Original Article

Exploring The Potentials Of Mama Kit On Antenatal Care Uptake And Delivery In Health Facilities: A Qualitative Study Among Pregnant Women In Benue Rural Communities

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ABSTRACT

Maternal and neonatal health constitutes a significant concern within public health domains, particularly in low and middle-income nations, with a great emphasis on rural Nigeria where the engagement with antenatal care (ANC) and health facility delivery services remains inadequate. This study sought to assess the potentials of Mama kits as a motivational tool aimed at enhancing ANC attendance and health facility delivery rates among pregnant women residing in rural communities of Benue State. The research was carried among twelve rural communities, encompassing a sample of 72 pregnant women selected through purposive sampling techniques. Data collection was through nine Focused Group Discussions (FGDs), stratified by demographic factors such as age, parity, and literacy levels, and subsequently analyzed utilizing thematic analysis supported by NVivo-12 Pro software. The results indicated a generally good ANC attendance, with the majority of participants adhering to their scheduled clinic appointments. Factors motivating ANC engagement included the provision of early pregnancy care, the management of health-related complications, and the availability of medicinal resources. Nevertheless, several barriers were identified, including the absence of qualified health personnel, insufficient diagnostic services, and the negative attitudes exhibited by certain healthcare providers. The decision to deliver at health facilities was influenced by the perceived quality of care, the presence of skilled attendants, and apprehension regarding potential complications. Despite these factors, financial limitations—especially concerning the costs associated with delivery materials—and sporadic poor attitudes from staff emerged as significant impediments. Notably, all participants showed willingness to utilize health facilities for childbirth if Mama kits were made available at no cost. The kits were perceived as alleviating financial burdens and fostering sustained engagement with maternal health services. Additionally, participants expressed their intent to advocate for such initiatives within their respective communities. In conclusion, integration of such incentive-based strategies within maternal health programs holds potential for substantially enhancing maternal and neonatal health outcomes in rural Nigeria.

Key words: Antenatal Care, Delivery, Health facility, Incentives, Mama kit

INTRODUCTION

Maternal and neonatal health constitute paramount public health priorities on a global scale, particularly within low and middle-income nations where preventable complications associated with pregnancy continue to substantially affect morbidity and mortality rates.[1] Sub-Saharan Africa represents a disproportionately high incidence of maternal fatalities worldwide, with Nigeria enduring one of the most significant burdens.[2] Notwithstanding the existence of efficacious interventions such as antenatal care (ANC) and the presence of skilled personnel during childbirth, the uptake of these services remains inadequate, particularly in rural areas.[3] Constraints related to access to healthcare facilities, financial limitations, sociocultural beliefs, and systemic health challenges persistently hinder optimal utilization of maternal healthcare services.[4] Antenatal care functions as a crucial gateway for maternal health services, facilitating opportunities for the early identification and management of complications associated with pregnancy, as well as providing health education, immunization, and nutritional support.[5] Consistent attendance at ANC is positively correlated with enhanced pregnancy outcomes and a greater likelihood of delivering in a health facility.[6] Likewise, childbirth in a healthcare setting under the oversight of qualified health professionals is a pivotal strategy for mitigating maternal and neonatal mortality, as it guarantees prompt intervention for obstetric

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emergencies.[7] Nonetheless, in numerous rural communities within Nigeria, a considerable proportion of women still opt to deliver at home or with traditional birth attendants due to factors such as cost, distance, perceived quality of care, and prior interactions with the healthcare system.[8]

