Knowledge and Social Status as Determinants of the New Antenatal Care Guidelines among Pregnant Women Attending Antenatal Clinics in Surulere Area, Lagos

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Abstract: Pregnant women in developing countries have an increased risk for pregnancy-related complications and death and the infants of these mothers have an increased risk for complications during birth or shortly after delivery. However, many of the complications are preventable with appropriate antenatal care (ANC). Antenatal care is a key strategy to improve maternal and infant health. This study was proposed to explore the awareness, attitude, practice of the new antenatal care guidelines among pregnant women attending antenatal clinics (ANC) in Surulere area of Lagos State.

This study adopted descriptive cross-sectional design and simple convenient sampling technique in trying to understand the views of pregnant women regarding the new guidelines of ANC released in 2016 by the WHO. A forty seven (47) item validated and structured questionnaire was used to collect data. The knowledge question and social status was measured on a twenty two point ration scale, Result indicate that level of knowledge among respondents has no relationship (p. value, 0.259) with utilization of the new recommended ANC guideline in Surulere, Lagos State.Also,educational status of respondents has a relationship (p. value, 0.026) with number of contacts, while other social status is not significantly associated with number of contact. Appropriate, recommendations were made.

Keywords: Knowledge,Social Status, New Antenatal Care Guidelines,

I. INTRODUCTION

Pregnancy is one of the most important periods in the life of a woman, a family and a society. Extraordinary attention is therefore given to Antenatal care (ANC) by the health care administrators of most countries. This is because of its preventive power in reducing to the barest minimum pregnancy related complications. Antenatal or prenatal care aims to prevent health problems in both infant and mother and to see that each newborn child has a good start (HEN, 2003). Antenatal care is an essential part of modern health care system. The 2014 World Health Organization report on ANC established that only 61% of pregnant women in a developing country like Nigeria ever made at least one "contact" with a skilled ANC provider and only 57% made the WHO recommended "at least 4 visits" (WHO, 2002) between 2006 and 2013 despite free ANC in most parts of the country. These figures released by the WHO and other international bodies are not encouraging (WHO, 2014). It defeats the purpose of antenatal care as a whole. This is because with an increasing population comes increasing burden on the health care system as a whole. If a country like Nigeria cannot get it right at implementing effective antenatal care, one will wonder when then is the country going to get it right especially with pregnancy related deaths and diseases remaining unacceptably high.

According to the World Bank estimate of 2015, Nigeria's maternal mortality rate, MMR is still as high as 821 per 100,000 live births (World Bank, 2015). Worst still, of the 303,000 women that died globally due to complications of pregnancy and child births, 58,000 of these women died in Nigeria alone (WHO, 2015). These figures are unacceptably high as most of these illnesses are preventable. With population growth rate projected at 2.9% annually (NBS, 2012), measures needs to be put in place to address the issues arising from or aiding these preventable deaths. One of such method is increasing the number of "contacts" mothers have with their professional/experienced care giver from "four" to "eight". This is highlighted in the World Health Organization

new guidelines on antenatal care for a positive pregnancy experience (WHO, 2016). Still according to the 2016 World health organization guideline, it has been shown that increasing the number of contacts pregnant women make with their skilled healthcare giver gave them positive pregnancy experience.

The term "contact" as used by WHO implies an active connection between a pregnant woman and a health care provider that is not directly expressed with the ward visit. According to the United States Agency for International Development (USAID, 2018), the word contact may include more families model of clinic-based ANC, visit as well as ANC and/or counseling session for pregnant women at the house hold and community level. Recent evidence indicates that a higher frequency of antenatal contacts by women with a health care provider is associated with a reduced likelihood of s still births (WHO, 2016). Jana & Sebastian (2017) observed that at least one ANC visit were associated with a 1.04% reduction in neonatal mortality and a 1.07% reduction in infant mortality. Furthermore, one of the conclusions of their work was that having at least four ANC visits and at least seeing a skilled provider reduce the probability by an additional 0.5% and 0.42% respectively.

From the above result, one might therefore infer that the higher the number of contacts, the higher the probability of reducing diseases/complications that might put the health of the mother and the child at stake. This is therefore the bane of the new recommended guidelines. It first of all places importance on increasing the number of contacts pregnant women make with their care givers to about eight irrespective of the fact that the pregnancy is high risk or not.

