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Original Article

Knowledge And Acceptability of Group Antenatal Care Among Antenatal Care Providers in Zaria, Kaduna State, Nigeria

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Abstract

BACKGROUND: Antenatal care (ANC) is one of the strategies aimed at addressing maternal mortality in developing countries. Despite the importance of ANC, its utilization remains low in our environment. The content of the visits and coverage of essential interventions have also been shown to be of inadequate quality. Group antenatal care (GANC) is a new, innovative and alternative evidence-based ANC model that has the potential to improve the quality and utilization of ANC. **OBJECTIVE**: The aim of the study was to assess the knowledge and acceptability of GANC among ANC providers in Zaria, Kaduna state, Nigeria. **MATERIALS AND METHODS:** The study was a cross-sectional descriptive study that was conducted between January 2021 and March 2021. Respondents were ANC providers from Tertiary, Secondary and Primary health care centres within Sabon Gari Local Government, Zaria. The health care centres were selected using multistage stratified sampling technique and disproportionate sampling allocation was used for sample size allocation for each centre. Ethical approval was obtained from Ethical Clearance Committee of Ahmadu Bello University, Zaria and Kaduna State Ministry of Health. Data was collected using a self-administered pretested questionnaire and analyzed using SPSS version 25. **RESULTS:** The mean age of respondents was 34.4 years (SD=7.0). Of the total respondents, 76.6% were aware of GANC and the most known type of GANC was Centeringpregnancy. Knowledge of GANC was found to be poor in 31.3% of respondents and only 28.1% had excellent knowledge score. Those with higher knowledge score were more likely to accept GANC (p value <0.001). Antenatal providers from Primary and Secondary health care were found to have more knowledge regarding GANC than those in Tertiary center (p value<0.001). Majority accepted GANC (88.3%) and were willing to participate in its implementation. **CONCLUSION:** The knowledge regarding GANC was found to be poor in this study. It was however found to be an acceptable alternative to the traditional antenatal care among Antenatal providers as majority were willing to participate in its implementation.

KEYWORDS: Group Antenatal Care, Antenatal Providers, Knowledge, Acceptability.

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Introduction

World Health Organization (WHO) envision a world where "every pregnant woman and newborn receives quality care throughout pregnancy, childbirth and the postnatal period" However about 303,000 women and adolescent girls died as a result of pregnancy and childbirth related complications that were preventable in 2015 and of

which 99% of this mortality occur in low resource setting[1]. Sub Saharan countries account for about 2/3rd of this mortality with Nigeria alone accounting for 20% of the global maternal death with a maternal mortality ratio of 512 deaths per 100,000 live birth. [2]

Maternal health care has been considered one of the key elements of the Millennium Development Goals (MDGs) and the more recent Sustainable Development Goals (SDGs). Complications during pregnancy, childbirth, and following delivery remain a significant challenge to maternal health and contribute to maternal mortality.[3]

One of the strategies aimed at addressing maternal mortality in developing countries is the implementation of good antenatal care.[4] Providing quality ANC is an important strategy with the aim of addressing maternal mortality and improving perinatal outcome by prevention, detection and treatment of potential health problems to all women during pregnancy. [5]

Antenatal care (ANC) is a long-established public health intervention which is recommended for women during pregnancy[7]. The care is provided by skilled health care professional to pregnant women in order to ensure the best health condition through an integrated service delivery in a series of regular individual provider visits. [8] High quality antenatal care (ANC) optimizes both the outcomes and experiences of maternal health care for pregnant women along with outcomes for their newborns[9]. ANC has undergone various changes and evolution over the years. Currently the more recent WHO 2016 ANC model which is a women centered care aimed at a positive pregnancy experience is been advocated. Other forms of ANC include midwife led ANC and group ANC[1].

Globally, while most women now attend at least one ANC visit (86%), only 62% attend the WHO recommended minimum visits, with lower rates reported in Sub-Saharan Africa and South Asia. [1, 8] In Nigeria the ANC coverage of women age 15-49 years is about 67% with 57% having at least 4 visits according to National Demographic and Health Survey (NDHS) 2018. This shows that much more needs to be done to address ANC utilization and increase access to quality maternal health care services for women, especially for those from vulnerable populations. [1,9]

Group antenatal care (GANC) is an innovative and alternative evidence-based ANC model which combines risk assessment, health education and peer support within a group. Centering pregnancy, the most well studied GANC was created by Sharon Schindler Rising, a certified nurse midwife. This evidence-based model was piloted in Connecticut in 1993-1994 in U.S.[10,11] Growing evidence have showed group antenatal care is an effective alternative to traditional ANC in delivering quality care, improved maternal and fetal outcomes as well as improve utilization.