In addressing these obstacles, various demand-side interventions have been instituted to augment the utilization of maternal health services.[9] One such initiative is the provision of delivery incentive packages, commonly designated as Mama kits.[10] Mama kits generally comprise essential supplies for delivery, including sterile gloves, sanitary pads, soap, razor blades, cord clamps, and infant clothing.[10,11] By alleviating out-of-pocket expenses associated with childbirth and addressing material requirements, Mama kits are designed to motivate pregnant women to engage with ANC services and deliver in healthcare facilities.[12] In Nigeria and other resource limited environments, Mama kits have garnered increasing attention as a cost-effective strategy for enhancing maternal health outcomes, particularly within underserved rural populations.[13] Despite the burgeoning implementation of Mama kit programs, the evidence regarding their efficacy remains inconclusive, with a substantial portion of the existing literature relying on quantitative metrics such as ANC attendance rates and institutional delivery proportions.[13] While these indicators are significant, they offer limited perspectives on the lived experiences, perceptions, and contextual variables that shape women's decisions to engage with maternal health services.[14] Therefore, qualitative research is indispensable for elucidating the mechanisms through which Mama kits affect health-seeking behaviors, as well as for identifying potential barriers and facilitators impacting their efficacy.[15]

Benue State, is predominantly rural and continues to face challenges pertaining to the utilization of maternal health services.[16] Elements such as poverty, inadequate health infrastructure, transportation challenges, and inconsistent quality of care contribute to low rates of ANC attendance and health facility deliveries in numerous rural communities.[17] Investigating the viewpoints of pregnant women in these contexts is vital for informing context-specific interventions and policies aimed at enhancing maternal health outcomes.[18]

This study aims to examine the potentials of Mama kits on the utilization of antenatal care services and the uptake of health facility deliveries among expectant women residing in rural communities of Benue State through a qualitative methodology. By eliciting the perspectives and experiences of women, the research intends to yield comprehensive insights into the influence of incentives on the utilization of maternal healthcare services. The anticipated outcomes are designed to guide policymakers, healthcare practitioners, and program implementers in the effective integration of incentive-based interventions within maternal health strategies, thereby augmenting service uptake and ultimately enhancing both maternal and neonatal health outcomes in rural Nigeria.[2]

MATERIALS AND METHODS

Study sites and sampling

This research was carried out across twelve (12) rural communities situated within Benue State. Benue is anticipated to have a population estimate of 6,888,980 individuals in the year 2023, derived from an annual growth rate of 3%, encompassing a total land area of 32,518 square kilometers.[19] The state of Benue is characterized by three predominant ethnic groups, which include the Tiv, Idoma, and Igede; nonetheless, English serves as the official language within the jurisdiction of Benue State. English is recognized as the official language in the state of Benue. Furthermore, Benue State encompasses twenty (20) significant rural Local Government Areas (LGAs), which have been systematically categorized into three distinct senatorial zones designated as A, B, and C, from which selections were made. Recruitment of participants for Focused Group Discussions (FGDs) involved participants who were selected by purposive sampling technique due to similarities in the units of sampling (parity, age group, and socio-economic characteristics). A total of 72 pregnant women were interviewed; 24 women from each senatorial area were selected purposively and stratified based on literacy, age group, and parity for the FGDs.

Data Collection

Data was obtained using the Focused Group Discussions (FGD) guide. FGDs are particularly suited for capturing new information on the participants' live accounts of events at both the individual and group levels. Twelve (12) research assistants were recruited. They included: four (4) Resident doctors, four (4) Community Health Officers, and four (4) Community Health Extension workers from the Community Health Department of Benue State University Teaching Hospital (BSUTH). The research assistants were trained for five days on the research protocol. Information about their roles, responsibilities, and expectations during the study was spelled out to them. This included the conduct of FGDs particularly using the tools. The FGDs explored the following themes – Antenatal care services utilization and barriers, hospital utilization for deliveries and barriers. All the FGDs were conducted in Tiv, Idoma, and Igede which are the local languages. They were facilitated by research assistants with proficiency in the local languages and good knowledge of the culture and traditions. Focused group discussions were conducted by the research team using the FGD guide.

The sample size attained was based on theoretical saturation, which is the point at which the newly collected data no longer provides additional insights.

