Original

Assessment of Birth Preparedness and Complication Readiness among Antenatal clients in Kaduna North Local Government Area of Kaduna State, Nigeria: Report of a Qualitative study

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Abstract

Background: Birth preparedness and complication readiness (BP and CR) are strategies to reduce the three delays that contribute to high maternal mortality and morbidity in developing countries. Awareness and practice of BP and CR in Nigeria among antenatal clients is poor in most health care facilities in the Northern Nigeria. The study aimed to explore knowledge and practice of BP and CR among antenatal clients attending primary health care centers in Kaduna North Local Government (KNLG) Area of Kaduna State Nigeria.

Method: A qualitative study design using Focused Group Discussions (FGD) was conducted. Four Primary Health Care facilities (PHCs) were selected based on the high turnout of antenatal clients and a total of 8 FGDs were conducted. The discussions were facilitated by guide a focusing on: knowledge of, attitude towards and perceptions of BP and CR among antenatal clients. Data was collected with a tape recorder and note-taking from May to June, 2017. The data were transcribed verbatim and investigated using a content analysis.

Result: Two themes were identified: poor knowledge of the concept of BP and CR and Poor practice of BP and CR. The antenatal clients demonstrated poor knowledge and practice of BP/CR and preferred home delivery.

Conclusion: This study revealed poor awareness and practice of BP and CR among antenatal clients in KNLG, Nigeria. There should be public awareness of this concept.

Keywords: Birth preparedness, complication readiness, antenatal clients, qualitative study, Kaduna state.

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Introduction

Birth preparedness and complication readiness (BP/CR) is a strategy to promote the utilization of skilled maternal and neonatal care on the assumption that preparing for childbirth and being ready for complications reduces delays in obtaining care.[1,2]

The "three delays" model has proved to be a useful tool to identify the points at which delays can occur in the management of obstetric complications, and to design programs to address them. The first two "delays" (delay in deciding to seek care and delay in reaching appropriate care) relate directly to access to care, encompassing factors in the family and the community, including transportation. The third delay (delay in receiving care at health facilities) relates to factors in the health facility, including quality of care.[3] Unless the three delays are addressed no Safe Motherhood Program can succeed as Safe Motherhood Initiative means ensuring all women receive the care, they need to be safe and healthy throughout pregnancy and childbirth.

Poverty is one of the major health determinants. Poor mothers are at high risk of developing pregnancy-related complications.[4] This is because they are not financially able to pay for the required services. Delivery of babies is not free of charge in many African countries. Indeed, it was never without a cost in traditional societies not even in countries where delivery is declared to be free in public facilities. The cost of accessing care, both direct and indirect can be prohibitive. Almost 95% of all maternal deaths occurred in low and lower middle-income countries in 2020, and most could have been prevented.[5] In many societies in the world, cultural beliefs and lack of awareness inhibit preparation in advance for delivery and the expected baby. Since no action is taken before delivery, the family tries to act only when labour begins. Majority of pregnant women and their families do not know how to recognize the danger signs of complications. When complications occur, the unprepared family, will waste a great deal of time in recognizing the problems, getting organized, getting money, finding transport and reaching the appropriate facility.[6]

Several studies have shown inadequate knowledge and practices of birth preparedness and complication readiness among pregnant women.[7-9] However, to understand the perception and knowledge of BP and CR, a qualitative study needed to be carried out at the nearest health centers to the community.

Method

Study area

The study was carried out at Kaduna North Local Government Area (KNLG) of Kaduna state.[10] It is one of the metropolitan local government areas in Kaduna state. The LGA has an estimated population of three hundred and sixty-four thousand, five hundred and seventy-five (364,575) by 2006 census projected to be 492,100 in 2016 (National Population Census, 2006). There are different ethnic groups among which are Hausa, Gbagyi, Bajju, Atyab, Ninzom, Koro, Yoruba, Igbo, Nupe, Igala, foreign expatriates and all other mixed tribes due to its metropolitan nature. The two major religions practiced are Islam and Christianity. The people within are predominantly civil servants and traders. Pregnant women constituted 24,036 (5%) of the population. [10]

The Local Government Area (LGA) has 12 political wards within which lies 14 health facilities, 11 PHCs and 3 health clinics. Four out of the 11 PHCs such as Badarawa, Zakari Isah, Ungwan shanu, Ungwan sarki PHCs were selected based on the workload (i.e based on the antenatal clinic attendants and the delivery rate). This was because the **more** the number of clients, the **more** the likelihood of adopting the Focused Antenatal Care practices.

