

Attitudes and perceptions of pregnant women towards the use of Anti-Retroviral Therapy in Nigeria

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Abstract

Background

Mother-to-child transmission of Human Immunodeficiency Virus continues to be a major problem in Nigeria. Despite several initiatives, the number of infected pregnant women receiving Anti-Retroviral Therapy to prevent Mother-to-child transmission of the virus remains low in Nigeria. Evidence suggests that attitudes and perceptions of the pregnant women influence their use of Anti-Retroviral Therapy.

Aim

To understand the attitudes and perceptions of Human Immunodeficiency Virus infected pregnant women towards the use of Anti-Retroviral Therapy for prevention of mother-to-child transmission in Nigeria.

Method

Twenty four Human Immunodeficiency Virus infected pregnant women were purposively selected from antenatal clinics. Women's attitudes and perceptions towards the use of Anti-Retroviral Therapy were explored using semi-structured in-depth interviews conducted in May/June 2016. All interviews were recorded, transcribed and analysed using thematic approach.

Findings

Overall, participants reflected a positive attitude about using Anti-Retroviral Therapy to prevent mother-to-child transmission and perceived the treatment as beneficial. The main themes identified included: perceived benefits of Anti-Retroviral Therapy; barriers to using Anti-Retroviral Therapy; threat from the susceptibility to the illness and the severity; perceived roles in treatment; and the negative behaviours of healthcare providers.

Conclusion

The findings provide useful insights to inform Nigeria's health policies on Anti-Retroviral Therapy. There is a need to educate the women on the benefits of the treatment as well as how they can cope with side effects and the daily regimen of the therapy during pregnancy. The findings also indicate the need for training healthcare providers on facilitative patient-provider relationship.

Key words

Attitudes, Perception, Anti-Retroviral Therapy, Mother-to-child transmission, Nigeria

Statement of Significance

Problem	What is already known	What this paper adds
Nigeria bears the highest burden of mother-to-child transmission of Human Immunodeficiency Virus (HIV) infection (32%). Anti-Retroviral Therapy is underutilized among infected pregnant women in Nigeria.	There is a strong relationship between women's attitudes and perceptions towards Anti-Retroviral Therapy and its use.	Women's attitudes and perceptions were associated with perceived benefits of and concerns about Anti-Retroviral Therapy. Barriers to ART included the belief that they are healthy, forgetfulness, waiting time at hospitals, side effects and taking treatment every day. There is a need for more education about the effectiveness of ART and the importance of adherence to treatment.

1. Introduction

Mother-to-child-transmission (MTCT) of Human Immunodeficiency Virus (HIV) is one of the major challenges resulting from the HIV epidemic, accounting for 90% of all paediatric HIV infections worldwide.^{1,2} Globally, women constitute nearly half of those living with HIV and Acquired Immunodeficiency Syndrome (AIDS).¹ The World Health Organization (WHO) estimated that approximately 18 million out of about 37 million people with HIV are women.³ Biomedically, women appear to have higher risk of HIV infection than men, due to the

structure of the female reproductive tract.^{3,4} However, the growing feminization of the HIV epidemic may also be due to interrelated socio-cultural and economic factors that make women more vulnerable.⁵ As more women become infected there is also an increase in paediatric HIV through MTCT.^{2,6} Without intervention, HIV-positive mothers have about 15 to 45% chance of transmitting HIV to their children via pregnancy, birth and breastfeeding.² It is estimated that about 1.8 million children were living with HIV and 150,000 were infected in 2015, every day about 400 children are infected with HIV, mainly through MTCT.⁷ Of these HIV-infected children, 91% live in Sub-Saharan Africa (SSA).⁸ In SSA, paediatric HIV is a major contributor to child mortality, with about one-third of infected infants dying within their first year of life.^{7,8}