Nine FGDs consisting of eight women in each group were conducted among pregnant women residing in the three selected communities of each senatorial zone. The FGDs were carried out after stratifying the women based on literacy level and parity. To stratify based on literacy, those with primary education were regarded as those with lower formal education. Respondents with completed secondary and tertiary education were regarded as those with higher formal education. Stratification by parity was done by categorizing the women into those with one to four deliveries and those with more than four deliveries. The focused group discussions (FGDs) were conducted in three community halls. Before each FGD, the moderator asked all participants to introduce themselves. After the introductions, the moderators explained the purpose of the discussion, and urged participants to contribute freely to

the discussions. Each FGD was led by the moderator and was conducted in the native language (Tiv, Idoma, and Igede), and lasted for an average of 45 minutes. A digital voice recorder was used to record the discussions, while one of the research assistants took key notes on the discussion. After each FGD the moderator and Note-Taker reviewed the notes together while listening to the voice recorder to harmonize the findings which were transcribed and saved.

Data analysis

Data was analyzed using Nvivo-12 Pro for emerging themes. Thematic analysis was used to identify a narrow range of themes reflecting the textual data using the following steps: The English transcripts were read several times by 2 of the authors in order to familiarize themselves with the raw data. Qualitative data files(transcripts) were imported into Nvivo-12 Pro and the results were coded by location and frequency into nodes. Frequent nodes were categorized into themes. The coding frame comprised the major issues identified as ANC utilization and barriers, health facility deliveries utilization and barriers as well as the potentials of Mama kit on health facility utilization for delivery. Each transcript was then coded separately by the two authors according to the framework. On completion, they each revisited the framework and divided further using emergent subthemes. The narratives were then recoded where relevant, under these subthemes. Quotes were chosen to represent a typical response, unless where stated, to illustrate a deviant opinion.

Ethical clearance

Ethical clearance was sought from the Ethical Committee of Benue State Ministry of Health and permission was obtained from the local government chairmen of selected LGAs. An advocacy visit was paid to village heads of selected communities to inform them about the study and solicit their support. Informed written consent was also obtained from the participants before the study.

RESULTS

The majority of the respondent where less than 24 years (72.2%), and literate (76.4%). Most of the respondents were farmers (73.6%), who had between one to three children and had most of their deliveries in a health facility (Table 1)

The majority of respondents agreed that they come for antenatal care (80.0%) according to the appointment made at the health facility.

Some of the respondents had this to say: *"I attended antenatal care according to the scheduled date by the Nurses in our hospital. I was not attending haphazardly"* (A non-literate 18 year old primigravida in Vaase) *"Yes, I attended. In fact, the moment I got my Mama kit, I was always at the clinic as scheduled. Even the text messages made me know that the project is a serious onesure I attended more than 5 times before I delivered"* (A literate 38 year old multigravida in Mbaiyase) (Figure 1).

The reasons for ANC utilization were evenly distributed among the respondents. Some of the women said they came to receive medications (33.3%), some said it was because of an unexpected sickness (33.3%) while others said they attended because they were pregnant (33.3%).

Some of the respondents had this to say: *"Immediately I discovered that I was pregnant, I started going for antenatal care because I didn't want to lose this child. I had lost two pregnancies in the past because of late antenatal care attendance so I didn't want this to repeat again"* (A non-literate 28-year-old multigravida in Ikyogen) *"I started coming for antenatal care because of vomiting that will not stop early in my pregnancy. I would vomit, get weak and would not be able to do any work all day"* (A non-literate 24year old multigravida in Vaase. (Figure: 2)

While exploring the barriers to ANC attendance, the majority of respondents said they had no reason not to attend(64.4%), others reported absence of doctor (21.4%), absence of test/investigations in the health facility(7.1%), and bad attitude of the health workers (7.1%)

A few respondents were captured saying; "*There is nothing stopping me from coming for antenatal clinic in our health facility. My house is very close to the clinic so all I need is just walk here and the health workers are very understanding"* (A literate 25-year-old multigravida in Okpoga) *"I went for one delivery at Family Support Clinic and the women kept talking to me disrespectfully. They will say I should shut up, that am not the only one that has delivered in this life? The men spoke better"* (A literate 28 year old multigravida at Anyiin) (Figure 3).

