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Perceptions and Experiences of Pregnant Women about Routine HIV Counselling and Testing in Tertiary Hospitals in Rivers State, Nigeria

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

The study is aimed at investigating Perceptions and Experiences of Pregnant Women about Routine Human Immunodeficiency Virus Counselling and Testing in Tertiary Hospitals in Rivers State. Qualitative and quantitative research designs were used for the study. Two objectives and two research questions guided the study. A sample size of 200 pregnant women was used for the quantitative study while depth interviews were held with 10 pregnant women who tested for HIV at antenatal clinics (ANC), as well as four (4) healthcare workers involved in routine HIV counselling and testing. The instrument was subjected to a reliability test and a reliability coefficient of 0.85 was obtained. Data were analysed using the content analysis approach and simple percentages. The

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qualitative section of the study was divided into attitude of husbands, attitude of healthcare workers, fear of death for being HIV positive and suicidal tendency subthemes. The findings of the study revealed that 5% of the respondents were between 18 - 25years, 55% were between 26-30 years, 35% were between 31-36years while 5% were 37years and above. The result further revealed that HIV counselling and testing is well received and acceptable for most pregnant women. Most women were aware of routine antenatal HIV testing before registering for ANC services. The women indicated that they had learnt about HIV testing and its benefits through various community education activities, mass media and during their previous pregnancies. During ANC services, most health care workers were over stressed by the large numbers of women waiting for HIV testing. This was noticed to have downplayed or reduced the quality of counselling services, thereby affecting the quality of prevention of mother to child transmission services. Also, routine HIV counselling and testing in tertiary hospitals in River State is very important and necessary but should not be made compulsory. The study concluded that routine counselling and testing will enable individuals to make informed choices regarding the HIV test and take appropriate action. Therefore, the study recommended that routine counselling and testing facilities should be made available in all antenatal units of the hospitals.

Keywords: Perceptions; experiences; pregnant women; routine HIV counselling.

1. INTRODUCTION

Over the years, human immunodeficiency virus (HIV) has continued to be a global public health problem with too much burden on women and children [1].This virus has destroyed many innocent lives and exposed them to poor quality of life. According to [2], there are many ways people can be infected with HIV, but the one that is paramount and remains a public health challenge, especially in developing countries, remains the mother-to-child transmission. According to the [3]. This virus can be transmitted from an infected pregnant mother to her child during pregnancy, childbirth and breastfeeding. Without preventive interventions, the possibility of a baby getting HIV from an infected mother is in the range between 15% and 45%, which in most cases occurs during pregnancy, childbirth or breastfeeding [4]. In Asia, the percentage of HIV prevalence rate among pregnant women is between 1 to 2 [5]. Likewise, in India, the percentage of women that have done HIV testing is about 96 [6], also in Vietnam, the percentage of HIV prevalence among Pregnant women are reported to be 0.37 [7]. Pregnant women infected with the virus (HIV) are on the increase in sub-Saharan Africa with prevalence ranging from 5 to 37% [8] of mother-to-child transmission (MTCT) which must be treated through routine HIV counselling and tests (HCT).

“Globally, the percentages of all HIV/AIDS cases are more of young people who are between the ages of 10 –24 years over 50. Irrespective of high vulnerability to HIV infection, VCT uptake by young people is significantly very lower” [8]. “According to a survey from Sub-Saharan Africa (2005–2010), only 10% of males and 15% female of 15–24 years of age knew their HIV status, this means that the majority of young people in this age group are undiagnosed leading to HIV epidemic, thereby exposing them to high risk of either acquiring or transmitting the disease” [9].

In Tanzania, irrespective of the fact that awareness of VCT in facilities is high, 65.8% of males and 46.3% of females of 15–24 years are still not aware of their HIV status and unfortunately, this is where the HIV epidemic is concentrated and very high [8]. In Arusha, 69.8% of males and 30.3% of females of 15–24 years had never been tested [10]. Only 50% of females and 39% of males in secondary or higher institutions in Tanzania know their HIV status, giving an average of 45% VCT uptake among them [11]. The low response to VCT among young people is said to be associated with different factors, which range from fear of the unknown and knowing their HIV status to the limiting factors towards the service and social issues influencing the attitudes and behaviours of the service providers [12]. However, an approximately 50% increase in HIV-related deaths among adolescents between 2005 and 2012 was found to be contributed to inadequate friendly VCT services, poor prioritization of adolescent issues, inadequate treatment, and lack of support for young people.

