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Original Research Article

A Cross -Sectional Study of the Factors Influencing Satisfaction of the Quality of Antenatal Care Services in Health Facilities

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Abstract

Aim: The objective of this study was to determine factors influencing the quality of ANC services in health facilities in Patna.

Methods: This was a cross-sectional study conducted in Patna. Random sampling was used for sampling procedure. All households of mothers having the youngest child of 3 years and below were visited. All respondents who did not consent or unwilling to participate; aged below 18 years; incapable of answering the questionnaires were excluded from the study. A total of 1000 women gave their consent for participation.

Results: The mean (SD) age was 28.3 (6.1) years ranging from 18 to 49 years. 55% of females were in the age group 20-29 followed by 55% in the age group 30-39. 76% of them were housewives and the rest were engaged in other jobs. The majority of the respondents made more than nine antenatal visit during their last pregnancy (73%) followed by 5–8 times (20%) and only 7 % had 1–4 times antenatal visits. 60% of them booked antenatal visit before the third month followed by 32% who booked between 3 and 5 months of gestation. 39% were attended by both doctor and nurse. On an average 18 min were required to attend the clinic. It was reported that 19% did not have any out of pocket expenses.

Conclusion: The study concludes that ANC services provision has an influence on the expectant mothers' satisfaction.

Keywords: Antenatal Care, Expectant Mothers, Service Satisfaction.

Introduction

Antenatal care (ANC) is a care provided to pregnant women by healthcare professionals to uphold and maintain optimal health of women through pregnancy, labor, and puerperium period. [1] ANC helps to provide basic preventive and therapeutic care, raise awareness on maternal danger signs, orient to birth preparedness, and improve health-seeking behavior of women. [2-4]

Quality of health service is crucial at any time while the quality of ANC is important to increase utilization of other maternal health services. [5-8] Good quality ANC service could increase client satisfaction. [9,10] Similarly, it has a role to achieve health service goal that aimed at dropping

maternal death [11] as evidences show that maternal death is high in countries where ANC coverage is low and where it has poor quality. [10,12-15] Delivery of good quality ANC service necessitates the presence of structures such as infrastructures, adequately trained health professionals, infection control facilities, diagnostic equipment, supplies and essential drugs, and appropriate utilization of guidelines. [5-7]

Research shows that physical infrastructures such as generator, waiting area, private examination room, couch in the ANC room, clean toilet, and water are either not available or non-functional. Furthermore, shortage and low qualification of health care providers, scarcity of equipment such as fetoscope, stethoscope, blood pressure apparatus, weight scale, ANC guideline, and thermometer are also not sufficiently available. [16,17] In general, scarcity of the infrastructures leads ANC seeking women to be referred to private clinic.16 Additionally, gaps in structural readiness of health facilities, inadequacy of key essential supplies, unguaranteed properly equipped and staffed facilities leads to low quality of ANC services. [18,19]

Since the 1990s, remarkable strides have been made globally in lessening maternal related deaths, however, a significant number of pregnant mothers and their new-borns have continued to die from avoidable pregnancy and/or birth related complications with the situation being worse. The quality of ANC and patient satisfaction, greatly affects the image of the hospital from the customer's point of view as opposed to the quantity in terms of visits. [20,21]

The objective of this study was to determine factors influencing the quality of ANC services in health facilities in Patna district.

Materials and Methods

This was a cross-sectional study conducted in in Patna district Random sampling was used for sampling procedure. All households of the villages with mothers having the youngest child of 3 years and below were visited. All respondents who did not consent or unwilling to participate; aged below 18 years; incapable of answering the questionnaires were excluded from the study. A total of 1000 women gave their consent for participation.

Data collection was done using an interviewer-administered questionnaire. For each maternity care services, patient satisfaction questions were asked regarding the services received. The level of satisfaction with antenatal care was determined by seven domains of satisfaction. Each domain has Likert's scale questions. After summation of all domains score, it was checked for normality. The satisfaction score was divided into quartiles. The lowest quartile as poor and middle two quartiles as average and the last quartile categorized as highly satisfied with antenatal care

Data analysis

SPSS 16.0 software package was used to determine the structure of the relationship between the variables.

Results

Table 1: Socio-demographic characteristics of the respondents

Characteristics	Frequency %	95 % CI	
		Lower bound	Upper bound
Age in years			
>20	60 (6)	4.9	7.6
20-29	550 (55)	51.1	56.9
30-39	350 (35)	32.6	38.1

40-49	40 (4)	3.3	5.5
Mean (SD) years	28.3 (6.1)	28.0	28.7
Marital status			
Single	100 (10)	9.5	13.8
Married	700 (70)	67.0	72.0
Divorced	110 (11)	8.8	16.8
Widowed	90 (9)	7.9	12.8
Level of education			
Primary	160 (16)	1.3	2.8
Secondary	320 (32)	27.1	34.1
College	280 (28)	19.6	33.2
University	240 (24)	22.3	26.6
Occupation			
Housewife	760 (76)	74.4	79.2
Government	110 (11)	8.9	12.5
Private	90 (9)	7.3	10.4
Self employed	40 (4)	3.5	7.5