In Nigeria, a total of about 260,000 children aged zero to 14 years were living with HIV/AIDS and about 180,000 deaths were due to AIDS in 2015; the majority (90%) being infected via MTCT, perhaps due to underutilisation of Anti-Retroviral Therapy (ART) among HIV-infected pregnant women in Nigeria.⁷⁻¹⁰ It was estimated by the joint United Nations Programme on AIDS (UNAIDS) that in 2015 only 30% of HIV-infected pregnant women utilised ART for prevention of MTCT in Nigeria.⁹ However, ART has been shown by clinical trials to be effective in preventing MTCT of HIV.¹¹ The randomised trial conducted by French and American researchers in 1994 showed that when Zidovudine (a form of ART) was given to pregnant women, it reduced the MTCT risk, marking the first significant breakthrough in efforts to prevent MTCT of HIV.¹¹ This study determined the effectiveness of Zidovudine monotherapy in preventing MTCT among 477 HIV positive pregnant women. The study's participants received Zidovudine from 14 weeks of pregnancy and above until delivery and their infants were treated for six weeks. Among these participants, there was a 67% (95%CI) reduction in the risk of MTCT. Recent evidence suggests that combination therapy with two or more antiretroviral drugs is associated with a greater reduction of MTCT risk than monotherapy.^{1,12} A clinical trial (Kisumu Breastfeeding Study) conducted in Kenya reported reduced risk of MTCT when women received three-drug regimen from 34-36 weeks of

pregnancy until six months postpartum.¹² MTCT rates at birth was 2.5%, at six weeks (4.2%), at six months (5.0%), at twelve months (5.7%), and at 24 months (7.0%) among 487 live-births.¹² Thus, the WHO recommends a lifelong combination therapy for pregnant and breastfeeding women (option B+).^{1,8-10}

While the global prevalence of paediatric HIV is declining, the number of infections and deaths from HIV among Nigerian children is increasing.¹⁰ Since 2009, there has been a decrease in new infections of 76%, 69% and 65% in South Africa, Uganda and Ethiopia respectively.¹⁰ However, incidence of new infections in Nigerian children has only declined by 15% since 2009, thus, Nigeria now bears the highest number of new paediatric HIV infections in the world with 28% rate of MTCT.¹⁰

The Nigerian Federal Ministry of Health (NFMH), supported by the WHO and the UNICEF, initiated the PMTCT programme in 2002 in six tertiary health institutions spread across the country.¹³ This response was in line with the global strategy for PMTCT that promotes the four-pronged procedure: preventing HIV infection in females of child bearing age as well as their partners, preventing unwanted pregnancies in HIV infected women, PMTCT, and giving support and care to HIV positive mothers, their young children and family members.^{9,113} Despite explicit political will and practical means that were put in place to facilitate uptake, the number of Nigerian HIV-infected pregnant women receiving ART to prevent MTCT of HIV is not increasing as much as it was expected by public health authorities.¹³ Presently, only about three out of every ten HIV-infected pregnant woman receive ART to prevent MTCT.^{10,13} In order to achieve the United Nations' target of eliminating MTCT, this gap in access to and usage of ART among pregnant women in Nigeria must be addressed.

Research has established that there is a strong relationship between the use of ART and the women's attitudes and perceptions towards ART.^{14,15} Evidence suggests that women are more likely to utilize ART when they hold favourable attitudes to ART, compared with those who have negative attitudes.¹⁴⁻¹⁶ In addition, Ezzy *et al* argued that HIV positive clients'

(including women) attitudes towards ART exerts a greater influence on their choice to start ART than other aspects such as ill-health and clinical markers of HIV progression.¹⁴ For example, concerns that ART could harm the baby in South Africa,¹⁵ and doubts about ART being effective to prevent MTCT in Malawi,¹⁶ hindered HIV-infected pregnant women from using ART.

Studies on PMTCT in Nigeria have focused mainly on knowledge and perception of MTCT and HIV testing and counselling, with ART mentioned as a method of PMTCT.^{8,17-20} Furthermore, existing studies were conducted in the South-Western,^{6, 20} North-Eastern²⁰ and South-Eastern zones of Nigeria.²¹ The only PMTCT study in the South-South zone focused on the perceptions of HIV testing and counselling for PMTCT.¹⁸

There is a lack of studies focussing on attitudes and perceptions of ART for PMTCT in Nigeria. Therefore, this study aimed to understand HIV-infected pregnant women's attitudes and perceptions to the use of ART for PMTCT in the Niger Delta region situated in the South-South zone of Nigeria.