Also, according to the global summary report of 2019 figure, "31.6–44.6 million people were

living with HIV and 1.2–2.2 million people acquired HIV infection. More than half of the people newly infected with HIV live in Social Security Administration SSA" [13]. “In a very close look into a decade's trend and monitoring the progress from 2010 to 2019, one would see that the HIV/AIDS-acquired immunodeficiency syndrome epidemic is on the increase in Eastern Europe and Central Asia, with the number of people acquiring HIV increasing by more than 70%” [14]. Similarly, the decade quantitative assessment reveals an increase of more than 20% in North Africa, Latin America, and the Middle East [15].

UN General Assembly agrees that ending AIDS as a public health threat by 2030 requires 4 milestones by 2020 and urgent action agreed. These milestones include reducing the number of new HIV infections to less than 500,000 annually worldwide and reducing the number of deaths from AIDS-related causes to less than 500,000 annually worldwide, This includes eliminating HIV-related stigma and discrimination. Although the number of deaths from AIDS-related causes has fallen steadily by nearly a third and annual incidence rates are at their lowest since 1989, these global goals have not been met and it remains a big challenge, [16].

“The epidemiological rationale for HIV programs focuses on key populations. These key populations continue to bear a significant HIV burden and influence the dynamics of the HIV epidemic. In many African countries, certain groups are particularly vulnerable to HIV infection, including migrant workers, refugees, truck drivers, military personnel, miners, children, adolescents, and young women. These populations are not uniformly at risk or equally affected in different countries and epidemic settings”, [17].

Established by United Nations Member States, Universal Health Coverage (UHC) aims to address the determinants of infectious diseases and their comorbidities, including HIV/AIDS, through multisectoral action [18]. “The Sustainable Development Goals (SDGs) are set for 2030 and include the empowerment of women and girls, including access to quality essential health services. In September 2019, UN Member States reaffirmed their commitment to this goal at the UN General Assembly High-Level Meeting on UHC. They also set a new goal of 1 billion more people having access to quality essential health services by 2023” [19]. But today, nearly half of the people living with HIV/AIDS are women.

Despite high awareness and knowledge of VCT services, the response to HIV testing by young people has been reported to be low [15]. This study aimed at determining the factors that influence young people to uptake VCT to influence early HIV detection to avoid increased AIDS cases and risk behaviors and influence support and care to HIV victims. Furthermore, facilitate the designing of appropriate strategies by the government and policymakers geared toward increasing VCT uptake among young people. Since young people are an important force for development, increasing VCT uptake would benefit not only the young people themselves but also determine the health of the future generation and the sustainable economic development of the nation.

HIV/AIDS counselling gives individuals psychological support or emotional treatment for preventing the transmission of the virus, controlling its spread and arresting the impact of the virus [20]. The testing involves a blood sample of the individual to know his/her status. HIV/AIDS counselling and testing help those that are negative and also, enable sick people to understand their body system and plan possible ways to manage life challenges and at large, support the growth of society [21]. HIV counselling and testing (HCT) assume an important role in the treatment and prevention of HIV/AIDS, antiretroviral drugs are also very effective and are used for treatment, and HIV-related ailments such as tuberculosis (TB) control and psychological support [22]. Counselling in HIV/AIDS is in three phases, which are; pre-test counselling, post-test counselling and follow-up sessions with adherence counsellors [23]. There are two (2) basic types of HIV testing which include the “opt-in” or voluntary counselling and testing VCT; and “opt-out” or routine HIV counselling and testing. There has been constantly increasing international support for "routine" or "opt-out" testing, where all patients are counselled and tested unless they decline. “Routine testing occurs in selected healthcare settings, such as pre-natal clinics or medical wards with a high prevalence of HIV, Tuberculosis, or sexually transmitted infections. This approach has successfully identified many patients in need of treatment and care” [24]. “Routine HCT during pregnancy is a starting point for instituting a

prevention program. This strategy promotes adequate treatment for HIV-positive women and has a positive impact on the child HIV transmission rate. For HIV-negative women, it provides opportunities for education and behavioural changes" [25]. "But experience to date in many countries shows great variation in willingness to make use of the services that are available and very low acceptance of routine HTC services" [26]. "Given the importance of this HCT, the utilisation of routine voluntary counselling and testing (VCT) especially among pregnant women in Nigeria is still poor" [27]. It, therefore, becomes important in this present study to look at the perception and experiences of pregnant women in their utilisation of routine HIV counselling and testing.

