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Women's Perceptions about Ante-natal Care Access, Marrere Hospital, Nampula, Mozambique, 2014.

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Abstract

Introduction: Mother and newborn mortality rates in Mozambique are the highest in the Eastern African region. Less than four ante-natal visits and low rates of institutional delivery by trained birth attendants are associated with maternal and newborn deaths in the literature. This study aims to understand the perceptions of women in Marrere, Nampula, regarding ante-natal care and determine the barriers to accessing primary health care services.

Methods: Descriptive qualitative study, with researcher led semi structured interviews of pregnant women and women who have given birth within the last year who presented to the Marrere Hospital Mother and Child Health clinic.

Results: We interviewed a total of 30 women, 25 were in their 3rd trimester of pregnancy and five had given birth within the last year. The 30 women had an average age of 24 years and a mean number of 3,7 pregnancies per women. The group had a low knowledge level regarding need and reasons for ante natal care (13 women, 43%); the majority of the participants presented for their first ante-natal visit in the second trimester of pregnancy (18 women, 60%). The majority of women were illiterates (16 women, 53%). Women (9, 27%) stated that "bad luck" was the cause of their miscarriages and (25 women, 83%) said witchcraft is a strong risk for pregnancies and miscarriages, thus women try to hide their pregnancy and wait until late in the pregnancy to seek ante-natal care.

Discussion: The barriers to ante-natal care access for women in Marrere most commonly mentioned in our study were: 1) lack of knowledge regarding reproductive health and ante-natal care; 2) fear of witchcraft so women don't tell anyone they are pregnant and only come to anteSnatal visits later in pregnancy or not at all; 3) social and economic difficulties, such as lack of decision power in the family and no or low income, as reported by other studies in Mozambique. The majority of this group points to the fear of witchcraft as a main reason for late ante natal-care.

Conclusion: solutions for knowledge deficit and witchcraft beliefs may be to involve traditional healers, traditional birth attendants, priests, community members and pregnant women in ongoing mother and child health care promotion and education. Using a train the trainer method to enhance health care promotion could be effective.

Key words: ante natal query, access, barriers, pregnancy risk, maternal health, Nampula, Mozambique.

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Introduction

Pregnancy is a vital experience for women and their families, involving physiologic changes, emotions and anxiety. This requires the health professional to have an adequate level of knowledge in all these areas to offer appropriate care to pregnant women. (1) Starting with the first consultation the health professional must analyze risk factors, provide safe motherhood education, evaluate the woman's social environment and calculate gestational age of the fetus and probable delivery date. (2-5) Ante-natal care (ANC) begins before conception and carries through to delivery. It includes family planning, disease screening, control and treatment and safe motherhood education. This will help to assure mother's health and promote good fetal development, thus reducing maternal and new born morbidity and mortality.(6-8)

Research done in Brazil showed that late ANC first consultation (87% of women presented late) delayed several disease diagnostics, interfering with mother and fetus heath (hypertension, non gestational diabetes, anemia, syphilis, HIV infection) and preventing treatment and preventive activities (tetanus vaccine, prevention mother to child HIV and syphilis transmission). (9) Other studies in Brazil point to other reasons to explain absent or late ANC: unknown pregnancy, personal problems (not wanting to be pregnant, not knowing the importance of ANC, economic, labor, school or support difficulties); and health service access barriers (difficulties to make a consultation, restricted schedule, poor treatment by health care providers, transport difficulties). (10-12)

Difficulties to access ANC are associated with high abortion rates and complications causing 29% of maternal deaths in Uruguay (comparing with a world rate of 13%). In a public hospital in Montevideo, unsafe abortion was responsible for 48% of maternal death. (13)

It is cricial to estimate pregnancy risk and identify main obstetric syndromes (early pre eclampsia, premature delivery and low intra uterine growth, gestational diabetes) to prevent maternal morbidity and mortality, demanding a more sophisticated level of care and making the health professional's tasks more complicated. (14-18)

Mozambique has a big challenge with high maternal mortality rate, even if it has been improving in the last few years (520 deaths in 100.000 pregnancies in 2005, 480 in 2013, 408 in 2015). (19) In 2011 it was estimated that 91% of pregnant women in Mozambique attended at least one ANC. (20) But in the last two years at Marrere Hospital (MH) we have a lower frequency of ante-natal consultations, varying with the seasons but systematically under the expected targets (table I). (21)

Table I: Access to ANC and institutional delivery at MH.

Period Mother and Child Health Service	1º Semester 2014	2º Semester 2014	1º Semester 2015
Number of pregnant women expected at ANC (note)	1.364	1.362	1.398
Number of pregnant women attending ANC	1.209	820	1.243
% of pregnant women attending 1rst ANC	89%	60%	89%
Number of pregnant women with institutional delivery	712	119	803
% of pregnant women attending 1rst ANC with institutional delivery	59%	15%	64%

Note: the number of expected pregnant women was calculated with population and rate of women of child bearing age using population's census 2007.