2. Methods

2.1. Study design

In-depth interviews were used to elicit information on the attitudes and perceptions of HIV-infected pregnant women regarding the use of ART for PMTCT. An interview guide was designed to organise, guide and facilitate the interview discussions. The interview guide was based on a literature review and constructs of the health belief model (HBM). Two main domains were explored: perceptions and attitudes towards ART. Women were asked how they feel about using ART during pregnancy, how they are involved in taking their medications, concerns about ART and what discourage or encourage them to use ART. This interview guide was reviewed by a clinician and health service researchers and was amended as required. Before the study was conducted, the interview instrument was piloted with three participants, which resulted in minor amendment in the order of the questions.

2.2 Participants and Recruitment

Participants included HIV-infected pregnant women aged 18 years and above who were attending antenatal clinics (ANCs) at three tertiary hospitals in Yenagoa and Uyo, capital cities of Akwa Ibom and Bayelsa states of the Niger Delta region of Nigeria during May and June 2016. A total of 24 participants were purposively sampled for the study. Pregnant women who met the inclusion criteria were approached by the nurse in-charge of ANCs in the study sites. The nurses informed them about the study and asked if they would like to participate in the research. Those who accepted to participate were introduced to the first author who provided them with information sheets, and asked them to sign a consent form.

2.3 Data Collection

Semi-structured in-depth interviews were conducted in May and June 2016 in English Language with a purposive sample of 24 participants in three tertiary hospitals located in the Niger Delta region of Nigeria. All the 24 interviews were conducted by the first author (PM) in a private room located in the selected hospitals. During the interviews, pregnant women's perceptions and attitudes towards the use of ART for PMTCT were explored using open questioning and probing where necessary.^{21, 22} The interaction was free-flowing and flexible and the interviewee was allowed a great deal of leeway.²³ The length of the interview was subject to the topics covered and the depth of the interviewees' answers, with each interview taking between 30 to 60 minutes. All the interviews were audio recorded with a digital voice recorder. Additional field notes were taken. At the end of each interview, recordings were double-checked for quality, unanswered questions and to identify gaps, and any new leads were followed up in subsequent interviews.

2.4 Data Analysis

All the 24 semi-structured recorded interviews were transcribed verbatim and were entered in NVivo 10. An inductive approach to thematic analysis which was data driven was adopted.²³ The thematic analysis process followed the six phases outlined by Braun and Clarke.²³ The transcripts were read repeatedly to achieve familiarity. Elements relevant to the objectives of the study were identified in the transcripts and labelled as codes. Coding and identification of themes was conducted without any intention of fitting them into a predetermined framework or structure as it was data driven.²³ During the data analysis, codes were grouped into categories and categories into themes.²³ All the coded data extracts were reviewed, and themes were further refined and defined.

2.5 Ethical Consideration

Ethics approval was obtained from the Institute for Health Research Ethics Committee, University of Bedfordshire and from the research and ethics committees of the following institutions in Nigeria: Niger Delta University Teaching Hospital; the Federal Medical Centre, Yenagoa; and the University of Uyo Teaching Hospital. Participants were informed about the purpose, nature of the research, dissemination plans and their right to withdraw at any time from the study. Opportunity was given for questions to be asked. Written informed consent was obtained from all participants before commencement of the interviews.

3. Findings

A total of 24 in-depth interviews were conducted (Table 1). The age of participants ranged from 26 to 39 years. Most of the participants (n=20) were married, few were single (n=2) and cohabiting (n=2). In terms of level of education received, 14 participants received post-secondary level of education and 10 were secondary school graduates. Majority (n=22) resided in urban areas, only two resided in semi-urban areas. In terms of the religion, all the participants were Christians. [INSERT TABLE1 HERE]

The thematic analysis process resulted in the identification of five main themes: The main themes included: (1) perceived benefits of ART; (2) barriers to using ART; (3) threat from the

susceptibility to the illness and the severity; (4) perceived roles in treatment; and (5) negative behaviours of healthcare providers. The themes (including sub-themes) are presented in table 2. [INSERT TABLE2 HERE]. The following sub-sections present the themes and sub-themes with illustrative quotes.