Apart from the number of contacts, the 2016 guideline outlined by the WHO accommodates some other vital aspects of ANC the sum of which forms the first globally accepted guidelines on ANC. These guidelines are comprehensive. According to the policy document, recommendations spans from standard maternal and fetal assessment, nutrition during pregnancy, prevention and treatment of physiological problems commonly experienced during pregnancy, preventive interventions for certain health context, amongst others (WHO, 2016). In all, the recommendations are 49 and they are grouped into 5 topical areas.

For Nigeria, the odds are against the nation. Adeniyi&Erhabor (2015) found that ANC utilization is lower in Nigeria than the African average. They found that the use of ANC was dependent on some factors such as social class, income, educational level etc. The country is still lagging behind in the WHO recommended four visits, one will wonder if the country can increase antenatal visit to eight? And how effective will this increase be?

Since the antenatal care policy in Nigeria follows the WHO recommended guidelines, it will not be out of place to access the level of utilization about an increase in the number of contacts among other components (NPC & ICF, 2014). In fact, research aimed at raising the level of awareness and practice of these new policy guidelines especially within Lagos metropolis.This work will find out the level of awareness and practice of these extra contacts women has when attending antenatal clinics in Surulere area, their perception of the guidelines and possible ways of enacting policies that will help in fostering the full implementation of the guideline in the country. Care givers are not left out in this study. Responses from them will also go a long way at assessing the level of practice of the new policy guideline and how best to overcome the huddles and fully implement the new recommended antenatal care guidelines.Hence, the following hypotheses were raised:

H_1:   There is a significant relationship between knowledge and utilization of the new recommended ANC guideline.
H_2:   There is a significant relationship between social status and the number of contacts among respondents

II.   METHODOLOGY

Research Design

This study is a cross sectional design that was conducted to provide in depth understanding on the population under study.

This study was conducted inSurulere area of Lagos State. Surulere is a residential/commercial hub of the mainland Lagos. With an area of 23km square, at the last census in 2006, there were 503,975 inhabitants. The LGA is bordered by Yaba, Mushin, and Ebute Meta. This Local government is known to have the high number to health clinics in the state among which are LUTH, SPHC center and GHR, Surulere was chosen because despite been one of the few LGA in Lagos state with highest number of Fourth Antenatal visit (9440 women in 2016) it still has the highest number of complication during pregnancy (148 women in 20116) according to a research conducted by UNFPA and Lagos State government in 2016 (UNFPA, 2016).

Population

This study was conducted among pregnant women who accessed ANC at LUTH, RGH and SPHC. The daily Antenatal care attendance register was used as a sample frame. The ANC in LUTH is run on Tuesdays and Thursday, while that of RGH is run on Mondays and Thursdays and SPHC is run on Thursday.The average daily ANC attendance in these clinics is Sixty five (65), forty (40) and thirty (30) respectively.

Inclusion/Exclusion Criteria

For this work, pregnant women attending antenatal clinic were recruited. Especially those who were pregnant some two years back after the implementation of the new policy guideline in 2016. Those who have used the clinic consistently during their previous pregnancy experience within the stated timeline were given priority. Women who did not understand or write English were excluded from the study. Also, women visiting antenatal clinic for this first time/first pregnancy were also excluded from this study.

Sample size and sampling Technique

Sample size Determination

The sample size (Larger population) was determined using the Cochran (1963) formula. The level of prevalence level of ANC utilization accounts for 55% in Nigeria by (Emmanuel, 2017).

$n = Pq(z^2)/e^2$. Where:

N – Sample size

Z – The confidence limit

p – Is the assumed prevalence of the dependent variable.

q – Is given by 1-p. is the acceptable deviation from the true value for this study.

e – Margin of error (0.05)

By substitution,

Z – 1.96 for CI at 95%

P – 55% = 0.55 (UNICEF in 2016 found that 55% of women in Nigeria had at least four antenatal care contact with their skilled care provider).

Q – 1-0.55 = 0.45

$(0.55)(0.45)(1.96)^2 / (0.05)^2$

$0.951/0.0025 = 215$

For this study, the sample size was rationed at 220 and provision for questionnaire that was not filled properly a non-response rate of 10% was added to the sample size. This made the minimum sample size approximate to be 220.

