Original Research Article

SATISFACTION WITH WAITING TIME; THE EXPERIENCE OF ANTENATAL MOTHERS IN SOUTH EAST NIGERIA

ABSTRACT

Background: Patient satisfaction is reportedly a useful measure to provide a direct indicator of quality in health care. Assessing patient perspectives gives them a voice, which can make public health services more responsive to people's needs and expectations, thus the reason for this study on satisfaction with waiting time in among pregnant women the antenatal clinics in south east Nigeria.

Objective: To evaluate and compare the clients' satisfaction with waiting time among pregnant women in secondary and tertiary health facilities in south east Nigeria.

Study Design: This was a comparative cross sectional study.

Methods: Using an interviewer administered questionnaire, information on clients' satisfaction was obtained from 500 women attending antenatal care clinic.

Results: The mean ages of the teaching hospital respondents was 29.6 ± 4.0 and is slightly higher compared with that of mission hospitals respondents which was 29.5±4.6. Satisfaction with over all waiting time at the antenatal clinics was generally low as only 59.8% of the respondents reported they were satisfied. Satisfaction was however higher among the teaching hospital respondents (67.4%) than the mission hospital respondents (46.4%). This variation was statistically significant.

Conclusion: There is a very low satisfaction rate among patients utilizing hospital services with regard to waiting time in the hospital. This has been shown from the result of this study and previous researches conducted. There is need for more researches to explore the reasons for clients' dissatisfaction with waiting time at health facilities.

Keywords: Antenatal care, Waiting time, Satisfaction, Teaching, Mission, Hospital, Anambra state

INTRODUCTION

Patient satisfaction affects clinical outcomes, patient retention, and timely, efficient and patient-centered delivery of quality health care [1]. For a health care organization to be successful, monitoring patients' perception is an important strategy to assess and improve the organization's performance[2]. Some patients may place their

satisfaction more on technical competence whereas others, on fulfillment of personal needs, comfort dignity and supportive services. With this background, this study was conducted to assess the level of patients' satisfaction with waiting time during antenatal clinic.

Many studies have shown reversed relationship between waiting time and patient satisfaction and this has become a major concern for hospital administrators and policy makers because it is a measure of organizational efficiency [3,4]. Waiting time as well as consultation time are the major factors that affect patient and consumer satisfaction [4,5,6,]. Patients are aware that they should wait for services at the health facilities; however, there is no known acceptable 'waiting' time. Previous researches showed that patients are less likely to be dissatisfied if their waiting time is between 30 to 45 minutes [6,7,8]. A study of outpatient waiting time done in 21 hospitals in Malaysia found that the average waiting time to see the doctor was 60 minutes [9].

This survey does not only provide a means for clients to express their concern with the services and time spent at the health facility, but also afford the provider to have information with which they can improve the quality of services provided.

METHOD

Study Design: This was a comparative cross sectional study on SATISFACTION WITH WAITING TIME; THE EXPERIENCE OF ANTENATAL MOTHERS IN SOUTH EAST NIGERIA.

Study Sites: The study sites were; Nnamdi Azikiwe University Teaching Hospital, Nnewi, Anambra State University Teaching Hospital Awka, St Charles Borromeo Specialist Hospital, Onitsha and Regina Ceali Specialist Hospital, Awka.

Sample Size and Selection: The minimum sample size for this study was based on 5% significance level and a power of 80%.

Formula; $n = \frac{[2(z\alpha+z\beta)^2 p(1-p)]^{10}}{d^2}$

Where:

n = sample size for individual group,

Zα = standard normal deviate = 1.96 at 95% confidence interval

Zβ = statistical power at 80% = 0.8 [10]

p = arithmetic average of two proportions which is $\underline{(P1 + P2) / 2}$

p1 = proportion of clients satisfied with antenatal care in a federal teaching hospital = 0.943[11]

p2 = proportion of clients satisfied with antenatal care in first level health facilities = 0.814[12]

P = (0.943 + 0.814) / 2 = 0.87855

d = arithmetic difference between the two population = P2 – P1

d = 0.943-0.814 = 0.129

d^2 =0.016641

Zα = 1.96

Zβ = 0.8

P = 0.8785

Substituting into the formula;

$n = [2(z\alpha + z\beta) P (1 – p)] / d^2$

$n = [2 (1.96 + 0.8)^2 0.8785 (1 – 0.8785)] /0.016641$

n = 97.72

n = 98.