3.1. Perceived Benefits of ART

The theme covers the benefits that participants perceived about using ART for PMTCT. Participants perceived ART as beneficial in terms of reducing viral load, improving physical health, prolonging life and birthing HIV-free babies. These perceived benefits were a source of motivation to use ART for PMTCT.

To reduce viral load

Participants were motivated to use ART because of the view that ART will reduce the virus load in their system and will offer prevention from harm to themselves and the baby:

“If I’m taking the drug, the drug will reduce the virus so that it will not harm me and my baby. If I don’t take them, it (HIV) will harm me. That’s why I’m taking them, so that at the end I will see good result. And as I’m taking them now I think things are improving” (P14).

“It improves your immune system, then all those virus. It subdues the virus, don’t allow the virus to do you any harm” (P13).

Improved physical health

Participants expressed how their health improved after commencement of treatment with antiretroviral drugs. They regained control over their health which was threatened by the virus. Improved physical health was measured by their feelings and experiences:

“Compared to the time I was sick before coming to the hospital and now. Since I started taking the drugs constantly, morning and evening, I feel better” (P19).

“What motivates me is that, I remember there was a time I was very sick. I was so lean, but now that I have started taking my drugs, anybody that sees me will say you are looking good. I know the drugs are working, so I always want to take them” (P9).

HIV free baby

Many accounts from the women indicated that they were motivated to take ART during pregnancy because of the desire to have a healthy baby free of HIV:

“When I discovered that I’m pregnant... (I thought) I need to fast (hurry) and start taking the drugs (as) I don’t want my baby to become infected as a result of this. I love my life very well, and my baby’s life too is very important to me. As I love my baby I will come and take it (ART) so that my baby will not be contaminated (infected)” (P2).

“I don’t have a choice for the sake of my baby. Even when I don’t want to (take ART), I tried to (take ART), no matter how hot I will feel. I tried to take for the sake of an innocent baby” (P19).

“I know very well that if I stick to the drugs the child might not have it (HIV). The other way round, you know if I don’t (take ART) before realising it the baby would be infected” (P2).

Healthier and longer life

Another significant perceived benefit of ART that motivated participants to take ART was to lengthen lifespan. Participants were concerned about a long lifespan so that they can take care of their children and live longer than their mothers and this was another motivating factor for them:

“I take it (ART) so I can live longer. The drug is helpful, makes people feel healthy. The drug is good...(help) people to be strong” (P13).

“I take it (ART) because I wanted to be healthy. I wanted to live long and take care of my children” (P17).

For other women, the will to live was a source of motivation to take ART. According to a 28 year old participant:

“Nobody wants to die, everybody wants to live. You want to live and survive, so you know the purpose that if you miss this drugs, maybe your status (CD4 count) will be coming down. The more you take this drug the more this virus drop. So you like yourself, you don’t want the virus to be rising, so you will be taking the drugs and going for what they say you should do” (P5).

“I want to live. If not of this drug I would have died. The sickness almost takes my life. I don’t forget to take as far as they tell me not to miss” (P4).

Hopefulness

Participants view ART as a source of hope since there is no cure yet. According to these participants, taking ART helps to sustain their lives until a permanent solution comes:

“I know that I have to take the drugs until solution will come. I don’t need to bother myself but I still pray. And I’m still taking the drugs, looking up to the end of this sickness” (P1)

Participants were optimistic about the treatment; they believe that in the nearest future there will be a drug for permanent cure of HIV

“I will do everything possible for me to take the drug consistent until there is a way out. ...I’m made to understand, the doctor told me in ten years to come there will be a cure. So I will still be taking (ART) and waiting, that is it” (P2).

“My belief is that whatever has a beginning will surely have an end. As far as God still give that sense to trace this drug that we are taking now, I know one day they will still trace the drugs that will stop everything” (P5).

3.2. Barriers to using ART

This theme is centred on pregnant women’s assessment of the difficulties in taking ART for PMTCT. The sub-themes include: “I’m healthy”, forgetfulness, waiting time, side effects and taking ART every day.

