

Knowledge and Attitude to Prevention of Mother-to-Child Transmission (PMTCT) of HIV among Pregnant Women in Imo State University Teaching Hospital (Imsuth) Orlu, Imo State, Nigeria

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ABSTRACT

This study was carried out to assess knowledge and attitude to prevention of mother-to-child transmission (PMTCT) of HIV among pregnant women in IMSUTH Orlu. HIV/AIDS pandemic is increasingly affecting mainly women and children. Close to 95% of HIV/AIDS are gotten through mother-to-child-transmission. The study adopted a descriptive cross-sectional study with the use of a structured questionnaire. The study is made up of a population of 1,250 pregnant women and a sample size of 303. Data were analyzed by the use of descriptive statistics and hypotheses were tested by the use of non-parametric statistics of chi-square. The study revealed that 120 (39.6%) of the respondents had overall knowledge of PMTCT of HIV. A little above half (50.8%) of the respondents had positive attitude to PMTCT of HIV. The study further revealed that there is a significant relationship between knowledge ($\chi^2=36.49$; $p<0.05$) and attitude ($\chi^2= 41.28$; $p<0.05$) towards PMTCT of HIV and the respondents' level of education. The study recommended that outreach programs should be organized on the health education of pregnant women on the dangers and poor attitude to utilization of PMTCT of HIV services.

Keywords: Knowledge, Attitude, Prevention of Mother to Child Transmission (PMTCT) of HIV, Pregnant women

INTRODUCTION

A global overview of the HIV/AIDS epidemic indicates that 42 million people are at present living with HIV/AIDS, of which 19.2 million are women and 3.2 million are children under 15 years of age [1]. Mother-to-child transmission (MTCT) of human immune deficiency virus (HIV) infection is the transmission of the virus from a HIV-infected mother to her child during pregnancy, labor, delivery or breastfeeding [2]. The risk of HIV transmission from mother-to-child was estimated at 5-10% during pregnancy, 10-20% during labor and delivery, and 10-20% in the post-partum period. Twenty five to forty percent of infants born to HIV-positive mothers will become infected if there are no interventions from the mother but with interventions, this risk can be reduced to less than 5% [3].

HIV is a global public health crisis with Sub-Saharan Africa having a disproportionately high burden of the epidemic. Sub-Saharan Africa accounts for more than two-third (68%) of the global infected population [4]. women and children continue to experience high rates of new infection and HIV-related illnesses and deaths. Mother-to-child transmission of HIV is one of the causes of high rates of HIV/AIDS among people in South Africa. Over 90% of infected infants and young children are as a result of MTCT of HIV infection. Without any interventions, between 20% and 45% of infants may become infected with HIV by their mothers [5]. Nigeria, a Sub-Saharan member nation with a current estimated population of over 162 million and a growth rate of 3.2% continues to record high rates of HIV among women and children. This is reflected in the UNAIDS 2013

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progress report on elimination of MTCT of HIV which showed that Nigeria recorded 60,000 new cases of MTCT of HIV in 2012 alone [6]. Prevention of mother-to-child transmission (PMTCT) services became available to infected pregnant women in 2001 when the government of Nigeria supported six tertiary hospitals across the six geo-political zones of the country to commence service. Since then, government supported PMTCT service outlets have increased. Despite the increase, reports indicate the country only has a 13% PMTCT coverage of pregnant women in the country. The national scale-up plan for PMTCT also indicated only 12% of pregnant women who require antiretroviral therapy (ART) to prevent MTCT actually receive the drug. This calls for scaling-up of services for high priority individuals [7].

In 2012, AIDS-related causes resulted in the death of 210,000 children less than 15 years of age out of a total of 1.6 million deaths due to AIDS. Despite the improvements in PMTCT services over the years, MTCT of HIV infection is high especially in Sub-Saharan Africa, and more than 90% are the result of mother-to-child transmission (MTCT) during pregnancy, labor/delivery or through breastfeeding [8].