"Perception is a concept that involves the dynamic psychological process responsible for attending to, organizing and interpreting sensory data. Perception is the process of recognizing, organizing and interpreting sensory information, it deals with the human senses and generates signals from the environment through the five sense organs: sight, hearing, touch, smell and taste [28,29]. Pregnant mothers who have a positive perception toward Mother to Child Transmission of HIV (MTCT) can assess their susceptibility correctly; understand the severity of MTCT of HIV, and the benefit of testing" [30]. A situation where pregnant women have a poor perception towards MTCT could constitute a significant barrier to the uptake of HIV routine testing, as mothers may not see the need for testing or inaccurately assess the risk associated with non-engagement in HIV testing and counselling [52,53]. It is assumed that the perception that pregnant women hold may go a long way to determining whether they will engage in routine HIV testing and counselling or not.

Experiences of pregnant women may play a role in routine HIV testing and counselling. Pregnant women face various experiences in a bid to get medical attention and these health experiences are also similar when trying to be tested for HIV [49-51]. These experiences sometimes are so frustrating and hence discourage many pregnant women to be tested for HIV. Some of the reasons why pregnant women do not test for HIV include the inaccessibility of healthcare facilities [15] perceived lack of confidence, stigma, and discrimination [31], also the cost of treatment, as well as illiteracy and inability to secure husband's permission. Others include attitude, skills of health workers and inadequate resources [32,33]. All these experiences may also have serious negative implications for pregnant women not wanting to go for routine HIV counselling and testing. Based on this premise the study examines the perception and experiences of pregnant women about routine HIV counselling and testing in tertiary hospitals in River State.

1.1 Aim and Objective of the Study

The aim of this study is to examine the perceptions and experiences of pregnant women about routine HIV counselling and testing in tertiary hospitals. The specific objectives of this study are to;

1. Ascertain the perception of pregnant women about routine HIV counselling and testing in tertiary hospitals in River State.
2. Explore the experiences of pregnant women about routine HIV counselling and testing in tertiary hospitals.

1.2 Hypothesis

The following hypothesis was formulated for the study;

Ho1: Educational qualification does not significantly determine the perception of pregnant women about Routine HIV counselling and testing in tertiary hospitals in River State.

2. METHODOLOGY

A mixed methods study design comprising of quantitative and qualitative data collection was employed. The study population consist of 500 pregnant women who are attending antenatal in two (2) tertiary hospitals in Rivers states. The sample size of 220 women attending antenatal were selected from the total population of 500. Simple random sampling technique was used to select the sample. A total of 10 pregnant women and 10 healthcare workers working in the ante-natal unit were be interviewed. The study made use of both descriptive and inferential statistic in analysing the data collected. A self- structure questionnaire was used to gather the data. The questionnaire used the 4 likert scale of Strongly agree, Agree, Disagree and Strongly disagree. Inferential statistics helped to provide explanations for a condition or event. Descriptive statistics that merely summarize the data that has actually been measured are fundamentally

different from it in that they allowed for drawing conclusions based on extrapolations [32].

The study also made use of thematic analysis in handling data transcribed from the recorded interview sections during the data collection process. Tables and graphs were used to further illustrate the data collected through questionnaire. While, categorizing enormous data sets into codes, subthemes and themes, thematic analysis gave one a great deal of flexibility in how one interpreted the data and made it easier to work with large data sets [34], hence the rationale for adopting thematic analysis. Also saturation of the data reached when there was no new information from the participants. However, SPSS analytical tools were used to analyse the data collected through questionnaire among pregnant women in tertiary hospitals in River State.

2.1 Model Specification

$$Y=a + bX + \in$$

- Y – is the dependent variable
- X – is the independent (explanatory) variable
- a – is the intercept
- b – is the slope
- $\in$ – and is the residual (error)

3. RESULTS AND DISCUSSION

3.1 Results

Characteristics of study participants

The participants' age ranges from 15 to 37 years and above and the majority of them had completed primary education. Also, most of the women were multiparas and housewives. All of them were married and living with a partner.

3.1.1 Socio-demographic characteristics

Fig. 1 shows that 5% of the respondents were below between 18 - 22years, 55% were between 23-27 years, 35% are between 28-32years while 5% were 33years and above.

