rise to the global need to focus on patient-centred care.[16] The concept of patient-centred care has gradually been changed to people-centred care in order to include those who are not ill such as women receiving antenatal care.[17] People-centred care goes beyond clinical quality of care to include concepts such as support, respect and autonomy.[18] Routine antenatal care which concentrates on the pregnancy and not on the woman carrying the pregnancy will fail to recognize the unique needs of each pregnant woman.[19] Improving the quality of care that women access during pregnancy can partly be achieved using a people-centred approach. This is because people-centred approach creates opportunity for a pregnant woman to express her fear and feelings and to allow care providers to help her address such positively.[20]

Clients' satisfaction is a reflection of their judgement of the different domains of health care which include technical, interpersonal, financial, time and organizational aspects.[21] The endpoint of antenatal care is client's satisfaction, and it is derived from the total experience during every antenatal care visit.[22]

Women's experience of antenatal care has shown that some women are treated respectfully and reported individualized care whereas some others perceived antenatal care as mechanistic or harsh.[11,6] The implication is that understanding the perceptions and satisfaction levels of users can substantially help midwives to improve their performance in the aspects of antenatal service that impact pregnant women's perception and satisfaction. The perception and satisfaction of people seeking care is one of the most important qualitative indices of health care provision and has a very special importance in antenatal care in that it affects the degree to which pregnant women will comply with antenatal services and accept interventions for better materno-fetal outcomes.[23] Therefore, it is important to assess maternal perception and satisfaction with care in order to make it more beneficial and culturally acceptable, ultimately leading to enhanced utilization and improved outcomes. In this study, the researchers explored pregnant women's perception of the equitability, efficiency and people-centredness of the antenatal services provided by midwives, and the association between their perceptions and satisfaction with the services.

OBJECTIVES

The objectives of this study were to:

1. Determine perception of pregnant women about the equitability of antenatal services provided by midwives at government-owned health care facilities in South-South, Nigeria.
2. Assess perception of pregnant women about the efficiency of antenatal services provided by midwives at government-owned health care facilities in South-South, Nigeria.
3. Ascertain perception of pregnant women about the provision of people-centred antenatal services by midwives at government-owned health care facilities in South-South, Nigeria.
4. Determine the association between pregnant women's perception about the equitability of antenatal services provided by midwives and their satisfaction with the services in government-owned health care facilities in South-South Nigeria.

5. Determine the association between pregnant women's perception about the efficiency of antenatal services provided by midwives in government-owned health care facilities in South-South Nigeria and their satisfaction with the services.
6. Determine the association between pregnant women's perception of the provision of people-centred antenatal services provided by midwives and their satisfaction with the services in government-owned health care facilities in South-South Nigeria.

METHOD

Study Design

This study was a cross sectional survey design.

Area of the Study

Government-owned health care facilities in the South-South geopolitical zone of Nigeria were used for the study. Akwa Ibom, Bayelsa, Cross River, Delta, Edo and Rivers are the six states that comprise the South-South geopolitical zone. Each State has primary, secondary and tertiary levels of government-owned health care facilities that provide antenatal services to pregnant women.

Population of the Study

The population of the study consisted of all pregnant women attending antenatal clinic in all the government-owned primary, secondary and tertiary level health care facilities in the six States of the South-South geo-political zone of Nigeria.

Sample size and Sampling Technique

The sample size was determined using Power Analysis Formula by Creative Research Systems.[24] Multi-stage sampling technique was used to select the pregnant women for the study. In the first stage, simple random sampling technique was adopted in selecting one tertiary level health care facility from each State. This technique allowed all the tertiary health care facilities equal chance to be selected in States with more than one tertiary health care facility. Simple random sampling was used to select two secondary and two primary level health care facilities from each State. This technique ensured that all the health care facilities had equal chance of being selected within the group. This gave a total of 30 health care facilities. In the second stage, simple random sampling technique was used to select 50 pregnant women from each of the 30 government-owned health facilities. This technique allowed all the pregnant woman in each facility to have equal chance of being selected for the study. The sample size for the study was 1500 pregnant women.

Instrument

Two instruments were used for data collection in this study. They are Questionnaire on Pregnant Women's Perception of the Equitability, Efficiency and People-Centredness of the Antenatal Services Provided by Midwives (QPWPEEPASPM) developed by the researchers and Patient Satisfaction Questionnaire (PSQ III) developed by Ware, Snyder and Wright.[25] QPWPEEPASPM contains a total of fifty-one (51) items and comprises two (2) sections (Sections A and B). Section A elicited information on the demographic characteristics of the respondents (e.g. age, parity, level of education, etc.). Section B comprised forty-four (44) items that were used to elicit information on equitability (e.g. all pregnant women get sitted during antenatal teaching sessions, health education is done using simple and understandable terms, cost of registration for antenatal care in this centre is affordable, etc.), efficiency(e.g. midwife explained the importance of HIV test, received tetanus toxoid injection, midwife offered intermittent preventive treatment of malaria (IPTp) to pregnant women, etc.) and people-centeredness(e.g. was treated with courtesy/respect; being involved in decision making, records are safely kept by midwife, etc.)

