

Parity and Economic Status as Determinants of Antenatal Care Services Utilization Among Pregnant Women in Igbo Eze South Local Government Area of Enugu State

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Abstract

The study was embarked upon to ascertain the parity and economic status determinants of Antenatal Care (ANC) Local utilization among pregnant women in Igbo-Eze South Local Government Area of Enugu State. Two research questions and two hypotheses guided the study. The cross-sectional research design was used for the study, and the population for the study consisted of 382 pregnant woman attending health facilities for antenatal care in Igbo Eze South Local Government Area of Enugu State. The entire population of 382 pregnant women was used for the study. The researcher-designed and validated questionnaire was used to collect data for the study. Frequency and percentage were used to answer the research questions, while ANOVA statistics was used to test the null hypotheses at .05 level of significance. The result of the study showed that ANC services utilization among the pregnant women was influenced by parity and income level. There was significant difference in ANC Services utilization among pregnant women Igbo-Eze South Local Government Area of Enugu State based on parity and economic status. Among others things, it was recommended that the principles, theory and practice of ANC Services should be included in the primary and secondary school curriculum.

Introduction

Antenatal care remains an important tool in reducing maternal and infant mortality. Maternal and infant mortality are serious public health problems both in developed and developing countries but the rate is higher in developing than in developed countries. Worldwide over half a million women die as a result of child birth or complications due to pregnancy, with 99 percent of these deaths occurring in developing countries (Gage, 2010). The rate of maternal mortality can be reduced to the barest minimum through availability and utilization of antenatal care services. World health organization-WHO (2006) suggests that 88 to 98 per cent of all pregnancy related deaths are avoidable, if all women would have access to and utilize effective reproductive health care services. In order to prevent these pregnancy related health problems, pregnant women should visit the hospital or clinic on a regular basis for supervision and care, normally referred to as antenatal care.

Antenatal care is a basic necessity for the health of both the mother and foetus. It involves a number of routine visits for assessment, to a variety of health care professionals on a regular basis throughout the period pregnancy. Adeliade (2009) defined antenatal care as a complete health supervision of the pregnant mother in order to maintain, protect and promote health and wellbeing of the mother, the foetus and the new born infant. Antenatal care is the clinical assessment of mother and foetus during pregnancy, for the purpose of obtaining the best possible outcome for the mother and the child (Harrington, 2012). Lucas and Gills (2009) stated that the functions of antenatal care services include preparing the pregnant woman and her family for delivery, educating the pregnant woman, her family and community. Other functions according to them include assessment and monitoring of health status of the woman and progress of pregnancy, providing appropriate preventive measures, nutritional supplements (iron, folic acid), tetanus immunization, malaria prophylaxis or treatment as indicated. These antenatal care services are available in health facilities but availability of these services will not make meaning if the services are not being utilized by pregnant mothers whom they are meant for.

Utilizing means using something. Utilization is the act of using, or the manner in which something is used. Utilization according to Gazal, Mukta and Gana (2012) is the way in which people use a particular thing, product, or service because of their belief that it is important or serves a very vital function and significant role in their wellbeing, society at large and the survival of the human race. Ideally these pregnant mothers are supposed to utilize these services especially when they are

pregnant, but sometimes it appears that many do not utilize the services, due to some factors that may hinder utilization of antenatal care services. In this case, such factors are regarded as determinants.

A determinant is something that influences the outcome of another thing. Sandra, (2008) defined determinant as a factor which establishes or changes the nature of an entity or event. Determinant according to Awusi, Anyanw and Okeke (2009) is a factor that decisively affects the nature or the outcome of something. It is element that fixes or conditions an outcome. Sullivan, (2009) defined determinant as a factor causing trouble in achieving a positive result or tending to produce a negative result. Such factors include parity and income level.

Economic status of a mother can influence her utilization of antenatal care services. Commission on Social Determinants of Health (2008) defined economic status as a measure of an individual's or family's economic and social position based on income and occupation. Economic status is a factor that is used to determine a person's social class which is based on the amount of wealth the individual has, which can be determined by looking at the family's income and assets (Arthur, 2009). Change in economic status of an individual may bring about a change in the person's way of life and probably the number of children to have, thereby influencing his or her health services utilization.