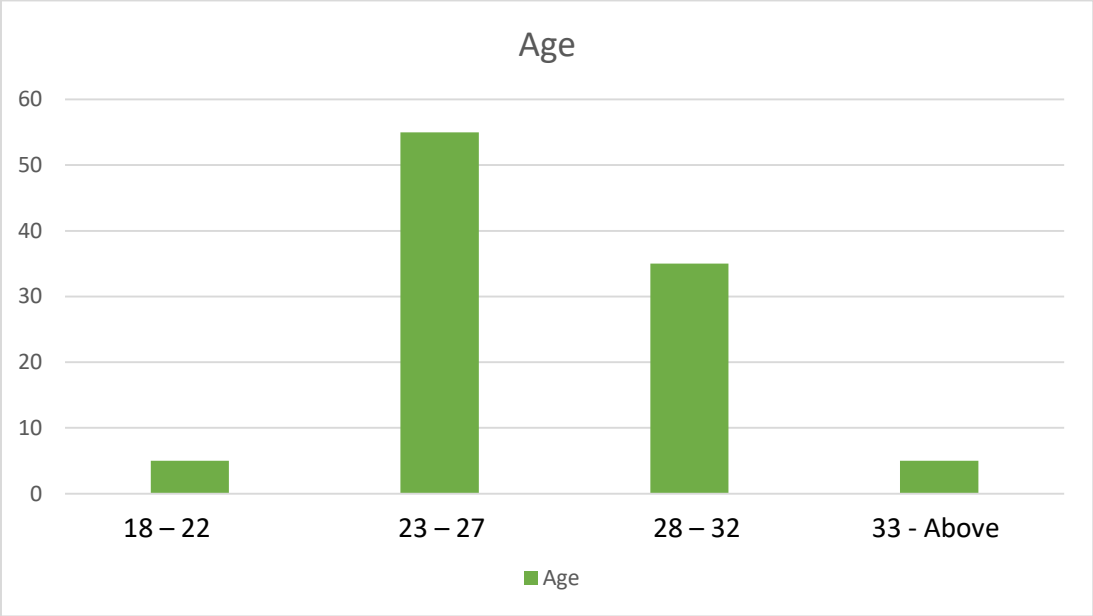

Fig. 1. Age of respondents

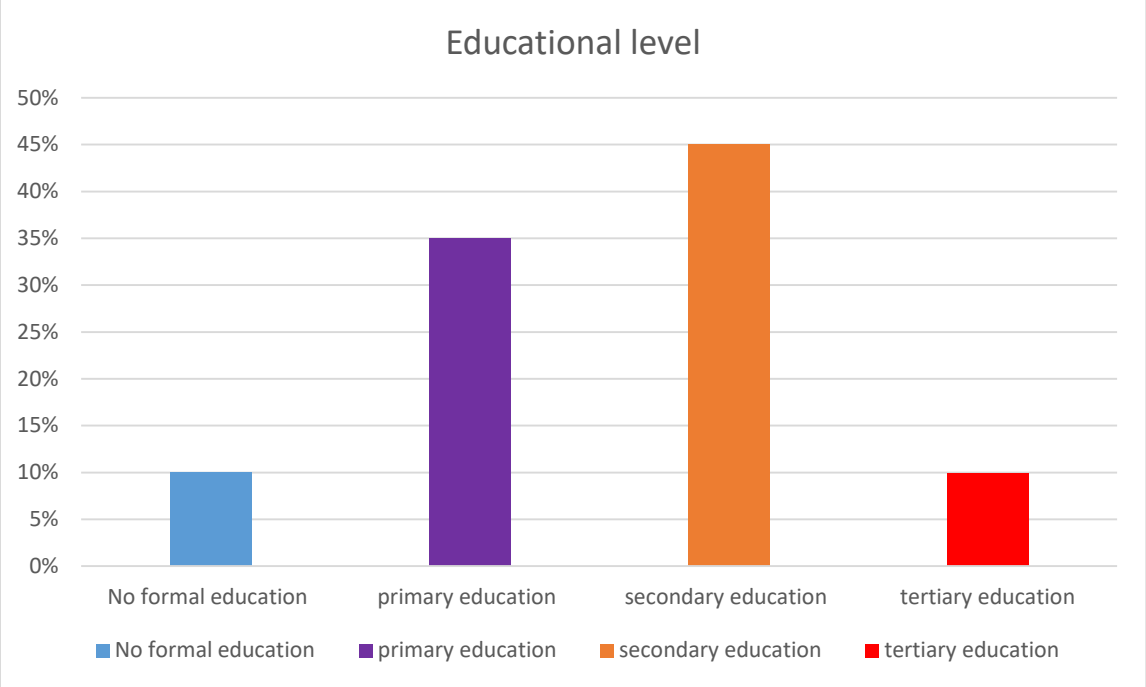

Fig. 2. Educational qualifications of respondents

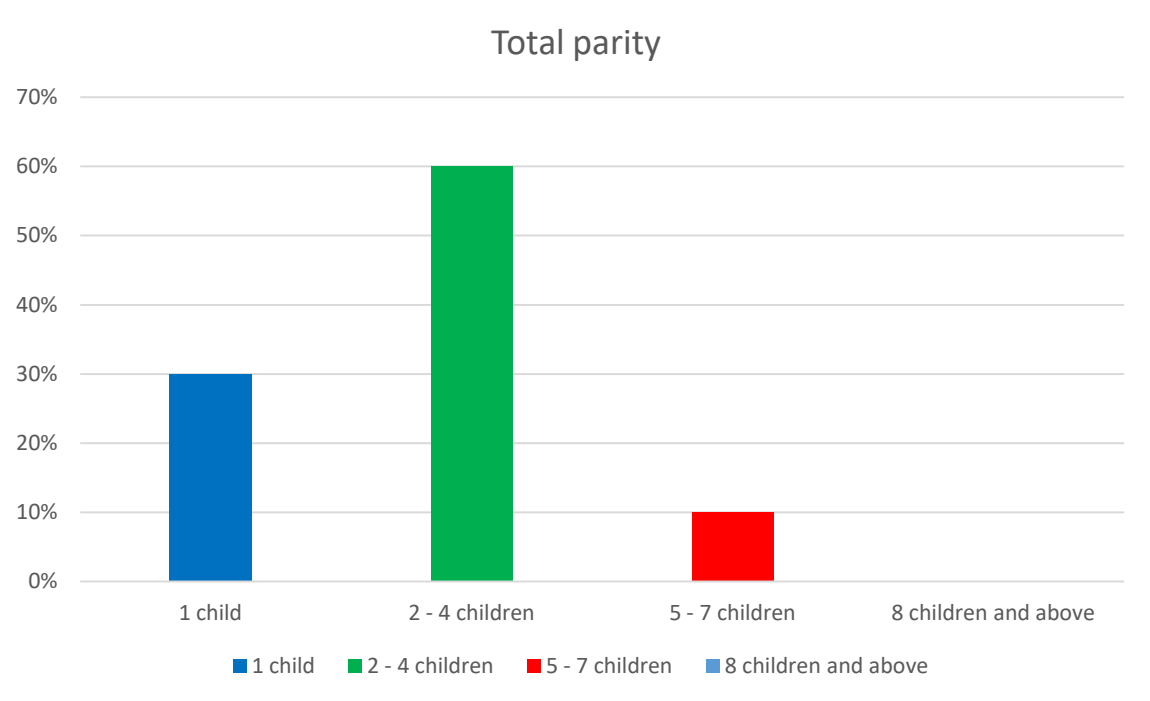

Fig. 3. Revealed that 30% of the respondents had 1 child, 60% had 2 -4 children, while 10% had 5 – 7 children

Table 1. Perception of pregnant women about Routine HIV counselling and testing in tertiary hospitals in River State

S/N	Items	SA	S	D	SD
	HIV testing and counselling is scaring	(62.9%)	(26.9%)	(5.7%)	(4.6%)
	HIV testing is a waste of resources	(59.2%)	(27.9%)	(8.9%)	(4.0%)
	there is a negative feeling against routine HIV testing	(51.4%)	(29.1%)	(12.6%)	(6.9%)
	HIV testing is important during antenatal	(55.4%)	(21.7%)	(16.6%)	(6.3%)
	Routine HIV testing often brings lack of trust in the home.	(64%)	(9.1%)	(16%)	10.85714
	the advantages of routine HIV testing outweighs its disadvantage	(62.9%)	(26.9%)	(5.7%)	(4.6%)
	Routine HIV testing aid early detection and prevention plan against the virus.	(51.4%)	(29.1%)	(12.6%)	(6.9%)
	Routine HIV testing also facilitate sexual health improvement and that of the baby as well	(73.7%)	(13.7%)	(12%)	(0.6%)

Fig. 2 showed the findings of the result which revealed that 10% of the respondents had no formal education, 35% had primary education, 45% had secondary education while 10% had tertiary education.

Research Question 1: What are the perceptions of pregnant women about Routine HIV counselling and testing in tertiary hospitals in River State?