PSQ III is made up of fifty (50) items under seven (7) sub-scales/domains namely: General Satisfaction (GSAT), Technical Quality (TECH), Interpersonal Aspects (INTER), Communication (COMM), Financial Aspects (FINAN), Time Spent with Midwife (TIME) and Access/Availability/Convenience. Both OPWPEEPASPM and PSQ III were designed into five-point rating scale namely: strongly Agree = 5points, Agree = 4points, Uncertain = 3points, Disagree = 2points and Strongly Disagree = 1point.

A reliability test was conducted using test-retest method to measure the reliability of the instruments. The co-efficient obtained for QPWPEEPASPM was 0.806. For PSQ III, the reliability test score was 0.702 for General Satisfaction subscale, 0.706 for Technical Quality subscale, 0.711 for Interpersonal Aspect subscale, 0.718 for Communication subscale, 0.702 for Financial Aspects subscale, 0.719 for Time Spent with Midwife subscale, 0.704 for Access/Availability/Convenience subscale, and 0.709 was the overall reliability for PSQ III.

Ethical Consideration

Ethical approval for the study was obtained from the Health Research Ethics Committee in the Ministries of Health of Akwa Ibom State, Bayelsa State, Cross River State, Delta State Edo State and Rivers State. The researchers obtained informed consent from the health faculity heads to be allowed access to the respondents. Also informed consent was obtained from the respondents who were also informed that their participation in the study was voluntary. The respondents were assured of anonymity, privacy and confidentiality during and after data collection.

Data Collection

Copies of the questionnaires were administered face to face by the researchers and two (2) registered nurse-midwives assistants in each of the selected tertiary and secondary health facilities as well as one registered

nurse-midwife assistant in each Primary Health care Facility. The research assistants were instructed on how to assist the researchers in the interpretation and administration of the instruments. Data collection was done after antenatal sessions on the antenatal clinic days of all selected facilities. The completed copies of the questionnaires were retrieved on the spot, and there was 100% return rate. The data collection lasted for a period of two (2) months.

Data Analysis

Data collected from QPWPEEPASPM and PSQ III were analyzed using frequencies, percentages, mean and standard deviation. Mean score of 3 and above for QPWPEEPASPM indicated positive perception and a mean score below 3 indicated negative perception. The data collected in the seven(7) subscales of PSQ III were converted to 100% scale with the PSQ III convertion formula before they were coded for analysis. The scores of the items in each subscale were summed to get the subscale score, and subsequently transformed to a 0-100scale. The objectives of the study were determined using means, standard deviations and Factorial Analysis of Variance (ANOVA) at 0.05 level of significance. Bonferroni Post hoc tests were carried out for the results that showed significant differences to determine the specific areas of significant differences. The data analysis was done using Statistical Package for Social Sciences (SPSS) version 22. All the results were presented in tables.

RESULTS

Table 1: Demographic Characteristics of the Pregnant Women.

S/N	Variables	Variable Classification	Frequency	Percentage
1.	Age (in years)	18-24	296	19.73
		25-31	914	60.93
		32-38	264	17.60
		39-45	13	0.87
		46 and above	13	0.87
2.	Number of deliveries	None	250	16.67
		1	339	22.60
		2-4	839	55.93
		5 and above	72	4.80
3.	Level of education	Non-formal	2	0.13
		Primary	43	2.87
		Secondary	575	38.33
		Tertiary	880	58.67
4.	Occupation	Nil	499	33.27
		Farming	14	0.93
		Artisan	72	4.80
		Business/Trading	510	34
		Employed	405	27
5.	Religion	Christianity	1457	97.13
		Islam	30	2.00
		Traditional African Religion	13	0.87
6.	Gestational age at booking (in months)	3 or less	223	14.87
		4-6	1176	78.40
		7 or more	101	6.73
7.	Health care facility where antenatal care was being received	Primary health facility	600	40
		Secondary health facility	600	40
		Tertiary health facility	300	20

Table 1 shows that majority 914 (60.93%) of the respondents were within the age bracket of 25-31years, while minority 26 (1.74%) were aged 39years and above. 839 (55.93%) of the pregnant women had 2-4 previous deliveries, while 72 (4.80%) had 5 and above previous deliveries. 880 (58.67%) of the respondents had tertiary level of education, while the least number 2 (0.13%) had non-formal education. The occupation of 510 (34%) respondents was business/trading, while 14 (0.93%) were farmers. 1457 (97.13%) of the respondents were Christians, while a few 13 (0.87%) practiced Traditional African Religion. Among the respondents, 223 (14.87%) booked at gestational age of 3months or less, while 101 (6.73%) booked at gestational age of 7months and above.

Table 2: Perception of Pregnant Women about the Equitability of Antenatal Services Provided by Midwives.

