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KNOWLEDGE, ATTITUDES AND PRACTICES OF PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HIV AMONG WOMEN IN LAROO DIVISION GULU MUNICIPALITY, UGANDA.

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ABSTRACT

This study is exploring the knowledge, attitudes and practices of Prevention of Mother to Child Transmission (PMTCT) of Human Immunodeficiency Virus (HIV) among child bearing women aged between 15- 45 years old in Laroo division in Gulu municipality. The goal of the study was to determine the level of attitude as well as of knowledge and belief about PMTCT and proportion of women practicing it among the child bearing women of Laroo Division. The Cross-sectional and Descriptive study design was applied in multistage sampling method with random selection of a parish followed by random selection of a village within the parish from which a sample of homesteads was randomly selected. From each homesteads, a single respondent was randomly selected and registered in the study. Questionnaires were given to respondents that had consented to take part in the study. A total of 208 respondents were registered and interviewed in a period of February to March 2011. There were 165 (79.3%) of the mothers who had knowledge about various PMTCT methods. Of these 86(52%) heard about PMTCT first from hospital. 50 (30%) knew about exclusive breast feeding, while another 50(30%) use of ART, 45(27%) knew about replacement feedings and only 21(13%) knew of elective caesarean section as method of PMTCT. However the majority of the mothers 159(96.5%) thought that PMTCT was beneficial. Nevertheless some mothers thought that PMTCT causes various counter indications including infertility 17 (10.5%) and abnormalities in children at birth 27 (16.7). Their HIV serostatus also varied. Of the 135(81.7%) screened for HIV 42(31.2%) tested HIV positive and only 27 (64.2%) used contraceptives to prevent pregnancy while they were HIV positive. However of the correspondents who tested positive in their last HIV tests, the majority (83%) had had at least a pregnancy after testing HIV positive of which 6.8% did not practice PMTCT. Our study suggests evidence that Knowledge, attitude and practice of PMTCT among women of reproductive age in Laroo Division in Gulu municipality in Northern Uganda is adequate. Nevertheless with the infection rate of 31.2% among them points out that there is a substantial burden of HIV in the women community.

INTRODUCTION

Prevention of Mother to Child Transmission (PMCT), services traditionally follows four-pronged strategies. These include primary prevention of HIV, family planning, reduction of vertical transmission from infected mothers to their babies including antiretroviral drugs (ART), and support for HIV-positive pregnant women and their families (1, 2). Without interventions, there is a 20-45% chance that a baby born to an HIV-infected mother will become infected with HIV. In recent years, promising developments have been made in preventing mother to child

transmission of HIV in the developing world (3). The risk of mother-to-child transmission of HIV can be reduced to less than 5 percent through a combination of prevention measures (PMTCT), including antiretroviral therapy (ART) for the expectant mother and her new-born child, hygienic delivery conditions and safe infant feeding (4). According to a study, *HIV/AIDS TRaC, a Study Examining the Use of Prevention of Mother-to-Child Transmission Services among Women of Reproductive Age* done in 2005 in Uganda, showed that MTCT is high (95%)(5).

But only 58% knew that MTCT occurs during delivery and pregnancy, while 68% were aware of where they could access PMTCT services and only 35% of the respondents knew two or more benefits of PMTCT(5). In 2011, there were approximately 96,700 HIV-infected pregnant women in Uganda and in 2010, 7% of under-5 mortality was due to HIV (6). Between 2009 and 2011, Uganda experienced a 25% decline in the number of new pediatric HIV infections from 27,300 to 20,600 (7). In 2010, PMTCT services were available in 81% of Antenatal care (ANC) facilities in Uganda (8). Although HIV testing coverage among pregnant women increased from 18% in 2005 to 63% in 2010(9), it is still low. In 2011, only 50% of pregnant women living with HIV in Uganda received efficacious ARV regimens for PMTCT (7), and only 22% children born to pregnant women living with HIV received ARVs for PMTCT in 2010 (9). In 2009, an estimated 860,000 pregnant women were found to be living with HIV in Eastern and Southern Africa, more than in any other region of the world. The region is also home to 47 percent of the global total of children living with HIV, of which over 90 percent were infected through vertical transmission from the mother to the baby during pregnancy, delivery or breastfeeding (4). The majority (92.5%) of health facilities in Kenya offer PMTCT services (10) and 67% of pregnant women living with HIV received efficacious ARVs for PMTCT IN 2011(7). In 2009, UNICEF endorsed the UNAIDS call for a virtual elimination of mother-to-child transmission of HIV by 2015(4).

We in this study investigated gaps of information about the knowledge, attitude and practice of PMTCT among females in Laroo Division in anticipation for future interventional measures.