Sampling Techniques

Simple convenience sampling technique was used to select participants for this study in Surulere area of Lagos state

Test of significance and Null Hypothesis testing

The research hypothesis was validated using the following null hypothesis so as to establish a statistical basis for the research hypothesis. It was tested at 5% level of significance. The research hypothesis is stated below;

1)   There is no significant relationship between knowledge and utilization of the new recommended ANC guidelines

2)   There is no significant relationship between social status and the number of contacts women had with their skilled care givers.

Instrumentation

Data for this research was collected using a researcher developed questionnairemeasured on a forty one (41) point rating scale. The instrument consists of five (5) sections. It was used to gather data from the respondents for the study. It was prepared in English.

Section A: Collected information on socio-demographic characteristics. This ranged from age, marital status, social status and educational backgrounds.

Section B: Gathered information on the level of knowledge about the new recommended antenatal care guidelines among women attending antenatal clinics in Surulere area of Lagos State. The numbers of visits respondents have had prior to this survey was also taken into account. This was measured on a twenty two (22) point rating scale.

Section C: Gathered information on the perception of respondents about the eight contact visit. This was measured on a nineteen (19) point rating scale

Section D: Gathered information about the attitude of pregnant women on the new eight contact visit. This was measured on a twenty one (21) point rating scale.

Section E: Provided information on the practice of attendance according to the eight contact visit. This was measured on a twenty one (21) point rating scale.

Validity and Reliability of Instrument
Validity

The instrument was validated with the help of my supervisor and experts in the field of ANC. This was done in order to evaluate whether the questions agreed with the scope of the items and whether the question reflects the research problems. To ascertain the validity of the instrument, a pilot test was conducted using 10% of the estimated sample size (23). It was analyzed using the reliability statistics on SPSS 21. After necessary adjustments, the result for Cronbach Alpha was 0.82 for all items in the instrument which showed good fit of the instrument.

Reliability

Test re-test reliability was done. The result yielded a correlation of 0.82 (82%), which translated to a very high reliability test.

III. METHOD OF DATA COLLECTION

First, Ethical clearance was obtained from Babcock University Health Ethics Research committee (BUHREC) before I set out to collect my data. Secondly, coordinating board of the various health institutions to be used for the study were approached for formal consent written to the Chief Medical Director and the permanent secretary as the case may be. Upon reception of my letter, approval was granted within 2week after careful consideration. Prior to the approval of my application, I trained two research assistants that helped in distribution of questionnaire. Within six weeks results were collated, sorted and analyzed.

Method of Data Analysis

The data was collected, entered, coded and analyzed using statistical package for social science (SPSS) version 21. Descriptive statistic i.e. frequency, mean, percentage and standard deviation was used to describe the respondents' demographics and to provide answers to the 5 research questions. The hypothesis was tested using simple linear regression. The level of significance was set at 5%.

IV. RESULTS

Table 1: Hypothesis One: H_A: There is a significant relationship between Knowledge and Utilization of the new recommended ANC guideline using a simple Linear Regression

Independent Variables	b (95% Cl)	t. Stat	P. value	r^2
Level of Knowledge	-0.184 (-0.504 – 0.137)	-1.131	0.259	0.006

N=206
b = Unstandardized coefficient/odds ratio

The model above indicate that level of knowledge among respondents has no relationship (p. value, 0.259) with utilization of the new recommended ANC guideline in Surulere, Lagos State. So therefore, we reject the alternative hypothesis (Ha) which states that there is a significant relationship between Knowledge and Utilization of the new recommended ANC guideline and we accept the null hypothesis (Ho) which states that there is no significant relationship between Knowledge and Utilization of the new recommended ANC guideline

Hypothesis Two: H_A: There is a significant relationship between Social Status and the number of contacts among respondents

Independent Variables	b (95% Cl)	t. Stat	P. value
Age	0.005(-0.011 – 0.001)	-1.639	0.103
Marital Status	-0.035(-0.120-0.050)	-0.810	0.419
Educational Status	0.063(0.008-0.118)	2.250	0.026
Religion	-0.005(-0.054-0.063)	0.155	0.877

	0.011(0.027-0.049)		
Ethnicity		0.566	0.572
	0.011(0.013-0.035)		
Occupation		0.884	0.378
	0.003(0.044-0.049)		
Number of pregnancy		0.123	0.902

N=396
b = Unstandardized coefficient/odds ratio

Table 2, shows that educational status of respondents has a relationship (p. value, 0.026) with number of contacts, while other social status is not significantly associated with number of contact. So therefore, we accept the alternative hypothesis (Ha) which states that there is a significant relationship between the social status and number of contact as level of education is significantly associated with number of contacts a pregnant would have and we reject the null hypothesis (Ho) which states that there is no significant relationship between social status and number of contacts.