“I’m healthy”

While the benefit of improving health from ART motivated participants to use ART, it also became a discouragement and reason for them to stop ART. Women stopped taking their medication since they were living a normal life without any health issue:

“...because I’m healthy, I’m not sick. I always feel that I am okay, so I stop to take the drugs sometimes” (P17).

“I got fed up with the drugs. Honestly speaking, I got fed up. I stopped since 2013 until I came (for ANC). If not nurse said I should start, I wouldn’t have even start again,... because I don’t have any problem, I won’t lie you. I don’t have any problem; I was living like normal human being” (P8).

Forgetfulness

Participants in this study acknowledged missing their doses. Some participants attributed this to forgetfulness which results from being too busy with work:

“Sometimes when I’m busy doing house work and I put my phone on alarm ...the alarm will ring and stop. You know when it stop and I don’t go to take the drugs, I will forget” (P12)

“Let me be sincere, I do miss, at times. I used to forget the drugs, I won’t even remember” (P16).

“I have missed taking my drugs some times. There were times when I am busy doing work that I forgot to take them” (P7).

Waiting time

Participants were also dissatisfied with the length of time spent to access ART services at the hospitals. Accessing ART services at the hospitals was a time consuming task. One of the participants said that she used to go to the hospital in the morning at 6 o’ clock and return after 5 o’clock in the evening. Another participant felt that her career was going to ruin as she has to wait for a whole day. The same participant also felt that the long waiting time meant she could not pick her children up from school :

“I have a certain time to go and pick my kids in school, and for such time you are still here in the hospital you cannot do anything. I mean it is discouraging; having to come to clinic for a whole day, so I saw that it was going to ruin my career and whatever, so I stopped (accessing ART). It’s when I started at the clinic here (ANC) that the matron was telling me no, I shouldn’t have stopped” (P6).

“Sometimes I will come here 6 o’clock in the morning you will stay till 5 o’clock (evening). They waste time, the whole day; they will take the whole day. They waste time” (P14).

Side effects

Side effects were a major concern for pregnant women. Nearly half of the women expressed concerns about the side effects of ART on their health. Women complained about feeling hot at night, dizziness and weakness after taking antiretroviral drugs. They felt discouraged or skipped their medication in order to prevent side effects:

“I feel very hot in the night because I take one at night. If it continues like this, it’s affecting me. And when I go to bed, I feel very hot...my head will be very hot. I have

to wake up and shower.well, let me be sincere once in a while when it's very hot and, like one period when my gen (generator) was bad, there was no light, I can skip the drug for a while" (P19).

"That first time, I was somehow discouraged because of the symptom (side effects)... I was like being discouraged and all that" (P2).

"Though they told me it is not harmful. I have to try to cope with it, especially the dizziness, the weakness, and all that. But then, we have to consider the advantage, we really don't have to give up" (P6).

Taking ART everyday

Even though participants perceived ART to be beneficial in preventing MTCT, taking the drug every day was not convenient for some of the participants. Participants felt unhappy, annoyed and felt uncomfortable to take drugs every day:

"What I'm not comfortable is this every day. It's not really easy for someone to take drugs (ART) everyday but I'm trying with it. That's the part I'm not comfortable with. At least if it is maybe take when you are sick... I don't know how to put it but this one is just every day" (P18).

"I'm not happy because before I wasn't taking anything but now I'm taking drugs every day. I'm not happy" (P14).

3.3. Threat from the susceptibility to the illness and the severity

The participants perceived the threat from their susceptibility to the illness and the perceived severity. These sub-themes are described in the following sub-sections.

Perceived susceptibility

According to the HBM, perceived susceptibility refers to a person's beliefs about the level of his/her risk of having a health problem.²⁴ In this study, perceived susceptibility refers to HIV-infected pregnant women's perceptions of susceptibility of their unborn children to HIV.

Participants expressed the fear of transmitting HIV to their unborn children acknowledging that this is a possibility:

“I’m afraid of this one (unborn child). I’m really afraid. I’m just praying, and I believe God. He should just punish me alone, and leave the child” (P3).

“Sometimes I get concerned. That fear is there... to let your baby not come and suffer what you are suffering. I think sometimes that as far as the thing (HIV) is in my body it’s possible. I don’t want my baby to suffer what I’m suffering, so I always think of what to do that my baby will not have it” (P4).