S/N	The Equitability of Antenatal Services	SD f (%)	D f (%)	U f (%)	A f (%)	SA f (%)	Mean	Std Dev.
1.	Consent of pregnant women is obtained by midwives prior to some procedures	0 (0)	0 (0)	0 (0)	600 (40)	900 (60)	4.53*	0.50
2.	Midwives do not delay provision of services to some pregnant women	180 (12)	600 (40)	0 (0)	180 (12)	540 (36)	3.15*	1.55
3.	All pregnant women get seat during antenatal teaching sessions	582 (38.80)	238 (15.87)	0 (0)	0 (0)	680 (45.33)	3.25*	1.86
4.	Health education is done using simple and understandable terms	0 (0)	0 (0)	0 (0)	1292 (86.13)	208 (13.87)	4.93*	0.25
5.	Midwives display empathy in their service provision	408 (27.20)	434 (28.93)	0 (0)	0 (0)	658 (43.87)	3.05*	1.76
6.	Cost of registration (booking) for antenatal care in this centre is affordable	680 (45.33)	420 (28)	0 (0)	200 (13.33)	200 (13.33)	2.21	1.46
7.	Cost of subsequent antenatal visit is affordable	151 (10.07)	0 (0)	0 (0)	799 (53.26)	550 (36.67)	4.11*	1.09
8.	Antenatal care given by midwives is not discriminatory	0 (0)	284 (18.93)	0 (0)	597 (39.80)	619 (41.27)	4.02*	1.08
9.	Antenatal care in this centre is provided on a first-come first-served basis	100 (6.67)	200 (13.33)	100 (6.67)	700 (46.67)	400 (26.67)	3.67*	1.20
10.	Some pregnant women are not stigmatized and marginalized by the midwives	60 (4)	140 (9.33)	380 (25.33)	480 (32)	440 (29.33)	3.73*	1.10
	Overall Mean						**3.67**	**1.19**

***Positive perception**

Table 2 shows that means for: Midwives obtained consent of pregnant women prior to some procedures = 4.53, midwives do not delay provision of services to some pregnant women = 3.15, all pregnant women got seat during antenatal teaching sessions =3.25, health education was done using simple and understandable terms = 4.93, midwives displayed empathy in their service provision = 3.05, cost of subsequent antenatal visit was affordable = 4.11, antenatal care given by midwives was not discriminatory = 4.02, antenatal care was provided on a first-come first-served basis = 3.67 and some pregnant women were not stigmatized and marginalized by the midwives = 3.73. The overall average mean score was 3.67 indicating that pregnant women had positive perception about the equitability of antenatal services provided by midwives.

Table 3: Perception of Pregnant Women about the Efficiency of Antenatal Services Provided by Midwives.

S/N	Efficacy of Antenatal Services Provided by Midwives	SD f (%)	D f (%)	U f (%)	A f (%)	SA f (%)	Mean	Std Dev.
1.	Midwife explain the importance of HIV test	192 (12.80)	0 (0)	0 (0)	435 (29)	873 (58.20)	4.26*	1.24
2.	Injection Received tetanus toxoid	0 (0)	0 (0)	0 (0)	1204 (80.27)	296 (19.73)	4.97*	0.16
3.	Midwives offer intermittent preventive treatment of malaria to pregnant women (IPTp)	0 (0)	0 (0)	0 (0)	1351 (90.07)	149 (9.93)	4.95*	0.22
4.	Advise to use insecticide treated net to prevent malaria	0 (0)	198 (13.2)	0 (0)	194 (12.93)	1108 (73.87)	4.49*	1.00
5.	Blood pressure check is done by midwives for early detection of hypertension	0 (0)	0 (0)	0 (0)	176 (11.73)	1324 (88.27)	4.88*	0.33
6.	Abdominal examination is done by midwives to assess condition of the baby in the womb	376 (25.07)	0 (0)	0 (0)	221 (14.73)	903 (60.20)	3.83*	1.69
7.	Head to toe examination is done by midwives for early detection of abnormalities (e.g anemia,	504 (33.60)	211 (14.07)	121 (8.07)	288 (19.2)	376 (25.07)	2.83	1.62