Using an anticipated non response rate of 10 %[13] (10×98/100) = 9.8.

Therefore 98+9.8= 107.8 which is approximately 108 persons.

The minimum sample size for one of the health facilities was 108 pregnant women.

The minimum sample size for the study was 216.

In order to increase the power of the study, avoid cluster effect and increase study external validity, the sample size used was 500 pregnant women. The respondents chosen from each facility were determined using a proportionate allocation by size of the facility.

The Clinic Patient Surveys: The study sites included two teaching hospitals (Nnamdi Azikiwe University teaching hospital Nnewiand Anambra state University teaching hospital, Awka) and two mission hospitals(St. Charles Borromeo hospital Onitsha and Regina Caeli Hospital Awka).

The Population Patient Surveys: The study population comprised 500 pregnant women attending antenatal clinics of teaching and mission hospitals in Anambra state.

Sampling Technique: The sampling technique used was systematic sampling technique [14]. Participants were selected using a sampling interval of two at exit point. Participants who denied consent or those on booking visit were excluded.

Study Instruments: Semi-structured interviewer administered questionnaire, key informants interview guide and a focus group discussion guide were used to obtain data.

RESULTS

TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENT IN TEACHING AND MISSION HOSPITAL ANTENATAL CLINICS IN ANAMBRA STATE:

VARIABLES	TEACHING HOSPITAL (N=321) n (%)	MISSION HOSPITAL (N=179) n (%)	TOTAL (N=500) n (%)	TEST STATISTIC χ^2	P-VALUE
Age (years)					
15- 24	0(0.0)	2(1.1)	2(0.4)		
25-34	278(86.6)	146(81.6)	424(84.8)		
Above 35	43(13.4)	31(17.3)	74(14.8)		
Mean age	29.6	29.5		t=0.152	0.879
Standard deviation	4.0	4.6			

Marital status					
Never married	6(2.0)	0(-)	6(1.2)	Fishers Exact	
Currently married	315(98.0)	179(100.0)	494(98.8)	9.021	0.132
Educational level:					
No formal education					
O'level	178(55.5)	60(33%)	3(0.6)	8.223	0.144
OND,NCE/Technical education	57(17.8)	38(21.3)	95(19)		
Bachelor, HND	72(22.2)	72(40.0)	144(28.8)		
PhD, Masters	14(4.4)	9(5.3)	23(4.6)		
Denomination/Denomination					

Christianity				Fishers Exact	
Catholic	178(55.6)	145(81.3)	323(64.6)	11.080	**0.004****
Anglican	93(28.9)	29(16.0)	122(24.4)		
Pentecost	50(15.6)	5(2.7)	55(11.0)		
Tribe				Fishers Exact	
Igbo	307(95.6%)	172(96.3)	179)95.8)	1.698	0.428
Yoruba	6(1.8)	3(1.7)	9(1.8)		
Hausa	0(-)	2(1.0)	2(0.4)		
Others [Igala, Efik]	8(2.6)	2(1.0)	10(2.0)		
Occupation					
Civil servant	107(33.4)	43(24.0)	150(30.0	11.891	**0.018***

			)
Business owner	106(33.2)	24(13.3)	130(26.0)
Self employed	29(8.9)	19(10.7)	48(9.6)
Student	50(15.6)	48(26.7)	98(19.6)
Unemployed	29 (8.9)	45 (25.3)	74(14.8)