Perceived severity

In this study, perceived severity is the perception of seriousness of the consequences of HIV in infants. Participants perceived that the consequences of HIV in infants will be disastrous and were in constant fear of their children’s survival:

“For a baby it can be serious because the baby will not withstand the things that will come out from it because she is still a baby... The baby will not be able to withstand the sickness that will come through the virus” (P5).

“It will be very very serious, because I have seen one when I gave birth to my child. The mother gave birth to the child and died in two weeks’ time; the child was down and very ill” (P12).

3.4. Perceived roles in treatment

The participant had varied perceptions about the actions they had to undertake to make the treatment successful. The subthemes included: perceptions about diet and ART, and perception about support and ART.

Perception about diet and ART

The participants perceived healthy eating as a role they must play while undergoing ART. They felt that food, especially fruits and vegetables, are necessary when taking strong drugs like antiretroviral drugs. They explained how the drugs can adversely affect HIV positive clients when taken without food. Some of them explained the significance of food in using ART by advocating that government should make provision for food and cash to HIV-infected women to encourage them access and stay on treatment. The need for government to create organizations that will be in charge of distributing food and money to HIV-infected women living in rural areas was emphasised during the interviews. The extracts below support these points:

“I have to take care of myself, eat good food and also take much fruits and vitamins to build up my immune system” (P6).

“You know this our status; you eat more of fruits, vegetables while taking the drugs. Many people are taking the drugs but there is no food. I think government should have some organisation, like NGO that will go inside the village and distribute even if its food or cash. Those people are dying because you cannot be taking drugs with empty stomach” (P10).

Perception about support and ART

The husband’s involvement in access and uptake of ART was a common theme across all the married participants in this study. They felt that husbands should support them with domestic chores so that they can take their medicines. For instance, one of the participants stated:

“...especially my husband, he’s helping a lot. When it’s almost time (to take ART) and I have not finished what I’m about to do, he’ll say keep it, go and take your drugs. He makes it easier for me. Either he’ll prepare the kids because we don’t have any house help, so it’s always easy for me to take (ART)” (P3).

Participants also acknowledged that disclosing their status to their husbands enhanced their uptake of ART. Participants believed that their husbands' awareness of their treatment minimized the tendency of secretly taking ART. One of them explained how her husband reminds her when it's time to take her medication:

“My husband is my treatment partner; he reminds me when it's time. You have problem when you hide it from your partner. Maybe when he's there you'll be trying to hide, when he's out so that you can take it, it will delay you” (P1).

“I really thank God for my husband, he will remind me of the time, you have not taken this (ART), it's close to 9 pm, take your drug. So he makes my life, he makes me feel good” (P2).

In addition to husbands supporting and reminding their wives to take ART, some participants use their phones as reminders in order not to forget to take ART.

“For me I also use my phone. I always set my phone on reminder. When it's that time I must take It (ART)” (P1).

3.5. Negative behaviours of healthcare providers

This theme is centred around the accounts from participants about how they felt as maltreated by healthcare providers while accessing PMTCT services. The maltreatment described by participants encompassed refusal to provide care, rudeness, verbal abuse, and the lack of sympathy and empathy.

Refusal to provide care

Participants described certain situations when they have been refused care when needed:

“Do you know when I took the form to the place (office), those girls (healthcare providers) there did not even collect the form from me. They were just looking at me... So I waited for after like two or three minutes, the other one said madam, wait, or go and come back after. So I waited there, none of them attended to me” (P18).

“Sometimes they will not answer us, we will sit down there, they will not answer”
(P14).

Rudeness

Participants expressed rude behaviours of nurses and other staff when they visit the hospital for PMTCT services:

“Some (nurses) they look down on us. They will act as if we are not human beings. They will talk to us anyhow, they will sigh, they will hiss in the hospital” (P14).

“This people (staff) will just look at you as if you are the worst thing. I don’t know how to put it, they will make you feel bad. Before you even come they will ask you, who asked you to sit down?” (P18).