According to the 2013 progress report of the global plan towards elimination of maternal to child transmission of HIV, Nigeria had 60,000 new pediatric infections in 2012 which is equivalent to one third of new infections among children in Sub-Saharan countries. The country's PMTCT coverage at the end of 2010 stands at just 13% as reported by the National PMTCT scale-up plan document. This is grossly inadequate and falls short of what is needed to reach the goal of eliminating maternal to child transmission of HIV in the country [6]. The reason for an increasing MTCT of HIV can include lack of knowledge of the risk of MTCT, benefits of preventive interventions such as prophylactic ARV drugs and infant feeding options [9].

Presently, no known studies have been carried out in Orlu Zone, Imo State to assess the knowledge and attitude of pregnant women in relation to prevention of mother-to-child transmission of HIV. Hence, it becomes necessary for this study to be carried out.

MATERIALS AND METHODS

A descriptive cross-sectional study to assess knowledge and attitude to prevention of mother-to-child transmission (PMTCT) of HIV among pregnant women was carried out in Imo State University Teaching Hospital (IMSUTH), Orlu Local Government Area in Imo State, Nigeria. Orlu is bounded by Isu, Njaba, Nkwere, Orsu, and Ideato North Local Government Areas all in Imo State. Imo State University Teaching Hospital is a tertiary healthcare institution founded in 2003. The hospital offers specialist service and post graduate training in Nursing, Surgery, Obstetrics and Gynecology, Pediatrics, Internal medicine and Community Medicine. The antenatal clinic is one of the subunits of the obstetrics, gynecology unit. Imo State University Teaching Hospital was chosen for the study because it is one of the centers chosen by the government for the prevention of mother to child transmission (PMTCT) of HIV/AIDS.

The target population of this study comprised of 1,250 pregnant women who came for antenatal visit from the month of October 2018 to March 2019. The sample size of 303 was determined by use of Taro Yamane which represents 24.24% of the population. A simple random sampling technique with replacement was used to select the pregnant women needed for the study. Three hundred and three (303) pieces of paper marked X and O were folded and placed in a bowl. The bowl was vigorously shaken and the papers properly mixed up. The pregnant women were then asked to pick and those that picked O were selected and the papers returned to the bowl. The exercise lasted for 6 months with a total of twelve visits, two visits in 1 month. Folders of women that had previously filled the questionnaire were marked KU to avoid repetition. A self-developed questionnaire was the instrument for data collection. Ethical clearance was obtained from the Chief Medical Director (CMD) of IMSUTH. Data were analyzed using descriptive statistics and non-parametric statistics of chi-square.

RESULTS

Age variables of the respondents indicated that those below 21 years were 55 (18.1%), those that are within the age brackets of 21-25 years and 26-30 years were 27.1% and 34.7% respectively whereas age brackets of between 31-35 years and 36 and above were 12.5% and 7.6% respectively. Educational qualification shows that respondents who had no formal education and primary education were 0.7% and 11.2% respectively. Majority (55.4%) had secondary education whereas 32.7% had tertiary education (Table 1).

Table 1: Demographic variables of the respondents

Variable	Category	Frequency	Percentage
Age bracket (Years)	Below 21	55	18.1
	21 – 25	82	27.1
	26 – 30	105	34.7
	31 – 35	38	12.5
	36 and above	23	7.6
Educational Qualification	No Formal Education	2	0.7
	Primary Education	34	11.2
	Secondary Education	168	55.4
	Tertiary Education	99	32.7

Majority, (81.5%) of the respondents indicated that they have heard about PMTCT of HIV. Almost half, (48.6%) of the respondents got the information from hospital/health personnel, 9.3% from mass media, 0.8% from church/priest. Others, 26.3% and 15.0% got their information from relations/friends/colleagues and from school/teachers respectively. Few, (36.6%) of the respondents had understanding of PMTCT of HIV as those interventions that are carried out to prevent transmission of HIV from an HIV-positive mother to her infants during pregnancy, labor, delivery or breastfeeding (Table 2).