	oedema, e.t.c.)							
8.	Urine testing is done by midwives for early detection of abnormalities	355 (23.67)	0 (0)	5 (0.33)	254 (16.93)	886 (59.07)	3.85*	1.66
9.	Weighing is done by midwives for early detection of abnormalities	488 (32.53)	189 (12.6)	234 (15.6)	346 (23.07)	243 (16.20)	2.77	1.50
10.	Receive teaching on prevention of mother to child transmission of HIV	174 (11.60)	34 (2.27)	93 (6.20)	671 (44.73)	528 (35.20)	3.88*	1.24
11.	Midwives teach signs of labour and the things needed to prepare for labour	39 (2.60)	0 (0)	0 (0)	984 (65.6)	477 (31.80)	4.27*	0.66
12.	Midwives teach the abnormal signs the pregnant women should report immediately in the health facility	10 (0.67)	0 (0)	0 (0)	1272 (84.80)	218 (14.53)	4.12*	0.43
13.	Midwives teach pregnant women diet in pregnancy	9 (0.60)	0 (0)	72 (4.80)	940 (62.67)	479 (31.93)	4.25*	0.60
14.	Midwives teach pregnant women antenatal exercises	204 (13.60)	84 (5.60)	392 (26.13)	469 (31.27)	351 (23.40)	3.42*	1.28
15.	Midwives explain the importance of delivering in a health care facility	0 (0)	0 (0)	0 (0)	689 (45.93)	811 (54.07)	4.55*	0.50
16.	Midwives explain the importance of exclusive breast feeding	0 (0)	0 (0)	0 (0)	602 (40.13)	898 (59.87)	4.60*	0.49
17.	Midwives teach pregnant women breast self-examination	303 (20.20)	345 (23)	15 (1)	339 (22.60)	498 (33.20)	3.24*	1.60
18.	Midwives teach pregnant women cervical cancer	223 (14.87)	234 (15.60)	0 (0)	501 (33.4)	542 (36.13)	3.57*	1.47
19.	Midwives teach pregnant women how to prevent sexually transmitted infections	23 (1.53)	92 (6.13)	0 (0)	109 (7.27)	1276 (85.07)	4.70*	0.86
20.	Midwives teach pregnant women the care of the newborn	9 (0.60)	15 (1)	10 (0.67)	998 (66.53)	468 (31.20)	4.26*	0.59
21.	Midwives administer routine drugs to all pregnant women	998 (66.53)	479 (31.93)	23 (1.53)	0 (0)	0 (0)	1.35	0.50
22.	Someone recommended this clinic to me because she was happy with the antenatal care she received here	964 (64.27)	33 (2.20)	0 (0)	74 (4.93)	429 (28.6)	2.29	1.81
	Overall Mean *Positive perception						**3.89**	**0.98**

Table 3 shows that means for: Midwife explained the importance of HIV test = 4.26, pregnant women received tetanus toxoid injection = 4.97, midwives offered intermittent preventive treatment of malaria to pregnant women = 4.95, advised pregnant women to use insecticide treated net to prevent malaria = 4.49, blood pressure check was done by midwives for early detection of hypertension = 4.88, abdominal examination was done by midwives to assess condition of baby in the womb = 3.83, urine testing was done by midwives for early detection of abnormalities = 3.85, received teaching on prevention of mother-to-child transmission of HIV = 3.88, midwives taught signs of labour and the things needed to prepare for labour = 4.27, midwives taught the abnormal signs the pregnant women should report immediately in the health facility = 4.12, midwives taught pregnant women diet in pregnancy = 4.25, midwives taught pregnant women antenatal exercises = 3.42, midwives explained the importance of delivering in a health care facility = 4.55, midwives explained the importance of exclusive breast feeding = 4.60, midwives taught pregnant women breast self examination = 3.24, midwives taught pregnant women cervical cancer = 3.57, midwives taught pregnant women how to prevent sexually transmitted infections = 4.70 and midwives taught pregnant women the care of the newborn = 4.26. The overall average mean score was 3.89 indicating that pregnant women had positive perception about the efficiency of antenatal services provided by midwives.

Table 4: Perception of Pregnant Women about the Provision of People-Centred Antenatal Services by Midwives.

S/N	Provision of People-Centred Antenatal Services	SD f (%)	D f (%)	U f (%)	A f (%)	SA f (%)	Mean	Std Dev.
1.	Midwives always introduce themselves	605 (40.33)	80 (5.33)	303 (20.20)	211 (14.07)	301 (20.07)	2.64	1.56
2.	Was treated with courtesy, respect	350 (23.33)	364 (24.27)	10 (0.67)	387 (25.8)	389 (25.93)	3.04*	1.58
3.	Being involved in decision making	691 (46.07)	49 (3.27)	388 (25.87)	74 (4.93)	298 (19.87)	2.48	1.57
4.	Records are safely kept by midwife	81 (5.40)	22 (1.47)	101 (6.73)	0 (0)	1296 (86.40)	4.58*	1.08
5.	Received information about the progress of pregnancy	374 (24.93)	213 (14.2)	40 (2.67)	213 (14.2)	660 (44)	3.35*	1.70
6.	Midwives are friendly, supportive	288 (19.2)	94 (6.27)	101 (6.73)	658 (43.87)	359 (23.93)	3.43*	1.41
7.	Midwives provide privacy during procedures	101 (6.73)	201 (13.40)	95 (6.33)	701 (46.73)	402 (26.80)	3.68*	1.20
8.	Have trust in midwives	82 (5.47)	22 (1.47)	101 (6.73)	193 (12.87)	1102 (73.47)	4.43*	1.09
9.	Midwives explain the progress of my pregnancy to me	15 (1)	397 (26.47)	3 (0.20)	672 (44.80)	413 (27.53)	3.67*	1.16
10.	Midwives explain the purpose of performing procedures and examination	614 (40.93)	215 (14.33)	219 (14.60)	452 (30.13)	213 (14.20)	2.61	1.48
11.	Provision of antenatal care is not affected by culture or tradition	10 (0.67)	13 (0.87)	17 (1.13)	1172 (78.13)	288 (19.20)	4.15*	0.51
12.	Midwives respect the people's culture and tradition	10 (0.67)	13 (0.87)	17 (1.13)	1172 (78.13)	288 (19.20)	4.15*	0.51
	Overall Mean						**3.52**	**1.24**

***Positive perception**

Table 4 shows that means for: Treatment was with courtesy and respect = 3.04, records were safely kept by midwife = 4.58, received information about the progress of pregnancy = 3.35, midwives were friendly and supportive = 3.43, midwives provided privacy during procedures = 3.68, had trust in midwives = 4.43, midwives explained the progress of pregnancy = 3.67, provision of antenatal care was not affected by culture or tradition = 4.15 and midwives respected the people's culture and tradition = 4.15. The overall average mean score was 3.52 indicating that pregnant women had positive perception about provision of people-centred antenatal services by midwives.