Participants pointed out that such rude behaviour is liable to discourage the desire to access and use ART in future:

“It’s discouraging when you talk to people anyhow. People will become tired and say, okay let me just give up. Instead of me to be suffering like this, coming to this clinic to take drugs every time and they will be talking to me (like this) because of this thing (HIV). ... Let me abandon the drugs, it’s better I die. Let me abandon it and give up” (P14).

Verbal abuse

Verbal abuse was reported by participants in terms of doctors using negative words and shouting at them:

“The doctor was telling me all kinds of painful things that I don’t have anything I’m getting pregnant. You don’t have anything and you are giving birth, nothing nothing, he was shouting at me” (P14).

Lack of sympathy and empathy

Participants also expressed how unhappy they were with the lack of sympathy and empathy displayed by their doctors. One woman explained how the doctor put fear in her, telling her she will die during child birth:

“I did my blood test and my blood level is low, is very low. When I come to the clinic this particular doctor that will attend to me...he will put fear in me more and more. He will say, this one your blood is low like this, if you give birth na casala (meaning death). I was scared” (P14).

4. Discussion

This qualitative study was based on 24 participants recruited through ANC nurses. The data was collected by conducting in-depth face-to-face interviews with HIV-infected pregnant women of Niger Delta region of Nigeria. Studies focussing on the uptake of ART based on HIV-infected pregnant women’s attitudes and perceptions in Nigeria are relatively scant, and the findings of this qualitative study provide insight into this area for contribution to policy and practice. Overall, women showed positive attitudes and perceptions towards ART and perceived it as beneficial in terms of improving physical health, reducing viral load, prolonging life and being able to prevent MTCT. ART was also reported to be a source of hope and survival. However, they had concerns about ART side effects, chances of having HIV negative or positive child and taking ART daily. This finding of women showing both positive attitudes and concerns about ART is in agreement with Richter et al study²⁵ which indicated that women had different concerns about ART even though they felt it was beneficial and was seen as a source of hope.

The women in this study reported that the benefits of ART were a source of motivation to use ART for PMTCT. Participants felt that taking antiretroviral drugs will kill the virus in their bodies and protect them and their babies from the disease. It was observed from the interviews that pregnant women were motivated to take ART because they wanted to have a healthy baby. Other studies have found that women from South Africa and Malawi have

negative perceptions and attitudes regarding ART as they believed that ART can harm their babies or kill them doubting the effectiveness of the therapy to prevent MTCT. Some of them also believed that medical intervention for HIV was not required.^{15,16} The desire to live healthier and longer motivated women to take ART in the present study. Women believed that ART improves their physical health and lengthen their lifespan. However, some women reported low adherence or stop taking ART when they felt that their health improved. Similar findings were reported by McKinney *et al.*²⁶ as reason for non-adherence of ART in Malawi.

Generally, the perceived benefits from ART as well as support from husbands/partners were central in stimulating positive attitude towards ART. This reinforces the view that government should promote an environment where women can disclose their status easily and get support from family members without the fear of stigmatization. This study found that support from family members especially husbands was valuable in using ART for PMTCT. This finding is in agreement with other studies^{26,27} which suggested that medical attention alone is not enough for successful ART delivery, as it also requires psychological and social support.

Consistent with other studies^{28,29} women perceived healthy eating has an important role in keeping them healthy while using ART for PMTCT. Women expressed the significance of food when taking ART and explained how hunger can lead to ART side effects. The women also advocated for food support and money to enhance the use of ART for PMTCT. Increased access to food has been associated with increased use of ART for PMTCT.²⁹ Equally, food insecurity may be associated with discouragement to use ART for PMTCT.^{30,31} Chop *et al.*³¹ specifically investigated the effect of food insecurity on uptake of ART among HIV-positive women. They found that food insecurity and hunger were common barriers for women to initiate and adhere to ART.

The worry about side effects as a deterrent to taking ART has been reported by other studies that examined determinants of adherence.³¹⁻³³ They found that HIV positive clients missed antiretroviral doses in order to avoid side effects. Bam *et al.*³³ assessed enablers and barriers of ART adherence and found that 61.9% of non-adherence respondents skipped

medication because of side effects. This suggests the need to provide counselling and educational intervention on how women can cope with the adverse effects of ART. As stated by Hawkins,³⁴ knowledge of adverse effects of ART is vital for both patients and healthcare providers.