It integrates three main components: health assessment, interactive learning, and community building. It is commenced in 2nd trimester with a group of 8-12 women of the same gestational age.[10,11] About 10 scheduled visits each lasting 90-120mins with discussions anchored by any health care providers licensed to provide ANC to women.[3,11] Women participate in self-care activities and self-assessment, facilitated discussions, and developing a support network with other group members, all within a group space. [9,10] Prenatal assessment, knowledge and skills development occur in an atmosphere that facilitates learning, encourages free exchange, and develops mutual support.[5]

Studies in high income countries have shown that compared to individual ANC, GANC can offer positive pregnancy experience and positive health outcomes like decreases preterm delivery, increased prenatal knowledge, higher rate of breastfeeding and higher engagement in health care postpartum.[12,13]

Introducing GANC in LMICs can offer an opportunity to improve delivery, performance and utilization of services for pregnant women especially in settings where coverage of comprehensive care is low and quality of care is poor.[9] There is the need to explore the benefits of this ANC model in LMICs and a step towards the implementation is through rigorous research as recommended by the WHO. [1]

This study assessed the knowledge and acceptability of GANC among ANC provider as they are one of the main healthcare stakeholders that deliver health care directly to pregnant women and their newborns. Thus, assessing their knowledge and acceptability of GANC is key to the successful introduction and implementation of this alternative ANC.

Material and Methods

A total of 128 ANC providers were recruited for the study that was done between 1st of January to 31st of March 2021. The sample size was determine using Cochrane's statistical formula for finite population.[30] Ethical clearance was obtained from Ahmadu Bello University, Zaria and Kaduna State Ministry of Health. Sabon gari LGA was purposely selected in Zaria as it has all the three health care strata i.e Tertiary, Secondary and Primary health centres. It has 25 PHCs, three Secondary Health Care Centre and one Tertiary centre. The one Tertiary centre was selected while the Secondary and Primary centers were selected using balloting. Study sample was drawn from all qualified Antenatal Care providers working at the selected centres including doctors, nurses, axillary nurses and Community Health Workers. A disproportionate allocation was used to determine the number of participants per centre as the population of ANC providers in each of the centre selected were not equal. A simple random sampling technique was then used in selecting participants from each of the health care centre selected i.e., the tertiary, secondary and primary health care centre till the allocated sample size was reached. Data was collected using a self-administered pretested questionnaire after consent was obtained. Knowledge score

was assigned and graded using the percentage rating scale as poor, fair, good, very good and excellent with percentages of < 44%, 45-59%, 60-69%, 70-79% and >80% respectively based on the questions that were answered correctly. Data obtained was analysed with statistical package for social science version 25.

Results

The total respondents in this study were 128 and the response rate was 100%. The mean age of the respondents was 34.4 years (SD=7.057). Male respondents were 46.9%

Table 1: Socio-Demographic Characteristics of Respondents

		Freq.	Percent
Age in years	20 – 29	21	16.4
	30 – 39	80	62.5
	40 – 49	21	16.4
	50+	6	4.7
Tribe	Hausa	65	50.8
	Yoruba	18	14.1
	Igbo	12	9.4
	Others	33	25.8
Religion	Islam	96	75
	Christianity	32	25
Level of health care	Primary	14	10.9
	Secondary	19	14.8
	Tertiary	95	74.2
Cadre	Doctor	89	69.5
	Nurse	22	17.2
	Auxillary	4	3.1
	Community health worker	11	8.6

Nurses were 17.5%, Auxiliary and female respondents were 53.3%. Those from Tertiary centre were 95 (74.2%), Secondary centre 19 (14.8%) and Primary centre 14 (10.9%). Doctors constituted 70.6%, were 8.7% and Community Health Workers were 3.2%. Majority were Muslims and of Hausa tribe.

Of the 128 respondents, 76.6% have heard of group antenatal care of which 92.9% were able to define it correctly. Their source of information of group antenatal care was majorly from seminar and presentations followed by colleagues.

Among the types of group antenatal care centering pregnancy was the most known followed by women's participatory action group. More than half of the respondents had knowledge about the components and elements of group antenatal care. The most known proven benefits of group antenatal care were cost effective model of care and more family and social support with percentages of 58.6% each.

Fig 1 shows the knowledge score of the respondents. Those with poor knowledge accounted for 31.3% while those with excellent knowledge were 28.1%.

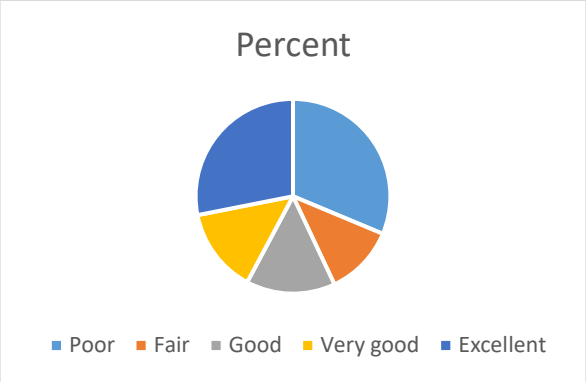

Figure 1: Knowledge Score of the Respondents

The acceptability was found to be high accounting for 88.3% of the respondents. Only 11.77% didn't accept GANC and the main reason were privacy concerns for the women.