Parity is the number of children a woman has given birth to. Parity as defined by Rundel (2005) is the number of times a female has given birth to, counting multiple births as one and usually including still births. Parity according to Opera and Zaidi (2007) is defined as the number of times a woman has given birth to a foetus with a gestational age of twenty-four weeks or more, regardless of whether the child was born alive or was still birth. The number of children a woman has can really influence her antenatal care utilization. For instance, a woman who has had at least two deliveries may think that she has learnt all she needs to know during her previous pregnancy or pregnancies as the case may be. However, a great grand multiparous woman (a woman who has had seven or more births) may feel ashamed, and shy away from utilizing antenatal care services.

Pregnant women according to Campell and Klock (2001) are women having developing embryo or foetus in their bodies, after a union of an ovum and spermatozoa. Hornby (2006) defined pregnant woman as an adult female human being who is having a baby or foetus developing inside her womb. Collins (2012) defined a pregnant woman as a female who is carrying a developing foetus in her body. Hence, pregnant women were the subjects in this study.

Antenatal care is an essential safety net for healthy motherhood and childbirth. One of the major reasons why people get married is for child bearing and rearing. This can only be achieved if the mother is in good health condition and if the child is born alive and healthy without any birth disorder. One of the objectives of Millennium Development Goals MDGs is reduction of maternal mortality to at least half by the year 2000 and a further one-half reduction in the year 2015. In order to achieve these goals, pregnant mothers are supposed to utilize antenatal care services available in hospitals and clinics where their health and wellbeing and those of their babies are guaranteed. This is because utilization of antenatal care services will enhance early detection and treatment of any pregnancy related health problem that could interfere with pregnancy and child birth. As part of the effort to achieve these goals, antenatal care became one of the four pillar initiatives of the safe motherhood initiatives. Despite all the efforts geared towards reducing maternal mortality rate through antenatal care services, maternal mortality seems to be on the increase, which implies that pregnant women do not adequately utilize antenatal care services. Therefore, the need to find out if certain socio-demographic factors influence their utilization of these services. The present study seeks to answered two questions.

Research Question

1. To what extent is parity a factor in ANC utilization among pregnant woman in Igbo Eze South LGA?
2. To what extent is economic status a factor in ANC utilization among pregnant woman in Igbo Eze South LGA?

Hypotheses

The following null hypotheses are postulated to be tested at .05 level of significance.

1. There is no significant difference in antenatal care services utilization among pregnant women in Igbo Eze South LGA based on parity.
2. There is no significant difference in antenatal care services utilization among pregnant women in Igbo Eze South LGA based on economic status.

Method

Cross-sectional research design was used for the study. The population for the study consisted of all the 382 pregnant women attending health facilities for antenatal care in Igbo Eze South Local Government Area of Enugu State. No sample was drawn due to the manageable size of the population. The instrument for data collection was a four-point rating scale and validated questionnaire which was structured by the researcher through literature review and based on the objectives of the study. The split half method was used to determine the reliability of the instrument. The reliability coefficient of .73 was obtained using Spearman Brown correlation coefficient.

Copies of the instrument were administered to the students on a face to face basis and collected on the spot with the help of the health workers as research assistants. The research questions were analyzed using mean scores and standard deviation. while ANOVA statistic was used to test the null hypotheses at .05 level of significance.

Results

Table 1
Percentage Response on the Extent of ANC Services Utilization among Pregnant Women Based on parity

	Items of utilization	1-4 children (n=125)			5 children and above 245		
		F	%	D	F	%	D
1	Booking at first time (history taking of the mother's general health, examination of height, weight and blood pressure)	78	62.4	HE	114	46.5	ME
2	Urinalysis (testing of urine to detect any abnormality)	49	39.2	LE	95	38.7	ME
3	Blood test (for anaemia, sexually transmitted diseases, and blood group)	54	43.2	ME	105	42.9	ME
4	Palpation (checking of the abdomen to ascertain position, growth and development of foetus and foetal heart sound)	81	64.8	HE	127	51.8	ME
5	General assessment (to ascertain the mother's health condition and size of the pelvis)	38	30.4	LE	71	29	VLE
6	Malaria prophylaxis and other materials such as mosquitoes' nets given to prevent malaria	74	59.2	ME	89	36.3	LE
7	Tetanus toxoid immunization (to enable the mother develop immunity against tetanus and enable the foetus receive immunity against danger of natal tetanus)	95	76	HE	149	60.8	HE
8	Health education (e.g. importance of breast feeding, personal hygiene, care of the body, how to keep healthy in pregnancy, and so on)	47	37.6	LE	203	82.9	VHE
9	Health counselling (for mothers with complications)	89	71.2	HE	94	38.4	LE
10	Diagnosis and treatment of complications	90	72	ME	128	52.2	ME
11	Treatment of minor ailments (such of	58	46.4	ME	141	57.6	ME