The majority of the participants that had utilized the health facility did so for the following reasons. Most of them attended the facility for delivery because of the treatment of complications (33.0%) they get during ANC which they hope would be offered at delivery as well. A greater majority said, they attended so that if any complication arise(33.0%) and investigations (33.3%), they would be taken care of (14.0%). A few reasons respondents said they wanted to be attended by a skilled health professional (8.0%).

Some of the respondents had this to say: *"All the needed test are available at the hospital especially when a woman is bleeding. They can easily check the blood to know if she may need a transfusion in labour. TBA may not be able to handle but the hospital workers will tackle them within a very short time"* (A non-literate 31 year old multigravida in Vaase) *"The head of the hospital in our community is very kind and skillful. He takes our deliveries without problems. The last time I came to the hospital under emergency, I had delivered at home but the placenta wasn't coming out so I was rushed to the hospital. It was the Nurse in our clinic that delivered the placenta in a very short time. They saved my life"* (A non-literate 25 year old multigravida in Abwa) (Figure 4)

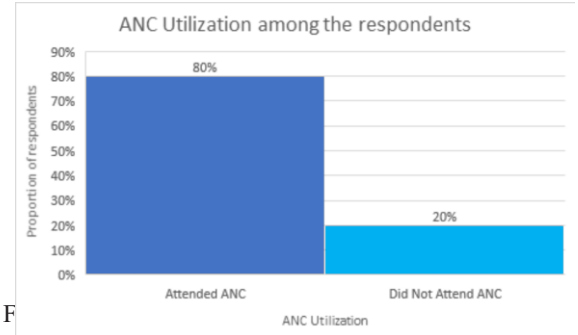
Majority of the respondent said payment for delivery items (92.0%) was the main draw-back for delivery at the health facility in a health facility. Some respondents said, the cost of services at delivery wasn't much, however the cost of items used for taking their delivery remain the major challenge. Some of the respondents had this to say: *"When we come to deliver, the health workers don't isolate the items for us to pay. We are asked to pay a lump some money like N7000. This is expensive and can deter many pregnant women from coming to deliver in health facilities"* (A 27-Year-old literate multigravida from Ulam) *" For me my experience is like this, when I came for delivery, the doctor used only his hand gloves but did not collect the money for*

only that. He gave me a charge of N4000 and that was all"(A 30 Year-old non literate multigravida from Otukpo) *"The payment for only delivery is like N1000 and sometimes even less this is not much" "*(A 21 Year-old literate multigravida from Daudu) *"Even if you don't have money, the health workers here take your delivery and wait for your husband to pay later provided you have delivery items"*(A 24 Year-old literate multigravida from Anyiin) (Figures 5 and 6)

Exploring the potentials of Mama kit on the utilization of health facilities for delivery, all the respondents 100%) agreed that when given a free delivery kit (Mama kit), they would all deliver in a health facility since it would eliminate their financial difficulty of having to procure one at expensive price. Some respondents had this to say: *"Yes, this is first time someone has come to our community with such a great project. Some of us used to attend antenatal care regularly and deliver in our health facility without the mama kit. Now that you have provided these items for us, it will encourage us the more"* (A non-literate 26 year old multigravida in Obarike) *"We shall be coming to deliver in the hospital, if the government will decide to remember us by giving us mama kits free of charge*" (A 24 years old literate multigravida in Ikyogen) (Figure. 7).

Table 1: Socio-demographic Characteristics of the participants

Variable	Frequency (%)
Age	
<24	**52 (72.2)**
24-34	**18(25.0)**
35-45	**2(2.8)**
Education	
Literate	**55(76.4)**
Non-literate	**17(23.6)**
Occupation	
Farming	**53(73.6)**
Business	**18(21.3)**
Civil Servant	**1(5.1)**
Parity	
0	**12(16.6)**
1-3	**47(65.3)**
≥4	**13(18.1)**
Place of last delivery	
Home	**22(37.3)**
Health facility	**37(62.7)**