**** = Fishers Exact Test Statistically Significant**

*** = Chi-square test Statistically Significant**

The socio-demographic characteristics of respondents in teaching and mission hospitals are shown in table 1. Data was obtained from 500 respondents, consisting of three hundred and twenty one teaching hospital clients and one hundred and seventy nine mission hospital clients. The mean ages of the teaching hospital respondents was 29.6 ± 4.0 and is slightly higher compared with that of mission hospitals respondents which was 29.5±4.6. All the respondents from Mission hospitals were all currently married compared to the respondents from teaching hospitals where 2% of the respondents were never married. All the respondents had formal education, but a higher proportion of the mission hospitals respondents,(40%) had Bachelor degree/HND as the highest educational

qualification attained compared with the teaching hospitals respondents where Senior Secondary/Grade II Teaching Certificate was the highest educational qualification obtained by majority of the respondents (51.1%). However, this is not statistically significant. There is a statistically significant difference in the denomination of the respondents, (P=0.004) as the percentage of respondents were higher in mission hospitals (81.3%) compared to teaching hospitals (55.5%). Also, the percentage of Pentecostal respondents was higher in teaching hospitals (15.6%) than in mission hospitals (2.7%). A higher proportion of respondents from both populations were Igbo ethnicity (95.8%) with the rest being Yoruba (1.8%), Hausa (0.4%), Igala or Efik (2.0%). The highest proportion of the respondents from teaching hospitals are civil servants (33.4%) followed by business owners (33.2%), compared to the respondents from mission hospitals where the highest proportion of respondents were students (26.7%) followed by unemployed women (25.3%).

TABLE 2: CLIENTS' PERCEPTION OF SATISFACTION WITH WAITING TIME IN TEACHING AND MISSION HOSPITAL ANTENATAL CLINICS IN ANAMBRA STATE:

VARIABLES	TEACHING HOSPITAL (N=321) n (%)	MISSION HOSPITAL (N=179) n (%)	TOTAL (N=500) n (%)	TEST STATISTIC χ^2	P-VALUE

Waiting time in getting registered and obtaining Card					
Strongly satisfied	50(15.6)	14(8.0)	64(12.8)	16.269	**0.002***
Satisfied	178(55.5)	48(26.7)	226(45.2)		
Somewhat satisfied	36(11.1)	31(17.3)	67(13.4)		
Indifferent	0(-)	12(6.7)	12(2.4)		
Dissatisfied	57(17.8)	74(41.3)	131(26.2)		
Waiting time before seeing a doctor					
Strongly satisfied	50(15.6)	19(10.7)	69(13.8)	8.137	0.085

Satisfied	100(31.1)	48(26.7)	148(29.6)		
Somewhat satisfied	64(20.0)	12(6.7)	76(15.2)		
Indifferent	21(6.6)	24(13.3)	45(9.0)		
Dissatisfied	86(26.7)	76(42.6)	162(32.4)		
Waiting time for tests to be done					
Strongly satisfied	50(15.6)	21(12.0)	71(14.2)	8.180	0.086
Satisfied	81(25.1)	64(36.0)	145(29.0)		
Somewhat satisfied	26(8.2)	17(9.3)	43(8.6)		
Indifferent	7(2.2)	24(13.3)	31(6.2)		
Dissatisfied	157(48.9)	53(29.4)	210(42.0)		
Waiting time for test					

results

Strongly satisfied	64(20.0)	21(12.0)	85(17.0)	15.973	**0.002***
Satisfied	128(40.0)	74(41.3)	202(40.4)		
Somewhat satisfied	43(13.3)	3(1.4)	46(9.2)		
Indifferent	0(-)	31(17.3)	31(6.2)		
Dissatisfied	86(26.7)	50(28.0)	136(27.2)		