All the PHCs conduct normal deliveries and refer complicated cases either to Yusuf Dan-Tsoho Memorial General Hospital or Barau Dikko Teaching Hospital, Kaduna. The laboratory scientists in all the PHCs conduct basic laboratory tests such as Packed Cell Volume, Blood group, Genotype, Urinalysis etc.

Study design and Sampling method

The qualitative study design was adopted for the study. Purposive sampling was done across the 4 selected PHCs based on parity yielding 8 groups. The antenatal clients were categorized into low parity (≤ para 4) and high parity (> para 4) groups. One FGD was conducted in each group. A total of 8 Focused Group Discussions (FGDs) that included both Para 4 and below and above Para 4 antenatal clients were conducted in the 4 selected PHCs (2 in each PHC). The FGDs were held in the morning before their antenatal care services started.

At Badarawa PHC, the Para 4 and below group had 48 participants while above Para 4 had 50 clients. Discussions at Ungwan Shanu PHC comprised 12 participants in the Para 4 and below group and 14 participants in above Para 4 group. At Zakari Isah PHC, the Para 4 and below group had up to 24 participants while above Para 4 group had 20 clients. At Ungwan Sarki, each group had 8 clients. The selection of the participants was based on their willingness to participate.

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Data collection

The instruments for data collection were interview guide that sought to determine the knowledge and practice of BP and CR among the participants. The FGD were carried out by the researcher and research assistant who is a female medical doctor recording and taking notes of all the discussions until saturation point was reached when enough data were collected to draw necessary conclusions, and any further data collection would not produce value-added insights. The interview guides were translated into Hausa local language and back translated into English language to retain the original meaning. This was because almost all the participants understood Hausa language. The credibility, dependability, conformability and transferability of the data were ensured.

Each FGD lasted between 30-45 minutes under the following questions guide

1. Knowledge of BP/CR
   - ✓ Knowledge of the obstetric danger signs (key danger signs during pregnancy, labour, delivery and post-partum).
   - ✓ Knowledge of the components of BP/CR
   - ✓ Source(s) of knowledge
2. Attitudes towards BP/CR practices
   - ✓ Identified place of delivery or not
   - ✓ Identified Skilled Birth Attendant or not
   - ✓ Identified means of transportation or not
   - ✓ Identified a blood donor or not
3. Perception on BP and CR
   - ✓ Believes in BP and CR concept
   - ✓ Factors that facilitate BP and CR practices
   - ✓ Factors that mitigate BP and CR practices

Data analysis

The data from FGD were transcribed, coded, categorized and subjected to content analysis. In the first step of the analysis, the transcriber and the researcher played and listened to the audio recorder several times in full before transcription began. Notes were taken and headings were created in the text after which the notes and headings were transcribed onto a coding sheet. The next step involved grouping the data and reducing the number of categories by combining similar headings into broader categories. The emerging themes were identified in line with the objectives of the study and the guiding questions.

Two themes and 2 sub-themes emerged, and these were:

1. Poor knowledge of the concept of BP and CR
2. Poor practice of BP and CR

Sub-themes:

2.1 Poor attitude towards BP and CR
2.2 Poor perceptions on BP and CR

Results

The 2 themes and the 2 subthemes which emerged during the analysis are presented below:

1. Poor Knowledge of BP/CR

Participants did not understand the danger signs of pregnancy. Symptoms of pregnancy were mentioned as the key danger signs:

"A woman may feel generalized body weakness, nauseated or even vomit. She may also have lower abdominal pain, lack of blood or even lack of water in her body". (Pregnant woman > Para 4, Badarawa PHC).