Our study aims to evaluate pregnant and postpartum women's perceptions about ANC services. The objectives are: identify causes for late ANC consultation; identify barriers to ANC consultation access and evaluate the knowledge and confidence levels regarding pregnancy and ANC services.

Methodology

Descriptive qualitative study, methodologically based on content analysis.

The study was done in Marrere Hospital (MH), a secondary care facility in the periphery of Nampula city, North Mozambique. Health services provided here include primary ANC consultations, maternity and healthy and at risk children consultations. The catchment area is very large, with over 50.000 residents mainly young people living in homes made out of local materials with no water or sanitation.

The study population was pregnant women in their third trimester seen at MH for ANC consultation and mothers who have delivered over the last year and are attending the healthy child clinic.

The study group was formed by women present at the consultation in when the students were able to travel to Marrere (during the months of June and July 2014). They were consecutively invited by the consulting nurse to participate and participation was voluntary after signing the informed consent protocol.

During the interviews we noticed saturation of answers after the 25th interview; this saturation was discussed with the principal researcher and we stopped interviews after 33 women. No women refused to participate, but three were eliminated because uncompleted data.

We used individual semi-structured interviews (annex 1), which asked questions regarding participant's knowledge about pregnancy and perceptions of ANC. The interview guide was applied as a pre-test to 10 women of childbearing age in the Muatala neighborhood, all the answers were well understood and there was no need for adaptations.

Interviews lasted an average of 45 minutes and field notes were collected during the interviews e and immediately reviewed by other research team members. Participant's answers were read back to them to allow the participant to confirm, correct or add anything to add validity to the interview.

The interviews were done by five students from the second year medical course of Lúrio University Health Sciences Faculty. The students had received a previous training about qualitative research and the student principal researcher had experience in qualitative research using interviews. The students' motivation to carry this research resulted from their experience with families in the Muatala neighborhood in the "One Student, One Family Program",[22] where they were faced with taboos and beliefs about witchcraft causing delay in ANC consultation.

Afterwards pregnant women's ante-natal clinical files were reviewed to confirm the date of their first ANC consultation.

We evaluated demographic and social data (age, school level, remunerated work and residence location), traditional beliefs and perceptions about pregnancy and abortion, knowledge about ANC, number of pregnancies, abortions and first ANC consultation date.

After literature review we selected 10 data codes to identify three main categories: A) knowledge about reproductive health (1.pregnancy signs and symptoms, 2.abortion); B) knowledge about ANC (3.ANC consultation significance, 4.delay in ANC and consequences, 5.health services quality perception); C) family and social environment (6.husband support, 7.who they look first for care, 8.wichcraft perception, 9.transportation to the hospital, 10.domestic responsibilities).

The questions were previously identified but they were reduced to limit interview time (too long to treat all the questions).

Data inputted to *Microsoft Office Excel* to calculate frequencies and percentages. They were presented in two entry tables with an univariate analysis.

Participants were unknown to all the researchers and the participants only knew the researchers were medical students.

The interviews were conducted at MH in a private area, without any other participants or observers to avoid coercion in answers.

The interviews were done face to face in the participant's first language (Macua) to allow a proper understanding of the questions.

There were no repeated interviews.

The researchers explained the study objectives and activities to the participants and they provided an informed consent form that was signed in duplicate by the women. The participant and the researcher each kept a copy. The study design had been approved by UniLurio Health Bioethics Institutional Committee and followed all Helsinki Declaration (2013) recommendations.

Results

Sample

There were 30 participants in the study with an average age of 24 years (minimum of 16 and maximum of 43 years): 25 were pregnant and five were postpartum.

There were an average of 3,7 pregnancies per women (one woman was pregnant with

her 11th child, one with 8 pregnancies, another with 7 and 5 women with one pregnancy) (table II).

Table II: number of pregnancies per woman.

Participants absolute frequency	Number of pregnancies
6	3
5	4
5	1
4	2
3	5
2	6
2	4
1	11
1	8
1	7
Total: 30	Total: 112

The total number of spontaneous abortions reported by women in the interview was 17 (see Table III).

Table III: number of abortions per woman.

Participants absolute frequency	Abortions number
19	0
5	1
6	2
Total: 30	Total: 17

Reproductive health knowledge

One 33 years old pregnant woman, who was married and illiterate, was asked about what miscarriage was and answered: "it's when you bleed before delivery date".

When asked about the date of the first ANC visit we found that the majority (18) had presented to their first ANC visit in the second trimester (Table IV).

Table IV: first ANC visit per trimester.