Table 5: Pregnant Women's Satisfaction with the Antenatal Services Provided by the Midwives.

S/N	Subscales/Domains of Patient Satisfaction	Mean	StdDev.
1.	General Satisfaction	56.12	10.17
2.	Satisfaction with technical quality of antenatal services provided by midwives	65.04	7.12
3.	Satisfaction with interpersonal aspects of antenatal services provided by midwives	71.07	11.23
4.	Satisfaction with communication aspect of antenatal services provided by midwives	63.07	16.59
5.	Satisfaction with financial aspects of antenatal services provided by midwives	59.75	9.88
6.	Satisfaction with time spent with midwife	73.33	29.82
7.	Satisfaction with access/availability/convenience of antenatal services provided by midwives	59.86	7.62
	Overall Scores	**64.03**	**13.20**

Table 5 Shows that the overall mean score of pregnant women's satisfaction with the antenatal service provided by the midwives was 64.03±13.20

Table 6: ANOVA result for Associations between Perceived Equitability, Efficiency, People Centeredness of Antenatal Services Provided by Midwives and Satisfaction with the Services.

S/N	Independent Variable	Dependent Variable	F-ratio	Adjusted R Square	Sig.	Mean Square
1.	Perceived equitability of antenatal services provided by midwives	Satisfaction	25.267	0.687	0.000	256.419
2.	Perceived efficiency of antenatal services provided by midwives	Satisfaction	8.501	0.285	0.000	95.755
3.	Perceived people-centredness of antenatal services provided by midwives	Satisfaction	18.763	0.567	0.000	173.778

Table 6 shows that Pregnant women's perceived equitability, efficiency and people-centredness of the antenatal services provided by midwives in government-owned health care facilities were significantly associated with their satisfaction with the services with F-ratio=25.267, p-value=0.000; F-ratio=8.501, p-value=0.000; F-ratio=18.763, p-value=0.000 respectively. Bonferroni Post-Hoc test was done to determine the specific areas with significant associations.

Table 7: Bonferroni's Post Hoc Test Result for Pregnant Women's Satisfaction with the Equtability, Efficiency and People-Centredness of Antenatal Care Provided by Midwives.

Dependent Variable	(I) Equitability	(J) Equitability	Mean Difference (I-J)	Std. Error	Sig.
Satisfaction	Consent	Delay	-.08333*	.16159	.000
		Get	-.25000	.09808	.109
		Simple	-.12829	.04002	.914
		Empathy	-.15175*	.05173	.000
		Reg	-.16667	.49653	1.000
		Afford	-.50000	.30138	.973
		Non-Discrim	-.56850*	.12296	.000
		First	.04386	.15896	1.000
		Non-Marginalization	-.55556*	.05602	.006
Dependent Variable	**(I) Efficiency**	**(J) Efficacy**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Satisfaction	HIV test	Toxoid	-.47382	.39650	.244
		IPTp	-.47222*	.24067	.000
		Net	-.66855	.09819	.495
		BP Detect	-.24064*	.12694	.000
		Fetal	-.22778*	.04728	.002
		Head	-.22778*	.02870	.010
		Urine	-.22778*	.01171	.000
		Weighing	-.22998	.01514	.317
		PMTCT	.03501	.06996	.134
		Labour	.03456*	.04246	.001
		Report	-.05229	.01732	.051
		Diet	-.10840*	.02240	.028
		Exercise	-.19444	.32280	.066
		Facility	-.39444	.19593	.608
		EBF	-.45866	.07994	.272
		BSE	-.35234*	.10334	.559
		Cancer	-.39444*	.51316	.009
		STI	-.42778	.31148	.736
		Newborn	-.84215*	.12708	.013
		Recom	-.04181*	.16429	.006
Dependent Variable	**(I) People-Centredness**	**(J) People-Centredness**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**
Satisfaction	Intro	Courtesy	-.27222	.50061	1.000
		Decision	-.33889	.30386	1.000
		Safety	-.57130*	.12397	.000
		Progress	.10146	.16027	1.000
		Friendly	-.33889	.45457	1.000
		Privacy	-.40556	.27591	1.000

		Trust	-.37283	.11257	.581
		Explain	.06111*	.14553	0.000
		Purpose	-.33889	.38478	1.000
		Culture	-.33889	.38478	1.000
		Tradition	-.37222	.23356	1.000

For pregnant women's satisfaction with equitability of the antenatal services provided by the midwives, table 7 shows significant associations between consent of pregnant women and delay in provision of antenatal services, consent of pregnant women and display of empathy by midwives, consent of pregnant women and non-discriminatory antenatal care as well as consent and non-marginalization of pregnant women with mean differences of 0.08333, 0.15175, 0.56850 and 0.55556 respectively.