"Sudden loss of blood" was mentioned as one of the danger signs during labour. However, other danger signs were not mentioned during the discussions. This is summarized in the statement below:

"Of course, sudden loss of blood is the worse problem encountered in labour". (>Para 4 pregnant woman, Badarawa PHC).

Participants gave same danger sign (mentioned above) that occurs during labour as the danger sign that could occur during delivery. They believed labour and delivery occurred together.

After delivery, excessive bleeding after delivery was a common danger sign known by the participants. A participant pointed out:

"A woman may deliver safely and may bleed excessively thereafter". (≤ Para 4 pregnant woman, Ungwan Shanu PHC).

Participants also mentioned "Tsinkau-tsinkau" meaning convulsions as one of the danger signs that could occur after delivery. However, other danger signs that occur after delivery were not mentioned.

Knowledge of BP and CR was very inadequate among the participants. Participants were in the view that antenatal care services were the major components of BP/CR. This is summarized in a statement made at Badarawa facility:

"Attending antenatal clinic regularly and complying with intake of routine antenatal drugs are the only preparations for birth". (> Para 4 Pregnant woman, Badarawa PHC).

Health workers and radio were mentioned as their sources of knowledge of BP and CR:

"We hear from the radio that we should keep blood, and also in the hospital, health workers give us a paper for delivery items to take home". (≤ Para 4 pregnant woman, Ungwan Shanu PHC).

2. Poor practice of BP and CR

2.1 Poor attitudes towards BP/CR practices

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Participants believed that no woman knows where she will deliver except God:

"No woman will ever tell you this is where I will deliver" (≤ Para 4 pregnant woman, Ungwan Shanu/Ungwan Sarki)

When the participants are made to know that even though we all believe that God is in control, however, you may have a plan on where you want to deliver your child. However, the participants from all the PHCs had same believe of that home delivery is better: Their statements were summarized below:

"If you really want to conceal your privacy is better you deliver at home"

"By the grace of God, I will deliver at home because one cannot pray for hospital delivery except if there is a problem. However, if a woman delivered at home, she can go to the hospital for check up afterwards" (≤Para 4 pregnant woman, Badarawa PHC).

"I delivered all my 5 children safely at home". (> Para 4 pregnant women, Ungwan Sarki PHC)

Concerning identification of Skilled Birth Attendant, participants mentioned that they usually call a midwife to assist when they are in labour while some delivered alone unattended to or call an elderly woman with experience to cut the umbilical cord:

"Some call midwives, some deliver by themselves, just like me; I deliver alone and cut the umbilical cord by myself without the help of anybody". (≤ Para 4 pregnant woman, Ungwan Shanu PHCs).

"All my deliveries were unattended to, no nurse, no body. I only call an elderly woman in the house who had experience to assist in cutting the umbilical cord" (> Para 4 pregnant woman, Ungwan Sarki PHC).

Participants were not aware of the need to identify a blood donor. They were with the view that the Hospital should make provision for blood donation if there is a problem:

"Sincerely speaking, there is no anything like blood donation in this hospital, you will only be informed if you have any problem". (≤ Para 4 pregnant woman, Ungwan Shanu PHC).

"I thought the hospital will provide that". (Primigravida, Zakari Isah PHC).

"If there is a problem, one can look for someone to donate". (> Para 4 pregnant woman, Zakari Isah).

For identifying means of transportation, the interviewed pregnant women believed that whenever there is a problem during labour at home, they can look for a car or other means of transportation.

"If one perceived there is going to be a problem then one can look for a car but is not that we specifically arrange a car for our transportation during labour". (≤ Para 4 pregnant woman, Ungwan Shanu).

"This is an era of keke na pep, so even if it is night one can still get it". (≤ Para 4 pregnant women, Ungwan Shanu, Ungwan Sarki, Badarawa PHCs).

Discussion with the participants revealed that saving money could be difficult in this period.