	anaemia, malaria, worm, urinary tract infections).														
12	Moderate physical exercise (eg hiking, juggling, among others)	33	26.4	VLE	90	36.7	LE								
13	Social activities such as dancing and singing	102	81.6	VHE	70	28.6	VLE								
	Overall %		54.6	ME		46.38	ME								

Key: VHE - very high extent
 HE - high extent
 ME - moderate extent
 LE – low extent
 VLE – very low extent

Table 1 shows the proportion of women who utilized ANC services. It shows that both women with 1 to 4 children and those with 5 children and above utilized to a moderate extent (54.6%) and (46.3%) respectively. The Table further shows that the proportion of women who booked at first time is higher among women who had one to four children (62.4%) than those of them with five children and above. It also showed that on the average, women with one to four children (46.4%) and those with five children and above (57.6%) engaged in moderate physical exercise to a moderate extent. The Table further showed that for item 13, mothers with 5 children and above utilized social services to a moderate extent ($\bar{x}=2.13$) while women with 1-4 children utilized it to a low extent ($\bar{x}=1.93$).

Table 2
Percentage Response on the Extent of ANC Services Utilization among Pregnant Women Based on income level.

Items of utilization	Below ₦10,000 (n=87)			₦ 10,000-29,000 (n=143)			₦ 30,000-79,000 (n=48)			80,000—₦99,000 (n=31)			₦100,000 and above (n=61)		
	f	%	D	f	%	D	f	%	D	f	%	D	f	%	D
1 Booking at first time (history taking of the mother's general health, examination of height, weight and blood pressure)	42	48.3	ME	90	62.9	HE	15	31.3	LE	20	64.5	HE	36	59.1	ME
2 Urinalysis (testing of urine to detect any abnormality)	54	62.1	HE	81	56.6	ME	19	39.6	LE	13	41.9	ME	41	67.2	HE
3 Blood test (for anaemia, sexually transmitted diseases, and blood group)	71	81.6	VH	45	31	LE	21	43.8	ME	19	61.3	HE	29	47.5	ME
4 Palpation (checking of the abdomen to ascertain position, growth and development of foetus and foetal heart sound)	33	37.9	LE	49	34.3	LE	34	70.8	HE	27	87.1	VHE	30	49.2	ME
5 General assessment (to ascertain the mother's health condition and size of the pelvis)	50	57.5	ME	63	44.1	ME	23	47.9	ME	9	29.1	VLE	34	55.7	ME
6 Malaria prophylaxis and other materials such as mosquito nets given to prevent malaria	61	70.1	HE	72	50.3	ME	18	37.5	LE	23	74.2	HE	19	31.1	LE
7 Tetanus toxoid immunization (to enable the mother develop immunity)	69	79.3	HE	101	70.6	HE	30	62.5	ME	14	45.2	ME	23	37.7	LE

	against tetanus and enable the foetus receive immunity against danger of natal tetanus															
8	Health education (eg importance of breast feeding, personal hygiene, care of the body, how to keep healthy in pregnancy, and so on)	49	56.3	ME	47	32.9	LE	11	22.9	VLE	17	54.8	ME	47	77.1	HE
9	Health counselling (for mothers with complications)	37	42.5	ME	54	37.8	LE	33	68.8	ME	21	67.7	ME	31	50.8	ME
10	Diagnosis and treatment of complications	65	74.7	HE	62	43.4	ME	25	52.1	ME	25	80.6	VHE	49	80.3	VHE
11	Treatment of minor ailments (such of anaemia, malaria, worm, urinary tract infections).	27	31.1	LE	87	60.8	ME	37	77.1	HE	10	32.3	LE	23	37.7	LE
12	Moderate physical exercise (eg hiking, juggling, among others)	34	39.1	LE	91	63.6	HE	39	81.1	VHE	29	93.5	VHE	41	3.44	LE
13	Social activities such as dancing and singing	52	59.8	ME	40	28	VLE	19	39.6	LE	17	54.8	ME	35	57.4	ME
	Overall %		56.6	ME		47.4	ME		51.5	ME		60.5	HE		52.7	ME