Table 2: Knowledge of pregnant women towards PMTCT of HIV

Options	Frequency	Percentage
Awareness of PMTCT of HIV		
❖ Yes	247	81.5
❖ No	56	18.5
Source of Information		
❖ Hospital/Health Personnel	120	48.6
❖ Mass media (TV, Radio, Newspaper, Magazine etc.)	23	9.3
❖ Church/Priest		

❖ Relations/Friends/Colleagues	2	0.8
❖ School/Teacher	65	26.3
	37	15.0
Understanding of PMTCT of HIV		
❖ Intervention carried out to prevent transmission of HIV from HIV- positive mother to her infant during pregnancy, labour, delivery or breastfeeding	111	36.6
❖ Measures carried out to cure HIV from HIV-positive women after childbirth and delivery	23	7.6
❖ Practices that reduce the signs and symptoms of HIV in HIV-pregnant mothers	82	27.1
❖ Practices that will not allow HIV-positive women to become pregnant	87	28.7

Majority, 69.3% of the respondents opined that MTCT of HIV can be transmitted during vaginal delivery, 56.8% and 40.6% affirmed that MTCT of HIV is through carelessness of the midwife during delivery and through breast milk during breastfeeding respectively while very few, 26.1% and 20.8% indicated that MTCT of HIV occurs during cutting of the umbilical cord of the newborn and during forceps delivery respectively, 18.2% said that it is during pregnancy through the placenta. Summarily, only 38.6% of the respondents had full knowledge of how HIV pregnant mothers can transmit HIV to their children (Table 3).

Table 3: Respondents knowledge on MTCT of HIV

Options	Yes (%)	No (%)
❖ Through breast milk during breastfeeding	123 (40.6)	180 (59.4)
❖ During vaginal delivery	210 (69.3)	93 (30.7)
❖ When cutting the umbilical cord of the newborn	79 (26.1)	224 (73.9)
❖ During pregnancy through the placenta	55 (18.2)	248 (81.8)
❖ During forceps delivery	63 (20.8)	240 (79.2)
❖ Carelessness of the midwife during delivery	172 (56.8)	131 (43.2)
Grand Total	702	1116
Average/Mean	117 (38.6)	186 (61.4)

NB: Multiple Responses

Majority, 70.6% of the respondents said that PMTCT of HIV can be prevented by giving antiretroviral drugs during pregnancy and childbirth, 58.7% and 53.1% affirmed that MTCT of HIV can be prevented by delivering baby through caesarean section and by giving HIV medicine for 6 weeks after birth to babies born to HIV-positive mothers respectively, 42.9% and 38.0% affirmed MTCT of HIV can be prevented through prevention of new infection in mothers and through regular hospital visit respectively, 30.4% indicated that MTCT OF HIV can be averted if mother avoid unintended pregnancy, 29.0%, and 26.1% indicated that MTCT of HIV can be prevented if HIV mothers do not breastfeed their babies for so long and by avoiding invasive diagnostic procedure before birth respectively. Summarily, less than half (43.6%) of the respondents were able to identify and tick all the options (Table 4) on ways to prevent MTCT of HIV.

Table 4: Respondents knowledge on ways to prevent MTCT of HIV

Options	Yes (%)	No (%)
❖ Giving of antiretroviral drugs during pregnancy and childbirth	214 (70.6)	89 (29.4)
❖ Delivering baby through caesarean section	178 (58.7)	125 (41.3)
❖ Not breastfeeding babies for so long by their HIV-positive mothers	88 (29.0)	215 (70.9)
❖ Babies born by HIV-positive mothers should receive HIV medicine for 6weeks after birth	161 (53.1)	142 (46.9)
❖ Through prevention of new infections in mothers	130 (42.9)	173 (57.1)
❖ By avoiding invasive diagnostic procedure before birth	79 (26.1)	224 (73.9)
❖ Through regular hospital visit	115 (38.0)	188 (62.0)
❖ Avoidance of unintended pregnancy	92 (30.4)	211 (69.4)
Grand Total	1057	1367
Average/Mean	132 (43.6)	171 (56.4)

NB: Multiple Responses

Very few (39.6%) of the respondents had overall knowledge of prevention of mother-to-child transmission (PMTCT) of HIV (Table 5).