More than half of the respondents (76.6%) cited lack of awareness of group antenatal care as a possible barrier to its implementation. All respondents in primary health care level had excellent knowledge while in secondary center 84.2% had excellent knowledge. However, in the tertiary level only 16.89% had excellent knowledge while 36.8% had poor knowledge. A positive association was found between knowledge and acceptability of GANC. Respondents with higher knowledge score are more likely to accept GANC than those with lower knowledge score.

Discussion

Most of the respondents were between the ages of 30-39 years with a mean age of 34.4 years and SD of 7.057. This reflects the working age group who are predominately young adults. The sample sizes for each of the centres were achieved. Doctors had the highest number of respondents accounting for 70.6%. This is because the largest sample size was allocated to the tertiary hospital where doctors form the majority of ANC providers. Majority of the respondents were Hausa and Muslims. This is due the study area which is predominantly Muslim and Hausa speaking population.

Table 2: Relationship Between Knowledge and Level of Health Care and Acceptability

		Knowledge score					Chi square	P value
		Poor	Fair	Good	Very good	Excellent		
Level of healthcare	Primary	0	0	0	0	14	44.196	<0.001
	Secondary	5	4	2	2	6		
	Tertiary	35	11	17	16	16		
Acceptability	No	13	0	1	1	0	24.887	<0.001
	Yes	27	15	18	17	36		

Of the 128 respondents, 76.6% of respondents have heard of group antenatal care of which 92.9% were able to correctly define it. Source of information about GANC was mostly from seminar and presentations followed by colleagues and medical books/lectures. This shows seminars and presentation are important means of disseminating information among health care providers. Of all the different types of GANC, Centering pregnancy was the most well-known among respondents in this study. This is not surprising as it is the most common and well-studied model of GANC worldwide.[10] Respondents identified cost effectiveness and more family and social support as benefits of GANC. In studies by Sharma et al and Ghani et al the most of the respondents identified convenient model of care and women empowerment and learning as the benefits of GANC.[5,9] This may be due to the difference in study population where in the latter studies only Nurses and Midwives who were offering GANC and conversant with the model were recruited.

The definition of GANC, types, components, elements and benefits were used in computing the knowledge score. And using percentage rating scale, only 28.1% had excellent knowledge score while 31.3% had poor knowledge score regarding GANC. Of those with excellent knowledge scores, ANC providers in primary and secondary healthcare centers had 100% and 84.2% excellent knowledge score respectively. In the tertiary center however only 16.89% of the respondents had excellent knowledge score. This disparity was due to the training and introduction of GANC in Primary and Secondary health care centres about a year prior to the study by the Kaduna State Ministry of Health.

In this study we found that those with higher knowledge score were more likely to accept GANC with p value of <0.001. This showed that those who had knowledge and were familiar with this model of ANC are more likely to be aware of its proven benefits.

The acceptability of GANC was found to be high with 88.3% of respondents willing to accept GANC. This is similar to findings of Patil et al and Joliviet et al where respondents enthusiastically accepted GANC.[13,25] Some of the reasons given for acceptance were because it was a new, interesting, innovative and more interactive model of ANC. It also has the potential to serve as a vehicle for delivering a more efficient and comprehensive antenatal care.[5,13] Another study found not only acceptability but also increased interest in participation in GANC.[24] Those who were not willing to accept GANC gave reasons such as lack of familiarity with the model, sociocultural factors and privacy concerns for the women. This finding was found to be similar with other studies.[5,28]

With regards to possible barriers to the implementation of GANC, most of the respondents identified lack of awareness and training programs for GANC and privacy concerns for the women as the major barriers. This finding is similar to previous study where lack of awareness and training, privacy concerns as well as hospital financial constraints as some of the possible barriers to the implementation of GANC.[5]

Conclusion

This present study has shown that the knowledge regarding other alternative ANC models are poor despite the low utilization and poor quality ANC with the traditional ANC. Antenatal providers need to be aware of alternative models of delivering antenatal care to improve delivery, performance and utilization of ANC services in suitable settings. This can be done by organizing seminars, programs and workshops which have shown to be an important means of disseminating information to sensitize stakeholders and health workers on alternative ANC such as Group antenatal care. Especially considering the high acceptability of Group antenatal care despite the limited knowledge.

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Abbreviations

ANC	-	Antenatal care	NDHS	-	National and demographic health survey
GANC	-	Group antenatal care	LMIC	-	Low- and medium-income countries
WHO	-	World health organization	LGA	-	Local government area
MDG	-	Millennium development goals	SD	-	Standard deviation
SDG	-	Sustainable development goals	CHW	-	Community health worker