Table 1 revealed that 62.9% of the respondents strongly agreed that they are always afraid of HIV testing and counselling, 59.2% revealed that routine HIV testing as a waste of resources, 51.4% strongly agreed that they often have a negative feeling against routine HIV testing, 55.4% of the respondents strongly agreed that HIV testing is important during antenatal care, while, 64% strongly agreed that routine HIV testing often brings about lack of trust in the home. 62.9% strongly agreed that the advantages of routine HIV testing outweighs its disadvantages, 51.4% of the respondents believed that routine HIV testing aids early detection and prevention plans against the virus while 73.7% strongly agreed that routine HIV testing also facilitates sexual health improvement and that of the baby as well. The findings of this study is in accordance with that of [35], who stated that respondents believed that routine HIV testing aids early detection and prevention plans against the virus.

3.1.2 Interview responses

HIV testing during pregnancy is beneficial

Throughout the interview sessions, the majority of the women expressed the perception of HIV testing during pregnancy. Two major perceptions of routine HIV testing that were brought up continuously during the interviews were 'knowing one's status and protection of unborn babies from HIV infection'. Most women described that knowing a pregnant woman's HIV status is essential to protect her unborn baby as there is access to treatment.

> *It is very good to get blood tested for HIV. It is good to know your status. A woman will take care of her child if she knows her HIV statu. (Participant 1).*

Participants reported that they knew the benefits of HTC during pregnancy from different sources including community education and mass media.

> *They taught us during antenatal and I also heard from a television that if a pregnant woman gets tested for HIV, it is possible to prevent the transmission of the virus to the baby as the woman is seen by health workers and get treatment…. (Participant 3).*

ANC visits for previous pregnancies were also mentioned as one of the sources of women's awareness that HIV testing is performed at the heath institution and their knowledge on the benefits of HIV testing. As elaborated by one woman.

> *Whenever you come for follow up (ANC), they (health workers) first test your blood for HIV. In case I am infected with HIV, they have something to do (give treatment)…(Participant 4).*

According to the current HIV testing guidelines, women must be explicitly informed of their right either accept or to refuse testing. The guidelines, stated that, clients should receive pre-test information in a group or individually on HIV/AIDS and PMTCT.

In this study, Our in-depth interviews among pregnant women found that the pre-test counselling accompanying the test was limited. HIV testing was not however perceived as a choice, but rather as a compulsory service for all pregnant women. Some participants stated that pregnant women are tested for HIV as part of ANC, along with other routine examining procedures.

> *Blood is taken from my hand (showing her finger) for HIV testing. The HIV testing is performed anytime we are pregnant and come for follow-up… (Participant 5).*

Another woman elaborated the perception that routine HIV testing is a government policy;

> *They (health workers) simply told me to test my blood for HIV. I didn't ask why they needed my blood since I thought that the test is a must… (Participant 2).*

This limited pre-test counselling was reflected by some women's lack of knowledge about the possibility of protecting children born to HIV positive women as one woman described below:

> *If the mother is healthy, the baby will also be healthy. Pregnant woman's knowledge of her HIV status has no benefit to the baby if she has already been infected with the virus…(Participant 7).*

Though, health workers acknowledged the importance of providing pre-test information they reported that they provide limited pre-test counselling due to large number of clients.

> *Counselling is important. If there are few clients we explain to them some introduction about PMTCT and then do HIV testing. Of course, counselling is missed. If we take longer time in providing pre-test counselling, others who wait outside will complain… (Health worker 4).*

In addition, another health worker emphasized on the importance of post-test counselling for HIV positive women compared to for those who are HIV negative women. She believed that there is no need to counsel HIV negative women as the goal of HIV testing is to prevent mother to child transmission of HIV.

> *The goal that needs to be emphasized is to save the baby. If the woman becomes HIV positive, there will be more counselling after the test. (Health worker 3).*

When asked if they know that routine HIV testing provided as a part of ANC is a choice, only few knew that HIV testing is optional. Those who knew it was optional indicated their views as follows:

> *It is based on my will. It is known that HIV testing has a benefit, but it is possible to refuse. All women should be tested but should be on their will. I should be tested for HIV based on my interest… (Participant 8).*

Health workers also approved the compulsory nature of the HIV testing as follows:

> *It is well documented that HIV testing should be voluntary, as stated in the guidelines. But you (health worker) emphasize on the importance of HIV testing when you give counselling, and you must push them to accept… (Health worker 1).*

HIV testing perceived as a pre-requisite to other health services

We asked our participants if refusal of HIV testing impacts the services that a woman gets from the health facility. Some women were concerned about their inability to decline the HIV test. They thought that refusal of HIV testing could result in a denial of other health services including delivery service:

> *I can't refuse. Refusing HIV testing will create a problem to the woman. If she refuses what they (health care providers) ask her to do, they may not help her when she come back for delivery…(Participant 6)*

Research Question 2: What are the experiences of pregnant women about Routine HIV counselling and testing in tertiary hospitals?