Table 5: Overall knowledge of PMTCT of HIV among the pregnant women

Knowledge of PMTCT of HIV	Frequency	Percentage
Understanding of PMTCT of HIV	111	36.6
Knowledge on MTCT of HIV	117	38.6
Knowledge of ways to prevent MTCT of HIV	132	43.6
Grand Total	360	
Average/Mean	120	39.6

The respondents had positive attitudes and affirmed that HIV-Positive pregnant women should be allowed to get pregnant. They also agreed that pregnant women who are HIV-Positive should breastfeed their babies. They also support that HIV-Positive women should be allowed to get married and have their own babies. They had negative attitude towards the following statements; pregnant mothers who tested HIV-Positive should disclose their HIV status to their husband, and that it is possible for HIV-Positive pregnant women not to transmit HIV to her unborn baby. Summarily, the mothers had positive attitude towards PMTCT of HIV with a mean score of 2.5 (Table 6).

Table 6: Respondents attitude to PMTCT of HIV

Statements	SA	A	D	SD	Total	X	Decision
HIV-positive women should be allowed to get pregnant	292	351	50	88	781	2.6	Positive
HIV-positive women should be allowed to breastfeed their babies	252	264	198	53	767	2.5	Positive
HIV-positive women should disclose their HIV status to their husbands	200	216	196	83	695	2.3	Negative
HIV-positive women should be allowed to get married and have their own babies	292	255	184	53	784	2.6	Positive
It is possible for HIV-positive pregnant women not to transmit HIV to their unborn babies	240	261	142	85	728	2.4	Negative
Grand Total						12.4	
Average/Mean						2.5	Positive

There is significant relationship between knowledge of PMTCT of HIV among pregnant women and their level of education (Table 7).

Table 7: Knowledge of PMTCT of HIV based on respondents level of education

Level of Education	Knowledgeable (%)	Not Knowledgeable (%)	Total
No Formal Education	0 (0.0)	2 (100)	2
Primary Education	8 (23.5)	26 (76.5)	34
Secondary Education	49 (29.2)	119 (70.8)	168
Tertiary Education	63 (63.6)	36 (36.4)	99
Total	120 (39.6)	183 (60.4)	303
	$\chi^2 = 36.49;$	$P < 0.05$	

There is significant relationship between attitude of pregnant women in IMSUTH, Orlu towards PMTCT of HIV and their level of education (Table 8).

Table 8: Respondents attitude based on their level of education

Level of Education	Positive Attitude (%)	Negative Attitude (%)	Total
No Formal Education	0 (0.0)	2 (100)	2
Primary Education	15 (44.1)	19 (55.9)	34
Secondary Education	63 (37.5)	105 (62.5)	168
Tertiary Education	76 (76.8)	23 (23.2)	99
Total	120 (39.6)	183 (60.4)	303
	$\chi^2 = 41.28;$	$P < 0.05$	

DISCUSSION

The study revealed that 39.6% of the respondents had overall knowledge of PMTCT of HIV. This is in line with Mamudu (2014) findings which revealed that 28.33% of the women had sufficient knowledge of PMTCT of HIV.

The study further revealed that a little above half (50.8%) of the respondents had positive attitude towards PMTCT of HIV. This is in line with [1] whose findings revealed that their participants had a positive attitude on PMTCT services. This was also in line with the study conducted by [10] whose findings revealed that there was a positive attitude of pregnant women towards the prevention of mother-to-child transmission of HIV.

The study also revealed that there is significant relationship between knowledge of PMTCT of HIV and the respondents' level of education. This is in line with [4] whose findings revealed that there was an increase in the level of knowledge of PMTCT of HIV as educational level increases and a decrease in knowledge of PMTCT of HIV as educational level decreases.

The study further revealed that there is significant relationship between attitude of pregnant women towards PMTCT and their level of education. This is in line with [10] whose findings revealed that there was a significant influence between level of education of pregnant women and their attitude.

CONCLUSION

The study shows that very few women had overall knowledge of prevention of mother to child transmission of HIV. Also knowledge of PMTCT of HIV is statistically related to level of education. Moreover, a little above half of the respondents have negative attitude to PMTCT of HIV with mean score of 2.5, also attitude is statistically related to level of education. The study recommends that women should be encouraged to pursue formal education as this can help them to improve their knowledge as well as have a positive attitude towards their health.

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