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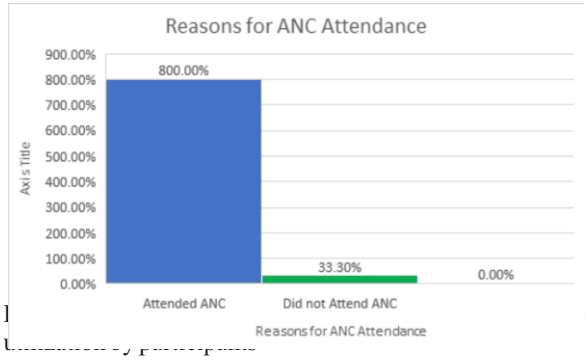

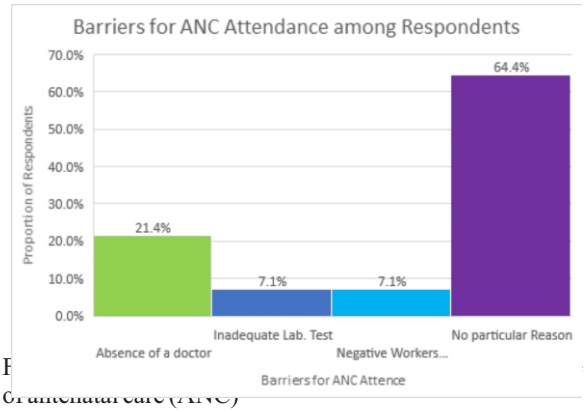

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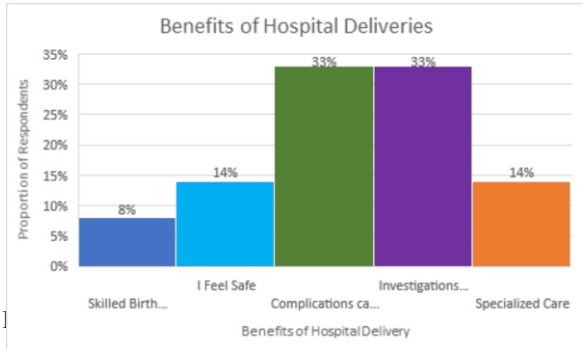