Table 2. Experiences of pregnant women about Routine HIV counselling and testing in tertiary hospitals

S/N	Items	SA	S	D	SD
	There are routine plans for checking HIV status during pregnancy	(62.9%)	(26.9%)	(5.7%)	(4.8%)
	there are routine strategy for checking HIV status though it has nothing to do with pregnancy	(71.50%)	(24.10%)	(1.20%)	(3.2%)
	Counselling sessions makes one feel uncomfortable	(51.4%)	(29.1%)	(12.6%)	(6.9%)
	Antenatal includes HIV screening test	(62.9%)	(26.9%)	(5.7%)	(4.6%)
	Because of stigmatization routine HIV testing is avioded.	(55.4%)	(21.7%)	(16.6%)	(6.3%)
	HIV screening test makes one feel uncomfortable	(58.2%)	(18.7%)	(16.6%)	(6.5%)

Table 3. Educational qualification does not significantly determine the perception of pregnant women about Routine HIV counselling and testing in tertiary hospitals in River State

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	899.992	1	5.992	.084	.199[b]
	Residual	2136.758	219	1.379		
	Total	**3036.75**	**220**			

Table 2 revealed that 62.7% of the respondents strongly agreed that they do have routine plans on checking HIV status during pregnancy, 71.5% strongly agreed that they do have a routine strategy though it has nothing to do with their pregnancy, 51.4% strongly agreed that they do not like the counselling session it makes me feel uncomfortable, 62.9% strongly agreed that they do not like the counselling session it makes me feel uncomfortable, 55.4% strongly agreed that they are afraid of been stigmatize so they avoid routine test, 58.2% strongly agreed that they feel uncomfortable whenever they go for HIV screening test.

3.2 Hypothesis

H_{o1}: Educational qualification does not significantly determine the perception of pregnant women about Routine HIV counselling and testing in tertiary hospitals in River State.

The Table 3 shows that the computed F is 0.084 while the p value = 0.199 therefore, since P <.05, i.e. p = .001 is statistically significant at the chosen alpha level of 0.05 meaning that educational qualification significantly determine the perception of pregnant women about Routine HIV counselling and testing in tertiary hospitals in River State

3.3 Discussion

In this study, routine HIV counselling and testing was well received and accepted by most pregnant women. This was apparent as most women were aware of the routine prenatal HIV testing before registering for ANC services. The women indicated that they were pre-information about HIV testing and its benefits through various community education activities, mass media and during their previous prenatal visits for the most recent pregnancy. During ANC services, health care workers were over-stressed by the large numbers of women waiting for HIV testing. This was noticed to have downplayed or reduced the quality of counselling services thereby affected the quality of PMTCT services. To this end, strategies such as, increased and deployment of more staff to ANC days to ensure that, HIV counselling and testing take place in the manner it was meant for [54-58].

“In this study, women valued routine HIV counselling and testing as this gave them an insight into their own status and also, protect their unborn babies, knowing that, those that are HIV positive could access treatment and suppressed the viral load. Therefore, acceptance of HIV testing in the study setting may be an indication why women are in full agreement to protect their unborn children as well as taking

care of their own health. It was also, observed that, some studies in Africa also identified the importance for mothers / women to protect their children (both born and unborn) and to show concern for their own health as a major indicator for acceptance of HIV counseling and testing during pregnancy" [36]. "Also, some women that are aware of the voluntary option of opt-out HIV testing, were against the routine HIV testing. The option that women should have the right to accept or refuse HIV testing had been documented in other African settings" [37]. This results were in line with "global guidelines and Ethiopian HIV testing policy that clients' right to informed consent should be respected" [38].

"In routine provider-initiated HIV counseling and testing, as stipulated in global and national guidelines, clients must receive pre-test information in a group or individually on HIV/AIDS and PMTCT" [26]. In our study, however, majority of pregnant women, along with the data from the interviews with health workers portrayed that pre-test counselling was limited. Similarly, in a study conducted "in Addis Ababa, revealed that providers took blood samples for HIV test from clients without pre-test counseling" [39]. "Health care providers mentioned that counselling was particularly important for HIV positive pregnant women, implied that counselling was not critical if a woman was HIV negative. This finding suggested that counselling was not prioritized for majority of people who tested negative, which indicated missed opportunities for primary prevention of HIV. Pre-test counselling qas vital for pregnant women to ensure that they understand the implications of negative or positive test results for themselves, their partners and their unborn children" [40].