Table 2 shows the ANC services utilization of Pregnant women according to income level. The Table revealed that pregnant women whose level of income per month was ₦80,000 to ₦99,000 (60.5%) utilized ANC services to a high extent while women with income below ₦10,000 (56.6%), ₦30,000 to ₦79,000 (51.9%), and ₦ 100,000 and above (52.7%) utilize ANC services to a moderate extent. All the pregnant women irrespective of their income levels utilized urinalysis to a moderate extent. . It showed that women in the income level of N10, 000 to N29, 000 (62.9) and those of ₦ 80,000 to ₦ 99,000 booked at the first time to a high extent while all other women booked to a moderate extent.

Table 3

Summary of ANOVA Testing the Null Hypothesis no Significant Difference between economic status and ANC Services Utilization among Pregnant Women.

Model	Summary of squares	df	Means square	F-value	P-value	Decision
Between groups	280.960	4	70.24	1.936	.104	Rejected Ho ₁
Within groups	13244.242	365	36			
Total	13525.203	369				

Table 3 shows that calculated P-value (.104) is greater than .05 level of significance, hence the null hypothesis of no significant difference between level of income of pregnant women and ANC Services utilization is rejected. This means that there is difference in ANC Services utilization based on level of income.

Table 4

Summary of ANOVA Testing the Null Hypothesis of no Significant Difference between Parity and ANC Services Utilization among Pregnant Women.

Model	Summary of squares	df	Means square	F-value	P-value	Decision
Between groups	117.283	1	117.283	3.219	.044	Reject Ho ₂
Within groups	13407.919	368	36.435			
Total	13525.203	369				

Table 4 shows that the calculated P-value (.044) is less than .05 level of significance, hence the null hypothesis of no significant difference between parity and ANC Services utilization among the pregnant women is not rejected. This means that there is no difference in ANC Services utilization based on parity.

Discussion

The result of the study showed that women with 1-4 children (54.6%) utilized ANC services more than those with 5 children and above (46.3%). This finding is not in line with Navaneetham and Dharmalingam (2002) who stated that higher birth order decreases the use of maternal health care services. Reason may be that the women who have gained more experience pregnancy and child birth may feel reluctant, and the time and cost pressures associated with larger families which decrease utilization. Sharma (2007) showed that women who delivered their first child were found to be significantly more likely to use prenatal care and trained assistance during the birth delivery than women in higher order. This may be because a higher birth order suggests greater family sizes and hence lower resources (both time and money) available to seek formal health care.

It was also revealed that pregnant mothers whose level of income fall within ₦80,000-₦99,000 (60.5%) utilized ANC service more than the other women. This finding is not surprising because it is expected that wealthier women will utilize ANC services more than the poor. Also, considering the fact that the study area is a rural area, a woman whose income per month is between ₦80,000 and ₦99,000 is considered as being wealthy and as such is able to afford the cost of ANC services more than those who are poor. This finding is consistent with the findings of Ortis (2007) who observed that wealthier mothers had more chances of attending a first visit and additional antenatal visits than the poorer mothers in Columbia. WHO and UNICEF (2003) also noted that low economic status of women denies them the power to make decisions that affect their lives and is a barrier to improving maternal health outcomes among the poor.

Conclusion

On the basis of the findings of the study, the following conclusions were drawn. Parity was a factor that determined ANC Services utilization among pregnant women in Igbo Eze South LGA. This is because women who had 1-4 children utilized ANC services more than their counterparts with 5 children and above. Economic status was also a factor that determined ANC Services utilization among pregnant women. This is because women in ₦80,00 to ₦99,000 income level utilized ANC services more than women in other income levels.

Recommendations

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

1. Government should subsidize the cost of ANC Services so that every woman can afford it.
2. State Ministry of Health, non-governmental organization and other health personnel, should organize periodic workshops for women, especially in the rural areas, with topics that relate to ANC Services utilization and the benefits.
3. Women's gatherings in the churches and communities such as August meetings, women Organization meetings, should be utilized by health educators and health personnel as opportunities to talk to women about the necessity of ANC Services utilization and implications of non-utilization.

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