Waiting time to collect drugs from the pharmacy				Fishers Exact	
Strongly satisfied	71(22.2)	9(5.3)	80(16.0)	17.795	**0.001****
Satisfied	93(28.9)	29(16.0)	122(24.4)		
Somewhat satisfied	29(8.9)	9(5.3)	38(7.6)		
Indifferent	0(-)	24(13.3)	24(4.8)		
Dissatisfied	128(40.0)	108(60.1)	236(47.2)		
Waiting time to pay for services or drugs					
Strongly satisfied	47(14.6)	19(10.6)	66(13.2)	43.512	**0.000***
Satisfied	152 (47.4)	45(25.0)	197(39.4)		
Somewhat satisfied	35(11.0)	14 (7.8)	49(9.8)		

Indifferent	18(5.6)	26 (14.5)	44(8.8)
Dissatisfied	69(21.5)	75(41.9)	144(28.8)

**** = Fishers Exact Test Statistically Significant**

*** = Chi-square test Statistically Significant**

Sixty four (12.8%) respondents from teaching and mission hospitals were strongly satisfied with waiting time in getting registered and obtaining card, while 226(45.2%) were satisfied and 67(13.4%) were somewhat satisfied. Dissatisfaction with waiting time in getting registered and obtaining card was shown by 131 (26.2%) respondents. There is a statistically significant difference ($\varkappa^2$ = 16.269, P= 0.002) with waiting time in getting registered and obtaining card in both populations. More respondents from mission hospitals (41.3%) showed dissatisfaction compared to teaching hospital respondents (17.8%).

Satisfaction with waiting time before seeing a doctor and waiting time for tests to be done was shown by 58.6% and 51.8% of the clients respectively with no significant difference comparing teaching and mission hospitals. Majority of the women from teaching hospitals (66.7%) were satisfied with waiting time before seeing a doctor and 48.9% were satisfied with waiting time for tests to be done while in mission hospitals, 44.1% and 57.3% were satisfied respectively.

Teaching hospitals respondents expressed more satisfaction with waiting time for test results (73.3%) and waiting time to collect drugs from the pharmacy (60%) compared with mission hospitals respondents (54.7% and 26.6%) with a significant difference of P= 0.002 and P = 0.001 respectively. A total of 66,6% were satisfied with waiting time for test results and 48% were satisfied with waiting time to collect drugs from the pharmacy.

Satisfaction with waiting time to pay for services or drugs from this table was reported by 62.5% of the respondents. There is a statistically significant difference in satisfaction with waiting time to pay for services and drugs ($\varkappa^2$ = 43.512, P =0.000) in teaching hospitals (strongly satisfied 14.6%, satisfied 47.4% and somewhat satisfied 11.0%) and mission hospitals (strongly satisfied 10.6%, satisfied 25.0% and somewhat satisfied 7.8%).

TABLE 3: INFLUENCE OF SOCIODEMOGRAPHIC VARIABLES ON WAITING TIME FOR ANTENATAL CARE SERVICES IN TEACHING AND MISSION HOSPITALS ANTENATAL CLINICS IN ANAMBRA STATE

Variables	Yes	No	Chi-square	P-value
AGE IN CATEGORIES				
15-24	68	52	9.190	0.163
25-34	20	99		
>35	52	22		
EDUCATIONAL LEVEL				
Primary	3	1	4.441	0.925
Junior Secondary	18	10		
Senior Secondary/ Grade II	121	66		
OND,NCE, Technical	66	31		
Bachelor/HND	106	54		
PhD, Masters	14	10		
DENOMINATION				

Catholic	224	117	0.988	0.912
Anglican	76	38		
Pentecostal	32	13		
OCCUPATION				
Civil servant	99	46	10.633	0.223
Business owner	75	41		
Self-employed	33	18		
Student	64	40		
Unemployed	60	24		

Clients' dissatisfaction with long waiting time had no significant relationship with age, educational level, denomination and occupation of respondents.