"In this study, client's viral load was raised as a barrier to pre-test counselling. In the ANC environments, health care providers were overwhelmed by the great numbers of women who attended their clinics for testing. This was observed to have affected the quality of counselling services, thus hampered the delivery of full package of PMTCT services. Similarly, studies in sub-Saharan Africa countries had demonstrated limited pre-test counselling related to the shortage of health workers in these facilities" [41]. "To this effect, strategies included increased in the number of health workers and the use of lay counsellors to ensure that provider-initiated HIV testing and counselling took place in the manner it was intended to" [42].

The Ethiopia PMTCT guidelines recommended that providers must explicitly inform the client the right to say "no" (to opt-out), and that this decision by no means affect the services rendered in the health facility [43]. "In this study, however, some women did not perceive HIV testing as a choice, but rather as a compulsory service for all pregnant women. The perception that HIV testing provided as part of ANC was compulsory, has also been documented in other African settings" [44]. "Some women perceived this approach as a government policy intended to protect children from HIV infection. For such women, the implication was that acceptance of HIV testing could be considered as a compliance with what they perceived as a government law. Health workers' emphases on the benefits of HIV testing during pre-test counselling found in this study, could have downplayed women's perceptions of the possibility of not testing, which was in congruent with a study conducted in Uganda" [45]. Similarly, "a study from four African countries revealed that some providers underlay the stance as the moral imperative to protect the unborn child" [46]. "Moreover, some participants perceived HIV testing was a prerequisite to receive other health services including delivery services. Similar findings have been documented in other African settings" [47]. "This was a fundamental shortcoming of unclear pre-test counselling which entirely eliminated pre-test counselling or provided insufficient information to the opportunities for informed consent" [48].

4. CONCLUSIONS

Routine HIV counselling and testing which was provided as part of antenatal care services in the study setting, was well accepted among the pregnant women which will enabled them to make informed choices regarding the HIV testing and to take appropriate action. In light of this, there was a sense of obligation as women feel HIV counselling and testing was a requirement for delivery services as an evident that participants were able to state the benefits of routine counselling and testing.

Participants' views were that there was a low acceptance of routine antenatal counselling and testing, because, the voluntary routine HIV testing was not fully explained and understood, which may be related to the limited pre-test counselling. The study suggest that, there was need to strengthen pre-testing counselling to ensure that HIV testing is conducted in a way

that would ensure pregnant women's autonomy and maximise primary HIV prevention opportunities.

This study also provided useful information about routine antenatal counselling and testing. Constraints which hindered the implementation of routine antenatal counselling and testing were identified, and recommendations to facilitate the application of the principles were made.

5. RECOMMENDATIONS

The recommendations of the study are based on the suggestions made by the participants Stigma and discrimination has been identified as a barrier to the acceptance of routine antenatal counselling and testing. Therefore, there is a serious call for interventions that would deal with violence against women and men over women's sexualities in communities. The men should be educated about the importance of routine antenatal counselling and testing. This would encourage partners to share the burden of HIV status and reduce stigma and discrimination. This cannot change overnight; therefore it remains a challenge to society at large to change their perceptions.

1. Community education about the importance of routine antenatal counselling and testing and PMTCT should be strengthened. It will encourage community nvolvement and the reduction of stigma and discrimination in the society. It will also improve the knowledge about the benefits of routine antenatal counselling and testing. Information and education empower individuals to make correct decisions concerning health care.
2. Since the healthcare workers are the important support system for pregnant women with HIV/AIDS, they should keep the information regarding the HIV results confidential and provide care and support to those who are HIV positive.
3. Routine antenatal counselling and testing should be available and accessible at all health facilities offering antenatal services. This will allow all pregnant women to benefit from the available interventions designed to reduce HIV infection among children.
4. Effective communication and cooperation should be encouraged between partners. It will increase the male involvement in the programme and ensure that men know the importance of routine antenatal counselling and testing. Male involvement will allow both partners to accept and share their results (negative or positive).
5. Cultural practices should be discouraged in order to prevent HIV transmission from the mother to the baby.
6. A policy on stigmatization and discrimination should be effectively implemented. It will help to reduce and eliminate the stigma and discrimination attached to HIV/AIDS.
7. Routine antenatal counselling and testing services should be extended to all hospitals, health centers and clinics that are offering antenatal services.

CONSENT

As per international standard or university standard, patient(s) written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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