This study also found that women reported a perception of threat (susceptibility and severity). Women perceived their unborn children as susceptible to transmitting HIV from them. They also perceived HIV as a serious condition in infants. Descriptions of susceptibility in this study were mainly elaborated through expressions of fear related to death of the child later in life, caring for a sick child and daily medication in childhood. These two perceptions were associated with motivation to use ART. Similarities can be drawn from the HBM, which proposes that people will take health-related actions (using ART), if they perceive themselves at risk of a condition, and also if the condition is perceived as severe.²⁴

Another common theme was the emphasis of the women on the significance of a good patient-provider relationship. The findings suggest that having a set of diverse and qualified staff is not enough to guarantee that healthcare professionals are sensitive to the individual care needs of women. Women in this study reported instances where providers were rude, disrespectful, lacked sympathy, refused to provide care and verbally abused them. Other studies have also reported similar findings about perceived negative behaviours of healthcare providers.³⁵ It has been argued that patients' motivation to use and access treatment can be significantly influenced by negative attitudes shown by providers.³⁶ The interviewed women's expectations of their communications with providers were explicit, they crave for support, respect, warmth, feelings of confidence and trust, and also desired for providers who care about them. Boehme *et al.*³⁶ opined that client-provider relationship is connected with client satisfaction and treatment, and also plays a key role in HIV positive clients' lives and well-being. Chochinov³⁷ argued that healthcare professionals can positively impact on the experience of clients by displaying genuine empathy which will in turn promote the right conduct and effective communication. Providing healthcare with

empathy, that recognizes the individual beyond their requirement for care, is an important target of current policies.³⁷

Strengths and limitations

This is the first qualitative study to explore attitudes and perceptions of HIV-infected pregnant women with regards to using ART for PMTCT in Nigeria. Employing a qualitative approach offered the opportunity for in-depth exploration of the area of interest. However, selection bias might have been introduced because of the purposive sampling method used in this study, and the selection of only ANC attendees at the time the data was collected. Therefore the findings may not be generalizable to the population group studied. Additionally, the study was conducted in the Niger Delta region of Nigeria which has predominance of Christians³⁸ making the sample homogenous in terms of religion. It has been indicated that religious beliefs can influence people's attitudes and perceptions towards ART.³⁹ Hence the findings of this study may not be representative of pregnant women from other religious beliefs.

In qualitative studies, researchers may influence the process because of the relationship that is built between the researcher and the participants. It is important to consider the likelihood of how researchers' influence the research process when conducting qualitative research.⁴⁰ The first author, during the interviews ensured that questions asked were not leading; rather women had the opportunity to narrate their own story and were encouraged to explain in detail any important point raised for clarity. In addition, when many researchers are involved in a qualitative research, the design is strengthened and the analysis enriched. The research team in this study discussed every stage of the analysis process and interpretation of findings.

5. Conclusion

The findings from this study indicated that women were positive towards ART and perceived it as beneficial. However, women skipped their doses and in some cases stopped taking

ART for some time due to reasons such as the belief that they are healthy, forgetfulness, waiting time at hospitals, side effects and taking ART every day. Factors such as the threat from the susceptibility to the illness and the severity; their own perceived roles in treatment; and the negative behaviours of healthcare providers also influenced their uptake of ART. A key recommendation is that there is a need for more education about the effectiveness of ART for PMTCT and the importance of adherence to treatment. This will help to scale up the uptake of ART for PMTCT and reduce MTCT of HIV in Nigeria. Even though women had access to ART, attitudes of healthcare providers may discourage them from future access. It is vital for healthcare providers to be trained on the importance of good client-provider relationship. Further research is required on how client-provider relationship as well as disrespect and abuse in maternity care impact on uptake of ART for PMTCT. The Nigerian PMTCT programme should incorporate food programme that will supply food to HIV-infected pregnant women both in urban and rural areas to enhance uptake of ART.

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Abbreviations

PMTCT: prevention of mother to child transmission of HIV; MTCT: mother to child transmission; ART: antiretroviral therapy; HIV: Human Immunodeficiency Virus; AIDS: Acquired Immune Deficiency Syndrome

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