Trimester of first ante natal consultation	Number of women (%)
First	10 (33%)
Second	18 (60%)
Third	2 (7%)
Total	30 (100%)

One 22 years old post-partum woman, married and illiterate was asked where she goes first when she thinks she's pregnant and answered "I go to the hospital but also to the traditional birth attendant".

Knowledge about ANC

When asked about the meaning of ANC, 13 women said they did not know what this was and 17 said they knew that it included going for a consultation at the health center or hospital during pregnancy. One illiterate pregnant woman answered that "the ante natal consultation is where you are weighed and get drugs".

Social and economic determinants

Analyzing the level of education we found the majority (16) of participants illiterate, 10 have basic education, 2 have primary education and 2 have middle school education.

Considering the economic situation, we assessed the origin of the participants' income and we found that the great majority

(24) were dependent on the family and only three could be considered financially independent with their own income from paid employment; three had no income source.

We assessed the location of participants' homes in order to estimate the average distance to travel to access MH. We found that this population comes from 16 dispersed neighborhoods, predominantly Natikiri and Lawrence and most of locations are quite removed from the hospital, with routes requiring a walk of at least an hour, except those residing in Marrere center.

When asked about the "distance from home to the hospital" as a limiting factor in access to services, we found that the vast majority of our study population identified this as a barrier: 9 women say that distance significantly influences the ability to attend ANC clinics, 9 state that it sometimes influences their ability to attend antenatal clinics and 12 say that the distance does not influence them.

Traditional beliefs

We asked about the causes of spontaneous miscarriages: half of the group did not know, nine thought it was due to bad luck and six had some knowledge of the causes of spontaneous miscarriages pointing to delayed access to ANC consultation as one. One 38 year old married pregnant woman, who did not complete primary school, answered that "abortion is due to bad luck; it has nothing to do with late ANC consultation".

Asked about the use of traditional medicine, the majority (18) answered that they do not use it. In this context we also asked if they considered "witchcraft" as a risk for pregnancy: 25 women stated they thought it was a risk factor for miscarriage. Continuing with the same theme, as a triangulation question to evaluate the weight of cultural determinants linked with pregnancy taboos and local beliefs, we asked if traditional medicine practitioners would be the best solution to solve the problems of "witchcraft": 18 women agreed, 7 said sometimes and 5 disagreed. We asked if priests could be a protection in pregnancy, the majority agree (17 women), 6 answered some times and 7 denied it. One 28 years woman with medium school level, single with four pregnancies and two abortions, said: "I do not use traditional medicine practices because I am Christian, but I believe traditional healers are effective to fight witchcraft; my friends use traditional medicine; ANC consultations are consultations for pregnant women and the sign of pregnancy is absence of bleeding; abortion is pregnancy destruction, that can be provoked or not".

Family determinants

Finally women were asked about the burden of household tasks and responsibilities, as a barrier to ANC consultation access: 12 women stated yes or sometimes to this question.

Discussion

The group's low level of education is representative of this community and illiteracy remains a determining factor in the health of the Mozambican population. Illiteracy contributes to low awareness of health services, maintain the taboos imposed

by culture and low confidence in ANC provided by health professionals.

Many women are dependent on others for income. Illiterate women are particularly affected, because most of them do not have a job to guarantee a monthly income. Widows or single women engage in small informal commerce, typically insufficient to achieve a decent livelihood. Their families are a heavy work burden, leaving women no time to take care of their own health. Those who have a husband are dependent on him with regards to household income, thus suffering low economic power.

Long distances from home to the hospital also influenced ANC visit frequency. As seen in other studies, [23, 24] transport costs are a negative factor for these women due to their weak economic power.

Almost half of the women interviewed were unaware of ANC, contradicting other research in Mozambique in 2012 where 93% had at least one pre natal consultation.[25] Our data show that the lack of knowledge about ANC still prevails, and that women are delaying ANC appointments to the second trimester of pregnancy, which is also demonstrated in other studies. [26, 27]

There were many mistaken perceptions about the etiologies of spontaneous abortions: 9 participants mentioned "bad luck", discounting late or no ANC as an associated condition; only 6 said that this delay might influence the occurrence of abortion.

Although traditional medicine is reportedly used by only a minority of women in this study (12), engagement in traditional medical practices may influence women's decisions and be connected to late ANC or an avoidance of ANC altogether.

When asked about the role of witchcraft as a risk for pregnancy our study found it was a significant concern among women (26) in Marrere. Compared to a study in central Mozambique, we found that women maintain the idea that witchcraft influences the development of an abnormal pregnancy, viewing it as a major risk for pregnancy complications. These women state that family, friends and neighbors can engage in witchcraft because of "envy". Fear of witchcraft affecting a pregnancy is widespread and is linked with the practice of hiding the pregnancy until a more advanced stage, thus missing opportunities for first trimester ANC visits.