"This period that everyone is looking for what to eat how could it be possible to save money?" (participant at Ungwan sarki facility)

"Our husbands earn small money to cater for our living" (participant at Badarawa facility)

2.2 Poor perception on BP and CR:

Participants believed in preparation for birth but they did not support for readiness of complication as they were not hoping for complications. This is summarized in the statement below:

"Is good to prepare for the birth but no one is hoping for complication, by God grace all of us will deliver safely." (>Para 4 women, Badarawa, Ungwan Shanu, Ungwan Sarki PHCs).

Participants mentioned co-operation of pregnant women as a major factor that could facilitate BP and CR practices because it is their duty to encourage their husbands on what they are informed about BP and CR:

"Until women co-operate in attending antenatal care services so that whatever information they get; they communicate with their husbands in a manner their husbands will understand to co-operate with them". (>Para 4 pregnant woman, Badarawa PHC).

They also strongly believed that the government is one of the factors that can facilitates BP and CR practice:

"This is a period of extreme poverty even what to eat is a problem, therefore government must intervene. Most of our husbands assumed everything was free in the hospital. Sometimes we fight with our husbands just because of 200 Naira. The government should please inform people through the mass media including the hospital of the poor people like this hospital that, the service is not free because it is causing a lot of problems in our matrimonial relationship. For instance, we assumed antenatal drugs are free whereas is not". (≤ Para 4 pregnant woman, Ungwan Shanu PHC).

Noncompliance of their husbands with some of the strategies was mentioned as the major factor that mitigates BP and CR practice.

"Our husbands need to be aware of the importance of these strategies even through the mass media because even when we tell them, they will not believe" (≤ Para 4 pregnant woman, Badarawa PHC).

Discussion

Poor Knowledge of BP and CR

Pregnant women attending PHCs in KNLG area have demonstrated poor knowledge of the obstetric danger signs. The antenatal clients irrespective of their parity did not know the key danger signs during pregnancy. They could not differentiate between the symptoms of pregnancy and the danger signs. This is consistent with the findings in many studies which reported limited knowledge of obstetric danger signs such studies as in Ethiopia and Eastern Democratic Republic of the Congo.[11-13] However, the qualitative survey carried out by Raymond et-al in a Kassena-Nankani community of Northern Ghana, revealed knowledge of obstetric danger signs were common among the participants. Community

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members were able to list a wide range of obstetric danger signs. These included vaginal bleeding, vomiting, headaches, dizziness, edema of the legs, abdominal pain, waist pain, fever and prolonged labour.[14]

The findings of blood loss during labour and delivery in this study was also supported by a community based cross sectional study in Southern Ethiopia, where the commonest danger sign experienced after delivery was severe vaginal bleeding among others.[15]

The study in Edo State, Nigeria revealed higher level of knowledge of obstetric signs compare to the Kaduna study. Frequently mentioned signs during pregnancy were bleeding and severe abdominal pains and the most common danger sign during labour was severe vaginal bleeding, and in the postpartum, smelly vaginal discharge.[16] Like the Kaduna study, the study in Edo was also carried out at PHCs though it was a cross sectional study.

There was lack of knowledge and awareness of BP and CR concept as well as the components of BP and CR among the participants. The participants mentioned antenatal care services as the major components of BP and CR. Though the women had demonstrated the importance of attending ANC, their awareness on the concept of birth preparedness in this study was low. This was because the goal-oriented interventions of Focused Antenatal Care, which included BP and CR, were yet to be implemented in most of the PHCs facilities across the state. Pregnant women were cared for on the basis of risk assessment in the traditional approach to antenatal care. They were not usually counseled on the importance of recognizing danger signs, saving money for childbirth, and identifying a means of transport before delivery, among other issues of BP/CR matrix.

The participants that mentioned blood donation as one of the components of BP and CR got this information from their health workers. The community-based cross-sectional study conducted among pregnant women of second and third trimester of pregnancy in South Wollo Zone, Northwest Ethiopia, revealed that the majority heard about the term BP/CR and their source of information were health care providers.[17] Though, the Ethiopian study is a quantitative survey carried out on pregnant women in the second and third trimester, at community level, this study in Kaduna, Nigeria was a facility based qualitative survey which did not specified the trimester of the pregnant woman.