DISCUSSION

Antenatal care remains an essential part of safe motherhood and one of the interventions that can considerably reduce maternal morbidity and mortality when properly conducted and improve maternal and newborn health [15, 16]. Clients' satisfaction is directly related with utilization of health services and service satisfaction surveys help us to access the responsiveness of the health system. The aim of this study was to assess the pregnant women satisfaction with waiting time during antenatal clinic. For the purpose of this study, waiting time during antenatal services was split into six different categories: waiting time in getting registered and obtaining card, waiting time before seeing a doctor, waiting time for tests to be done, waiting time to collect test results, waiting time to collect drugs from pharmacy and waiting time to pay for services or drugs.

More respondents from the teaching hospital (82.2%) were satisfied with time spent in getting registered and obtaining card than the mission hospital respondents (52%) and this is statistically significant(P=0.002). This could be as a result of lack of staffing at the mission hospital which is a known contributor to lengthy waiting time in hospitals. From both teaching and mission hospitals, 71.4% were satisfied while 26.2% showed dissatisfaction. This study agrees with the study done by Joshi et al in India, that patient waiting in outpatient clinics is often the major reason for complaints regarding their experiences in clinics as their study revealed

that 24% of their study populations were not satisfied with time spent in getting registered [17]. Also, an Ethiopian research showed that 25% of the respondents waited for more than 70 minutes to be registered [18]. This could be due to long queues caused by the registration center being manned by one staff [19].

On waiting time before seeing a doctor, 58.6% of our respondents were satisfied. Patients who were satisfied with waiting time for test to be done and to get test results were 51.8% and 66.6% respectively.

Waiting time to collect drugs from pharmacy had the highest rate of dissatisfaction as only 48% of the respondents were satisfied with the time the waited to collect drugs from pharmacy. This contradicts with the result obtained in Kano [20] where delay before releasing results of investigation was one of the most frequent complaints (43.8%) for being dissatisfied with waiting time. Majority of patients from mission hospital (60%) were dissatisfied than the teaching hospital respondents (40%) and this was statistically significant, P<0.001. Also, only 62.4% of the study population was satisfied with the time they waited to pay for services or drugs with more dissatisfaction coming from the mission hospital respondents (41.9%; P=0.000). The perceived long waiting time from this study is related to the realities of developing countries especially in Nigeria, where patients will have to wait longer before seeing a healthcare provider due to imbalance in the doctor-

patient ratio as only a few doctors and other health care providers are available to attend to patients[21] .

Our study indicated that 40.0% of clients were dissatisfied with time waited to receive antenatal services. This finding is higher compared with the study conducted in Jimma Hospital by Olijera and Gebre-selassie [18] which showed 20.4% dissatisfaction level previously and later it was 37.2% according to the study done by Fekadu A et al [22]. Likewise, the dissatisfaction level with the overall waiting time to receive services in a Nigeria Public Hospital was rated 48% [23], and a study conducted in India showed 35.4% dissatisfaction [24]. Also, from the studies done in Osun state[25] and Ibadan[26] showed that the most common reason for dissatisfaction with quality of care as reported by 66.5% and 48% of the respondents was waiting time. This study also agrees with a study in India were long waiting time was the chief cause of dissatisfaction (97.6%) with service utilized at the outpatient department [27]. This higher level of dissatisfaction rate with overall waiting time could be attributed to the increased number of patients in the health care services, less proportional number of health care providers with clients and educational background of participants to understand that some health care services requires time to provide quality of care.

CONCLUSION

Satisfaction with waiting time during antenatal services is very low in Anambra state and the problem of dissatisfaction needs to be tackled objectively. More level of satisfaction was expressed by the respondents of teaching hospitals than mission hospitals as seen in the quantitative findings. The major area for dissatisfaction with waiting time during antenatal clinic is on waiting time to collect drugs from pharmacy and on time spent for tests to be done. This study suggests the need for adequate staffing of health facilities in Anambra state to curb the problem of dissatisfaction with waiting time in most sections of the clinics.

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