The fact that 25 women said healers have been a protective factor against witchcraft leads many women to start with traditional treatment or continue it along with treatment dispensed in HM. This may lead to inappropriate drug interactions and raises the possibility of needing specialized and expensive care. This situation could be prevented if these women trusted their ante-natal care providers and ceased to be influenced by "witchcraft". In this context educational work with traditional birth attendants could reduce the problem. [28,29]

A majority of women (23) believes also that priests help to fight witchcraft. Religious beliefs and leaders can help advise women and help them to present for ANC. Churches and Mosques can reduce their fears, a very present reality in Mozambican communities where a very strong idea of "witchcraft" causing pathology exists.

Heavy household responsibilities contribute to delayed ANC care for 12 women, showing that in many cases women fail to take care of themselves and deal with the life and well-being of other family members first. This negatively influences access to the basic care that a pregnant woman should have.

To improve ANC access we think it will be necessary to act with different groups (pregnant women, husband, families, local health committees, local leaders, traditional healers and birth attendants, health professionals), to develop a mother and child health education program that is culturally adapted and sustainable.[30, 31]

Conclusion

Our study confirms Marrere's women have several barriers to access ante natal consultations leading them to access the services late, mainly in the second trimester of pregnancy:

a) Weak knowledge regarding ANC; illiteracy (a worrying factor for the health of Mozambican population), a major reason why many women have a weak knowledge about health services.
b) Women having a low level of confidence in ANC.
c) Most of these are illiterate women dependent on family decisions and income, provided by husbands; they remain in a status of low social and economic power.
d) Most neighborhoods are located at considerable distance from the MH and transport costs are not favorable for these women due to their economic struggles.
e) The burden of household work and care of children limits the amount of personal time that may be used to access health care services.

This is worrying because first trimester is the ideal period to start clinical follow-up, and to help ensure a normal pregnancy. Ante-natal monitoring allows detecting, correcting and controlling diseases that may jeopardize the normal course of pregnancy.

Over all the great majority of women in Marrere believe that witchcraft is a high risk for pregnancy complications and therefore they try to hide their pregnancy and delay ante-natal visits. Most of these women said that healers and priests are protective against witchcraft, and they often consult them before MH health professionals.

We think to reduce mother and child mortality in Marrere, it will be necessary to implement a culturally adapted mother and child health education program, with families, traditional healers and birth attendants, religious and local leaders, local health committees and health professionals.

Annex 1

Community Qualitative Research
Ante natal care access, Marrere Hospital, Nampula, Mozambique, 2014
Interview guide

I. Identification

1. Consultation date: …/…/…
2. Birth date: …/…/…
3. Age: ….. years.
4. Address: ……

II. Social and economic situation

5. School level
   5.1. Illiterate
   5.2. Basic
   5.3. Middle
6. Do you receive any payment / economic resource?
   6.1. No
   6.2. Yes
7. This money comes from?
   7.1. Own work

7.2. Family
7.3. Other resources. Describe:……

III. Environmental determinants

8. Distance to the hospital.
   8.1. Near: < 5 km (or 1 hour)
   8.2. Middle: >5 km < 10 km (2 hours)
   8.3. Far: > 10 km.
9. Attend other services
   9.1. Uses traditional medicine: yes.
   9.2. Uses traditional medicine: No.

IV. Obstetric history

10. Number of abortions: ……
11. Number of pregnancies: …...
12. First ante natal consultations date this / last pregnancy: 1 – 2 – 3 Trimester.

V. Interview

Question N°	Questions	Answers	Code
1	What to you think it is ante natal consultation?		B1
2	In your opinion, what are the signs or symptoms to say you are pregnant?		A1
3	What is an abortion?		A2
4	In your opinion, late ante natal consultation might influence abortion?		B2
5	Do you know anything about congenital malformation (babies born with physical abnormalities)?		A1
6	In your opinion, late ante natal consultation might influence congenital malformation?		B2
7	When you are pregnant, how does your husband behaves?		C1
8	Where do you seek care first when you are pregnant?		C2
9	Why do you choose it?		C2
10	Besides that, who are other care providers you seek?		C2
11	In your opinion witchcraft (from family or neighbours) is a risk to pregnancy?		C3
12	In your opinion traditional healers are the solution to face witchcraft when you are pregnant?		C3
13	And what do you think about Priest as a solution for this problem?		C3
14	In your opinion does long distances cause late ante natal consultations?		C4
15	And the tasks with your husband, children and domestic tasks, do also influence late ante natal consultations?		C5
16	How do health professionals attending you behave?		B3
17	People in your neighbourhood go to ante natal consultation or to the traditional healer?		C3
18	In your opinion, what are the disadvantages from going late to he ante natal consultation?		B2

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