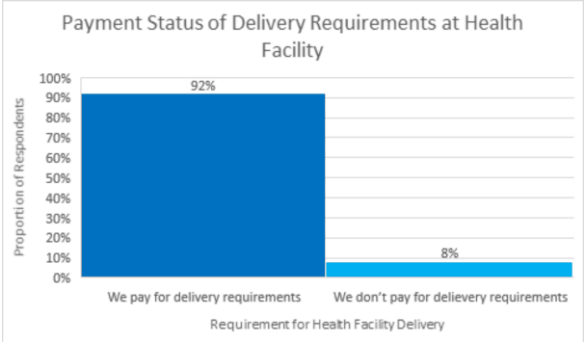

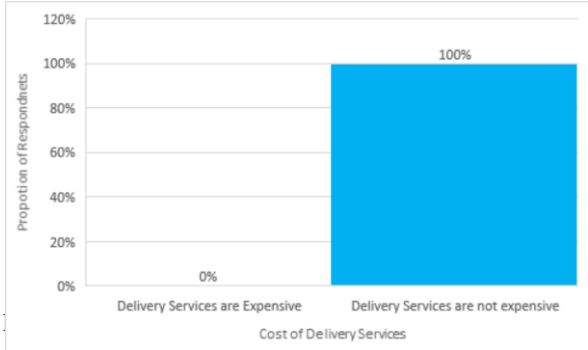

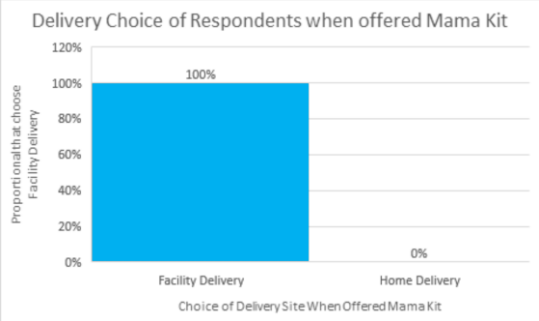

Figure 7: Health facility delivery with Mama kit

DISCUSSION

In this study, the access to antenatal care (ANC) was generally good (80%) as majority of the participants agreed that they kept to their appointment date as given at the health facility. However, some participants responded that the reasons why they attended ANC was because they were given medications that are effective for their problems while others said they attended because they had major health problems that made them to seek care. This finding is similar to findings in studies in Kwara and Gombe in Nigeria where the respondents said the facilities they attend provide good privacy, good attitude and safe delivery, and also treatment for any problems that may arise in pregnancy very well.[20,21] Studies carried out in Asia, showed contrasting results where household wealth, urban living, and husband's good educations were the reasons why women attended ANC.[22]

When women are well taken care of at ANC there is a higher likelihood of health facility delivery. This in turn results in favorable outcomes for both mothers and babies.

Findings on barriers to ANC utilizations in this study showed that majority of them said there was no barrier to ANC attendance. Others said the absence of a skilled birth professional, absence of equipment for investigations as well as bad attitude of health workers would deter them from attending ANC. This finding is in contrast to a study in Indonesia, Abeokuta, Kano and Kaduna where long waiting time, negative diagnosis, long distance to health facility, transport money, inadequate health workers and overcrowding were barriers to ANC attendance.[23–26] The barriers identified by these participants are key to closing the gap of poor ANC attendance in Nigeria and beyond.

Results from this study found that pregnant attendees of health facilities was good. These women utilized health facilities for reasons such as fear of complication, cheap cost of services at delivery. Presence of a skilled birth attendant, treatment of health challenge during ANC and availability of equipment for investigations. Studies carried out in Laos, Plateau and Ebony, Nigeria found similar results where, fear of complications, previous still birth, quality of care, TBA friendliness and care, husbands support and availability of medical equipment assured pregnant women of safe delivery in those health facilities.[27–29] A study in Nepal, South Asia found different results in which, husband good education and occupation, as well as Television education were the main reasons why women attend health facilities for delivery.[30] This study found that the high cost of delivery items and bad attitude of health workers were the major barriers towards health facility attendance. This finding is similar to results of studies in Laos, Ghana, South West and North West Nigeria where, high service cost, inadequate essential medicines, inadequate equipment, bad attitude of health workers and ignorance were barriers towards delivery in a health facility.[14,27,31,32]

On findings regarding the potential of a free Mama Delivery Kit as an impetus for delivery in a health facility, results from this study found that all the respondents agreed that they would deliver in a health facility where these kits are provided in the presence of a skilled birth attendant. Some of the participants said that when the Mama Kits are provided, they would inform others in the village and encourage them to come. This finding is similar to studies carried out in Laos, Uganda, Tanzania, Gombe and Jigawa States where free delivery policy, free Mama Kit increased the perception, ANC attendance as well as utilization of health facilities for deliveries.[10,13,27,33,34] In sub-Saharan Africa, low socioeconomic status and poor leadership are the main indirect reasons why women do not deliver in a health facility. When these gaps are closed using simple interventions, avoidable maternal deaths would be averted.

CONCLUSION

This study found high utilization of antenatal and delivery services, driven by quality care, skilled attendance, and affordable services. Major barriers included poor staff attitudes and delivery costs. Provision of free Mama Delivery Kits was universally accepted and may significantly improve health facility utilization and safe maternal outcomes.

RECOMMENDATIONS

Improving community education is essential, as it predicts knowledge. Periodic health talks and awareness campaigns on antenatal care and facility delivery, targeting women, should be implemented through government and non-governmental organizations, ensuring active community involvement for sustainable outcomes**.** In addition, job creation through formal and informal sectors as well, and skill acquisition programs should be enhanced to improve the earnings of women and girls in particular to improve access to ANC.

LIMITATIONS

Some participants who traveled to deliver outside the study communities during the study period could not be accounted for. The participants that were involved were

those found at the schedule of the FGDs.

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CONFLICT OF INTERESTS

I declare that I have no competing interests

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