In Table 7 pregnant women's satisfaction with the efficiency of the antenatal services provided by the midwives showed significant associations between HIV test and IPTp, HIV test and detection of hypertension with blood pressure check, HIV test and assessment of fetal wellbeing, HIV test and head to toe examination, HIV test and urine testing, HIV test and education on labour, HIV test and education on diet in pregnancy, HIV test and Breast Self

Examination (BSE), HIV test and education on cervical cancer, HIV test and education on care of newborn as well as HIV test and recommendation of the antenatal clinic by significant others. The mean differences were 0.47222, 0.24064, 0.22778, 0.22778, 0.22778, 0.03456, 0.10840, 0.35234, 0.39444, 0.84215 and 0.04181 respectively.

Table 7 shows that self-introduction of midwives was significantly associated with safe keeping of records and explanation of progress in pregnancy by midwives with mean differences of 0.57130 and 0.06111 respectively with regard to pregnant women's satisfaction with display of people-centredness by the midwives in provision of antenatal services.

DISCUSSION

Perception of pregnant women about the equitability of antenatal services provided by midwives

The overall mean score for the equitability of antenatal services provided by midwives was 3.67 (Table 2) indicating that pregnant women had positive perception. According to the respondents, antenatal care was provided on a first-come first-served basis, was affordable in subsequent visit, was not discriminatory, and entailed obtainment of informed consent before procedures were carried out. Researchers have noted that majority of pregnant women attended subsequent visits because the services they received were affordable, otherwise, there would have been more defaulting pregnant women in Punjab Province.[26] and Ibadan.[27] respectively. A related study indicated that most midwives attending to pregnant women in Northern Nigeria were non-discriminatory and had empathic attitude.[28] Offering empathic and non-discriminatory care resulted in a dignified antenatal care experience.[11]

Perception of pregnant women about the efficiency of antenatal services provided by midwives

Findings from the study showed that pregnant women received efficient antenatal care from the midwives with overall mean = 3.89 (Table 3). Pregnant women indicated that midwives explained the importance of HIV test, administered tetanus toxoid injection and IPTp, advised them on use of ITN, as well as performed blood pressure check, breast self examination, abdominal examination and urine testing for early detection of abnormalities. Many researchers had noted similar findings in their studies noting that midwives in Punjab Province prescribed antimalarial drugs, auscultated fetal heart sound, performed abdominal palpation, measured blood pressure and administered tetanus toxoid vaccine to majority of pregnant women.[26] Also, there are reports of measurement of blood pressure, issuance of HIV test result, urine testing, HIV testing and receiving iron supplementation from midwifery care providers to majority of expectant mothers in South-West Nigeria.[1]

Health education on diet, antenatal exercises and preparedness for delivery were given to pregnant women in South India.[29] Pregnant women in South-West Nigeria and Southern Ethiopia received information about danger signs during pregnancy, breast self examination, family planning and prevention of STIs including PMTCT,[1,30,27,31] On the contrary, it was shown in some studies that information about the prevention of cervical cancer was seldom given to pregnant women in Ibadan.[30,27]

Perception of pregnant women about the provision of people-centred antenatal services by midwives

The overall mean score of 3.52 (Table 4) indicated that pregnant women had positive perception about the provision of people-centred antenatal services by midwives. In the opinion of the pregnant women, midwives explained the progress of pregnancy and the purpose of performing procedures, kept records safely, were supportive, friendly, trustworthy and culture sensitive, as well as provided privacy. Reports indicating that staff were polite to pregnant women in Nepal is consistent with the findings of this study.[32] Also, antenatal care providers in Ile-Ife discharged their duties with competence.[33] This finding is commendable because the display of competence by midwives in the provision of antenatal services will definitely enhance the trust by clients. Pregnant women trust midwives who

communicate effectively with them as well as hold their information in confidence.[18]

Equitability of antenatal services and satisfaction with the services

The p-value of 0.000 (Table 6) indicated that pregnant women's perceived equitability of the quality of antenatal services provided by midwives in government-owned health care facilities was significantly associated with the satisfaction they expressed about the services. Supporting this finding, other researchers have observed that the perception of pregnant women about non-discriminatory treatment was significantly associated with their satisfaction with antenatal care in Northern Nigeria.[28] In the opinion of the present researchers, discrimination of pregnant women during antenatal care is not ideal and violates the right of pregnant women seeking antenatal care. Antenatal care is the right of all pregnant women.[27]