The mean (SD) age was 28.3 (6.1) years ranging from 18 to 49 years. 55% of females were in the age group 20-29 . 70% females were married and 32% females had secondary level of education. The 76% of them were housewives

Table 2: Percentage distribution of respondents by the number of antenatal visits, gestational age at booking, place of booking and out of pocket expenses

Characteristics	Frequency %	95 % CI	
		Lower bound	Upper bound
No. of antenatal visits			
1–4	70 (7)	5.7	8.4
5–8	200 (20)	18.4	23.0
≥9	730 (73)	69.8	74.8
Mean (SD)	9.7 (3.6)	9.51	9.90
Gestational age at booking (months)			
>3	600 (60)	58.3	63.8
3–5	320 (32)	29.8	35.0
≥6	80 (8)	5.3	8.2
Antenatal attendant			
Doctor	110 (11)	9.2	12.6
Nurse	500 (50)	48.2	53.8
Both	390 (39)	35.5	40.7
Time required to nearest MCH Clinic (min)			
<15	580 (58)	54.8	60.3
15–29	350 (35)	31.9	37.1
≥30	70 (7)	6.2	9.4
Mean (SD) min	18.05 min		
Expenses per antenatal visit (MYR)			
None	190 (19)	16.7	21.1
1-10	200 (20)	19.6	24.3
11-50	480 (48)	46.0	51.6
≥51	130 (13)	8.9	12.4

The 73% of the respondents made more than nine antenatal visit during their last pregnancy . 60% of them booked antenatal visit before the third month followed by 32% who booked between 3 and 5 months of gestation. 39% were attended by both doctor and nurse. On an average 18 min were required to attend the clinic. About 58% were attended to within 15 min. 19% did not have any out of pocket expenses.

Table 3: Factors affecting satisfaction on antenatal care: multinomial logistic regression analysis

Characteristics	Average Satisfaction				Highly Satisfied			
	β	Adj. OR	95 % CI		β	Adj. OR	95 % CI	
			Lower	Upper			Lower	Upper
Level of education								
Primary	−0.484	0.616	0.327	1.161	−0.984	0.374	0.182	0.769
Secondary	−0.788	0.455	0.158	1.31	−1.029	0.357	0.106	1.204
College	−0.334	0.716	0.441	1.164	−0.701	0.496	0.291	0.845
University (RC)		1				1		
Occupation								
Housewife	0.088	1.091	0.476	2.503	0.085	1.089	0.428	2.772
Government	−0.127	0.881	0.338	2.293	−0.251	0.778	0.265	2.282
Private	−0.845	0.43	0.17	1.087	−0.539	0.583	0.205	1.658
Self-employed (RC)		1				1		

A multinomial logistic regression was done to examine the factors affecting the level of satisfaction with antenatal care in which the satisfaction score was divided into three groups based on quartile score (poor, average and highly satisfied). It was found that 24.6 % were poorly satisfied and considered as reference category and 51 % had the average satisfaction and another 24.6 % were highly satisfied with antenatal care. Initially, all the explanatory variables were analyzed with the level of satisfaction using Chi square test of independence. The variables that were statistically significant in Chi square test. Similarly, respondents with secondary level of education 29.9 % were less likely to be highly satisfied, whereas, respondents having primary level of education, 1.6 % were less likely to be highly satisfied.

Discussion

The socio-demographics; age, marital status, education attainment and employment status were found to have some influence on women to access the ANC service. For example, women of high-income bracket owing to their steady flow of income received the services from private health facilities due to that, they could easily afford to pay for the service. Affordability of the services is regarded as the major reason for ANC health facility choice. Studies in Nigeria have shown that employment increases the family income appropriated to health care thereby increasing access of ANC and satisfaction. [22]

Furthermore, most of the beneficiaries of ANC were married implying that the larger proportion of participants have their partners encouraging and motivating them to seek for the service as it is regarded as beneficial to the couple. This is consistent with the study carried out in Kenya, Malawi, and Nigeria which revealed that expectant women's level of education has an effect on the quality of antenatal care accessed and satisfaction thereof. [23]

The maternal age in this study was highest in the age range of 20–29 years old, with the mean age of 28.3 years, showing a younger age group. A similar result was found in a study in Kuala Lumpur with a median of 29 years. [24] The characteristics of antenatal care received during last pregnancy revealed that the majority of them visited, at least, the state-recommended total of eight visits per pregnancy, which was similar to a high number of antenatal visits in developed countries such as in the United Kingdom and Sweden. [25,26] Two-thirds of the women visited the MCH clinic before 3 months of gestational age, which was also similar to Vietnam [27] and United Kingdom. [28]

Conclusion

The study concludes that ANC services provision has an influence on the expectant mothers' satisfaction. Different dimensions of antenatal care services influence satisfaction differently and a combination of several dimensions posts increased satisfaction but the cost of ANC services, negatively influenced the satisfaction.

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