Poor practice of BP and CR

- ✓ ***Poor attitudes towards BP and CR practice***

During the discussion with the antenatal clients, their attitudes towards practice of most of the components were assessed. The only component that was practiced among them were the provision of the delivery items. The participants identified home for their delivery either alone, with an experienced elderly woman or call Skilled Birth Attendant when the need arose. They also considered getting transportation during labour. The reasons they gave for preference of home delivery were concealment of their privacy, previous normal deliveries at home, not hoping for hospital delivery as it is meant for complicated cases among others. In Southeast Ethiopian study, the major reasons given by the respondents who delivered their last child outside health facility were; their labour was smooth and short, previous home delivery was normal, lack of person accompanying them to the health facility, presence of TBA and getting closer attention from relatives in their houses.[18]

The participants that identified hospital for their deliveries in this Kaduna study were those with previous history of obstetric complication as demonstrated by a participants who had excessive bleeding in the previous pregnancy. Obstetric complications during the recent pregnancy was another important determinant of place of delivery; women who faced problems (complications) related to the most recent pregnancy were nearly 9 times more likely to give birth at health facility than those respondents who had no obstetric complications in the most recent pregnancy.[18] This also agreed with results from other studies conducted in Sheka in Ethiopia.[19]

The preference of home delivery by most of the participants in this study could be attributed to the lack of adequate knowledge on obstetric danger signs. One of the expected effects of knowledge about an issue was changed on individual attitudes. Women who knew danger signs or possibility of obstetric complications and the importance of a skilled provider and the care provided tend to use delivery services by a skilled provider.[20]

The findings in this study revealed that participants did not identify blood donor except when the need arose as was also noted in some studies in Edo State, Nigeria and West Bengal India.[16,21]

The participants in this study indicated clearly that it would be difficult to save money during this period. The reasons were the poor economic status of the country and the poor financial status of their husbands. In Edo State, Nigeria, the practice of saving money for any obstetric emergency was also low despite their higher level of awareness on BP and CR. The reasons could also be due to economic situation of this country.[16]

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- ✓ ***Poor perceptions on BP and CR***

The discussion with the participants revealed that they believe in birth preparedness by attending ANC. However, they did not believe in complication readiness as they didn't anticipate or hope for any complication during their delivery.

The major factors that influence BP/CR in this study were: financial constraint, awareness of their husbands on BP/CR concept and the government assistance. Furthermore, when women explain the concept to their husbands in a manner they will understand, compliance on BP and CR will be high. This had indicated that men have important role in health decision making. Just like in other studies; financial power and gender roles contribute to inadequate birth preparedness in Southeastern Tanzania and rural Malawi.[22,23] The study in Southern Mozambique also revealed the important role men play in decision making and financial support for maternal health care issues.[24]

The study by Judith and Jo Leonardi on male involvement and maternal health outcome showed that Male involvement is associated with improved maternal health outcomes in developing countries. Their results underscore the need to shift from women-only maternal health services to 'male-friendly', couple-services.[25]

Limitations

The number participated in FGD in one of the LGA exceeded the recommended number, this could hard to give everyone enough time/space to speak.

Conclusion

This study revealed a lack of knowledge and practice of both BP and CR among antenatal clients in PHCs. Pregnant women were not acquainted with the knowledge of most danger signs during pregnancy, labour, delivery and after delivery. They believed in birth preparation but they didn't believe in getting ready for complications as they didn't anticipate any complication. Financial constraints, husbands and government commitment were identified as the major factors that could influence BP and CR practices. There should be increase awareness on the importance of BP and CR through partnerships with media houses and the use of information, education and communication materials on information dissemination in the local language.

Declarations

Ethical consideration: Ethical approval was obtained from the Human Research and Ethical Committee of Barau Dikko Teaching Hospital, Kaduna. Informed consent was obtained from the participants for the recording and taping.

Conflict of interest: *Author declares no conflict of interest.*

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