Efficiency of antenatal services and satisfaction with the services

The p-value of 0.000 (Table 6) showed that the efficiency of the antenatal services provided by midwives in government-owned health care facilities in South-South Nigeria was significantly associatedwith the pregnant women's satisfaction with the services. The essential care provided by the midwife in pregnancy include efficient counseling of pregnant women on adequate diet, HIV/AIDS, antenatal exercise, care of the newborn, exclusive breast feeding, recognition of danger signs and where to seek help, birth preparedness and complication readiness, as well as the use of insecticide treated bed nets.[12] It has been noted that pregnant women in Southwest Ethiopia were satisfied with the efficiency of providers in the health education given on personal hygiene, diet and nutrition, signs of labour, danger signs, family planning and child spacing, basics of newborn care and fetal movement monitoring, but were dissatisfied with the efficiency of providers in the health education given on cervical cancer prevention, STI prevention, malaria prevention, physical exercise and breast self examination.[34] The findings of studies which indicated that perception of pregnant women about the efficiency of the care providers in giving health education was significantly associated with their satisfaction with antenatal care in Nepal, is consistent with the finding of this study.[32] Provider's concern for clients' wellbeing has also been found to be significantly associated with their satisfaction with antenatal care in Northern Nigeria.[28]

People-centredness of antenatal services and satisfaction with the services

The p-value of 0.000 (Table 6) revealed that pregnant women's perceived people-centredness of the antenatal services provided by midwives in government-owned health care facilities had significant association with their satisfaction with the services. Perception of pregnant women about politeness of service providers was found to be significantly associated with their satisfaction with antenatal care in Nepal.[32] In the researchers' opinion, politeness will help the midwife to effectively communicate with the pregnant woman. The nature of patient-provider communication affects pregnant women's satisfaction with the antenatal care service.[35] In addition, antenatal care which concentrates on the pregnancy and not on the woman carrying the pregnancy will fail to recognize the unique needs of each pregnant woman.[19]

CONCLUSIONS AND RECOMMENDATION

Pregnant women had positive perception about the equitability, efficiency and people-centred antenatal services provided by midwives. Also, pregnant women's perceived equitability, efficiency and people-centredness of antenatal services provided by midwives were significantly associated with the satisfaction they expressed about the services. Midwives in government-owned health care facilities should organize regular forum with pregnant women to get feedback regarding the women's perception of equitability, efficiency and people-centredness of the antenatal services provided by midwives. This will serve as a means of periodically evaluating the quality of antenatal services provided by midwives for appropriate strategies geared towards improvement to be instituted.

REFERENCES

1. Fagbamigbe A, Idemudia E. Assessment of quality of antenatal care services in Nigeria: Evidence from a population-based survey. *Reproductive Health Journal, 2015; 12*(1): 78-88.
2. Federal Ministry of Health. *National HIV/AIDS and Reproductive Health and Serological Survey.* Abuja: Federal Ministry of Health (Nigeria), 2013.
3. Akanbiemu F, Manuwa-olumide A, Fagbamigbe A, Adebowale S. Effect of perception and free maternal health services on antenatal care facilities utilization in selected rural and semi-urban communities of Ondo State. Nigeria. *British Journal of Medicine & Medical Research, 2013: 3*(3): 681-697.
4. Stickler T. *Health risks. 2014:* Retrieved February 27, from https://www.health line.com/ health/pregnancy/risk-factors, 2018.
5. Ejigu T, Woldie M, Kifle Y. Quality of antenatal care services at public health facilities of Bahir-Dar special zone, Northwest Ethiopia. *BioMed Central Health Services Research, 2013; 13*(443): 63-69.
6. Novick G. Women's experience of prenatal care: An integrative review. *Journal of Midwifery and Women's Health, 2009; 54*(3): 226–237.
7. World Health Organization. *Quality of care*. Retrieved September 23, 2018, from www.who.int/maternal_child_adolescent/topics/qual ity-of-care/definit ion/en/, 2017.
8. World Health Organization. *Maternal, newborn, child and adolescent health.* 2018: Retrieved October 22, 2018, from

www.who.int/maternal_child_adolescent/topics/definition/en/.