V. DISCUSSION

The level of knowledge among the respondents indicated that almost the entire population had a poor knowledge on the recommended WHO antenatal care guideline similar to the findings of *Amanpreetr, Jagdeep, Harpreet, Harpreet, Priyanka, &Vikram (2018).*These translate that having a high level of education does not usually translate to having a high knowledge about a particular phenomenon. The low knowledge could also be probably due to the fact that much sensitization and awareness is yet to be created on the recommended WHO antenatal care guideline among pregnant women. This supports the assertion of Brown, Sohani, Khan, Lilford, and Mukhwana (2008), that adequate sensitization on a health program enables the people to possess adequate knowledge on it.

Majority do know that it's the duty of the doctors and nurses to attend to women during their antenatal visit. Majority had a wrong knowledge about antenatal care visits to the hospital. Majority of the respondents had had at least a visit to the ANC clinic which is in line with the findings of Islam &Masud (2018), this similarities can be because women will usually attend at least one antenatal session at the point of registering to the hospital the moment pregnancy is discovered, however only few of the women have received the WHO recommended eight or more ANC visits and only 66% received at least four ANC visits which of course is still similar to the above mentioned study.

This also can be as a result of the respondent generally having poor knowledge about the WHO recommended guideline for antenatal care visit. This indicates a very unsatisfactory compliance with the WHO recommended level of ANC visits in Surulere. Almost half of the respondents ANC visits help check and reduce complications and also to be sure the health of the mothers and the baby is in place as well; this is in line with the study of **Umar (2017); this** *similarities in findings may be because the reason behind ANC visit is to ensure safety of the both the mother and child and to curb complications whenever it arise.*Majority of the respondents also believed that delivery by traditional birth attendance is healthy, of course this translate to one of the major reasons to respondents low turnout to antenatal services. However the traditional birth attendance should be educated and trained to better utilize the services of ANC.

Paying for antenatal care seems to be a major problem to the health of most of the respondents and this report is also similar to the findings of Emanuel, Amos, & Victoria (2017).This result agrees with Qi (2009) that most pregnant women who utilized antenatal care were pregnant women who had a higher economic status. However, contrary to the finding of this study, Ouma, Van-Eijk, Hamel &Sikuku (2010) discovered that there was no significant influence of economic status on pregnant women's use of antenatal care services. Findings also indicated that distance from clinic is a major obstacle to accessing antenatal care services among respondents; this result is in line with the findings of Igbokwe (2004) and Emanuel, Amos, & Victoria (2017) who both reported that residential location had an impact on the utilization of the antenatal services; the finding of Igbokwe (2004) also reasoned that pregnant women who lived close to the health facility will patronize antenatal care services than those who lived far, and that pregnant women who lived close to the facility would have a higher level of knowledge of concept of antenatal care services than the pregnant mothers who lived far from the health facility; to buttress the point further, Openshaw, Bomela, &Pretlove (2011) found out that distance to the antenatal clinics has proved to be a problem that tends to limit access to the antenatal service.

VI.   CONCLUSION AND RECOMMENDATION

This study revealed a poor level of knowledge of antenatal care services which may translate to the need for adequate sensitization of a health program on the subject matter. Delivery by traditional birth attendance was reported to be healthy, of course this translate to one of the major reasons to respondents low turnout to antenatal services. However the traditional birth attendance should be educated and trained to better utilize the antenatal care services.

1.   For further improvement of maternal and child health, it is recommended that the ANC program need to be redesigned in the light of updated WHO guidelines focusing on at least eight ANC visits and adequate level of ANC content. Having adequate level of ANC visits and ANC content may contribute to early detection and timely management of risk for adverse pregnancy outcome.

2.   It is also recommended that policy makers could focus on improving women's empowerment, improving women's education, reducing wealth inequity and facilitating improved utilization of ANC through modifications on the supply side factors such as geographic location and focus on hard to reach women. These structural changes in policy can indubitably have wider ramifications than merely improving ANC visits.

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