9. Pell C, Menaca A, Were F, Afrah N, Chatio S, Manda-Taylor L, Hamel M, Hodgson A, Tagbor H., Kalilani L, Ouma P, Pool R. Factors affecting antenatal care attendance: results from qualitative studies in Ghana, Kenya and Malawi. *PLOS One, 2013; 8*(1): 1-10.
10. White Ribbon Alliance. *Annual report.* Retrieved February 1, 2018, from https://www.whiteribbonalliance.org/wpcontent/uploads/financials/2012AnnualReport.pdf, 2012.
11. Baeroe K. Legitimate healthcare limit setting in a real-world setting: Integrating accountability for reasonableness and multi-criteria decision analysis. *Public Health Ethics, 2014; 7*(2): 1-14.
12. Elkhalifa A, Kuppuswamy S. Evaluation of midwifery knowledge on antenatal care in Omdurman Maternity Hospital Sudan. *International Journal of Health Sciences, 2014; 2*(2): 127-142.
13. World Health Organization. *WHO recommendations on antenatal care for a positive pregnancy experience.* Geneva: World Health Organization, 2016.
14. Duysburgh E, Zhang H, Ye M. Quality of antenatal and childbirth care in selected rural health facilities in Burkina Faso, Ghana and Tanzania. *Journal of Tropical Medicine and International Health, 2013; 18*(5); 534-547.
15. Hulton L., Matthews Z, Stones W. *A framework for the evaluation of quality of care in maternity services*: Retrieved February 1, 2018, from www.mamaye.org/sites /default/files/u436/Hulton_2000_Framework%20for %20maternity%20QoC.pdf, 2008.
16. Sudhinaraset M, Giessler K, Golub G, Afulani P. Providers and women's perspectives on person-centred maternity care: A mixed methods study in Kenya. *International Journal for Equity in Health, 2019; 18*(6): 83-88.
17. Montagu D, Giessler K. *Measuring person-centred maternal health care.* 2018: Retrieved September 3, from https://www.mhtf.org/2018/02/14/measuring-person-centred-maternal-health-care, 2019.
18. Sudhinaraset M, Afulani P, Diamond-Smith N, Bhattacharyya S, Donnay F, Montagu D. *Advancing a conceptual model to improve maternal health quality: The Person-Centred Care Framework for reproductive health equity. 2017:* Retrieved September 3, 2019, from https://gatesopenresearch.org/articles/1-1.
19. Neal D. *Patient centred antenatal care.* 1992: Retrieved September 3, from www.safpj.co.za/index.php/safpj/article/view/2722/3300, 2019.
20. Rashid S. *Person-centred group antenatal care in Eastern Uganda: Reaching women through pregnancy clubs.* 2017: Retrieved September 3, from https://www.msh.org/2017/ 06/20/person-centred-group-antenatal-care-in-eastern-uganda-reaching-women-through, 2019.
21. Galle A, Parys V, Roelens K, Keygnaert I. Expectations and satisfaction with antenatal care among pregnant women with focus on vulnerable groups: A descriptive study in Ghent. BioMed Central Women's Health, 2015: 15(112): 162-172.
22. Donkor E, & Obed S. Waiting time and women's satisfaction at an antenatal clinic in Ghana. African Journal of Midwifery and Women's Health, 2012; 6(1): 68-74.
23. Mohammed A, & Amal A. Health Education during Antenatal Care: The Need for More. *International Journal of Women's Health*, 2015; *7*(1): 239-242.
24. Creative Research Systems. *Sample size formulas for our sample size calculator,* 2016. Retrieved April 3, 2019, from www.surveysystem.com/sample-size-formula.htm.
25. Ware J, Synder M, Wright W. *Development and validation of scales to measure patient satisfaction with medical care services. Vol 1, Part B: Results regarding scales constructed from the patient satisfaction questionnaire and measure of other health care perceptions.* Springfield: National Technical Information Service, 1976.
26. Majrooh M, Hasnain S, Akram J, Siddiqui A, Memon Z. *Coverage and quality of antenatal care provided at primary health care facilities in the 'Punjab' Province of Pakistan. 2014:* Retrieved February 22, from http://journals.plos.org /plosone/article? id=10.1371/journal.pone.0113390, 2018.
27. Nwaeze I, Enabor O, Oluwasola T, Aimakhu C. Perception and satisfaction with quality of antenatal care services among pregnant women at the University College Hospital, Ibadan, Nigeria. *Annals of Ibadan Postgraduate Medicine, 2013; 11*(1): 22-28.
28. Onyeajam D, Xirasagar S, Khan M, Hardin J, Odutolu O. Antenatal care satisfaction in a developing country: A Cross-Sectional Study from Nigeria. *BioMed Central Public Health, 2018; 18*(1): 368-378.
29. Ruby P, David K, Siva R, Vimala T, Rahman S, Sankarapandian V. Satisfaction of antenatal mothers with the care provided by nurse-midwives in an urban secondary care unit. *Journal of Family Medicine and Primary Care,* 2016: *5*(2): 420-423.
30. Fawole A, Okunlola M, Adekunle A. Clients' perceptions of the quality of antenatal care in Ibadan, Nigeria. *Journal of the National Medical Association, 2008; 100*(9): 1052-1058.
31. Tesfaye T, Mekonnen H, Negesa L. Maternal antenatal care service satisfaction and factors associated with rural health centres, Bursa District, Sidama Zone, Southern Ethiopia: A Cross-sectional Study. *Journal of Women's Health Care, 2017; 6*(363): 4-20.
32. Paudel Y, Mehata S, Paudel D, Dariang M, Aryal K, Poudel P, King S, Barnett S. Women's

satisfaction of maternity care in Nepal and its correlation with intended future utilization. *International Journal of Reproductive Medicine, 2015; 15*(1): 78-87.

33. Esimai O, Omoniyi-Esan G. Wait time and service satisfaction at Antenatal Clinic, Awolowo University Ile-Ife. *East African Journal Public Health, 2009; 6*(3): 309-311.
34. Lakew S, Ankala A, Jemal F. Determinants of client satisfaction to skilled antenatal care services at Southwest of Ethiopia: A cross-sectional facility based survey. *BioMed Central Pregnancy and Childbirth, 2018; 18*(479): 22-31.
35. Afulani P, Sayi T, Montagu D. Validation of the person-centred maternity care scale in India. *Reproductive Health, 2018; 15*(1): 147-159.