METHODOLOGY

A cross sectional (analytical) and descriptive study design was employed. The descriptive part described the level of knowledge, attitude and practice of PMTCT among women of child bearing age in Laroo Division. The cross sectional part compared the effects of knowledge and attitude on practice of PMTCT among women of child bearing age in Laroo division.

Study area

The study was carried out in Laroo Division in Gulu municipality which is situated approximately 330 kilometers North of Uganda's Kampala city. Laroo Division has both peri-urban and urban settlements with a good tropical climate. It covers approximately 5km square of land. Both the District and the municipal headquarters are located in this division. Administratively Laroo Division is at local council three (LC3) levels. It is divided into four parishes namely; Queens, Pece prison, Agwee and Iriaga all of which are at LC2 level. It has 14 sub wards at LC1.

According to Uganda population and housing census conducted in September to November 2002 by the Uganda bureau of statistics the population of Laroo division stood at 21,214 out of which 10,380 were male and 10,834 were female¹². Due to the past northern war, the population in Laroo increased due to influx of people from rural areas into town which resulted into very unstable population level.

The family structure in Laroo division is of extended family system with mean family size of 5 to 6 persons per house hold but the number may be as large as 12 persons per house hold. The population at Laroo is multi ethnic consisting of mainly of Acholi (85%). Others include the Langi, Madi, and Alur (15%). The main languages spoken in this community are Luo, English, Swahili, Madi, Lugbara, Luganda and Kinubi. Occupationally the people of Laroo Division are small scale business men and women who operate small bars and shops. There are few civil servants, but yet with other involve in small scale industries of bricks laying, metal work fabrication. Only about 25% of the population lives in good permanent homes, 15% have semi permanent homes and 60% live in much crowded poor grass thatched and mud huts. These occupational activities and the environmental settlements predispose the inhabitants to HIV transmission.

Study population

The study population was all females in Laroo division and the target population was females of child bearing age 15-49 years .Only one participant was chosen randomly from a house hold after consenting.

Sampling Procedure

The study was carried out using a multistage sampling method. The Division is made up of

four parishes namely: Queens, Agwee, Pece and Iriaga. By simple random sampling, Queens Parish was chosen for the study out of the four parishes. By further simple randomization again a village was selected out of Queens. From the selected village we randomly select 209 homesteads from which 209 respondents were selected (one respondent from each home stead by random selection in homes with more than one female eligible member). In cases of homestead with no eligible women with

inclusion criterion, a respondent was selected randomly from another neighboring homestead that had not been selected before.

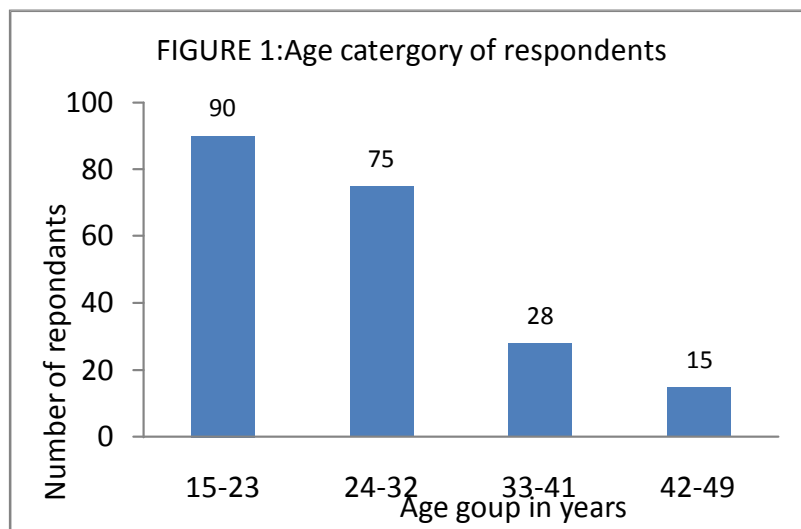
Ethical considerations

The intent and the benefits of the research were explained to the local leaders and the respondents in the study so that their cooperation and consent to participate was sought. They were assured of risk free, humane process and no penalty of any kind for those who would refuse to participate in the study and lastly they were assured of confidentiality of any information they would give. The ethical committee of Faculty of Medicine and the Uganda National Council of Science and Technology granted the permission for the study.

Data management and analysis

interviewed in Laroo Division in Gulu municipality between February and March 2011 is reported. Figure 1 shows the distribution of respondents registered and interviewed according to their age group. Out of the 208 mothers interviewed 165 (79.3%) had various

knowledge about PMTCT. These included 86(52%) respondents who heard about PMTCT first from hospital, 50 (30%) knew about exclusive breast feeding method for prevention of PMTCT, while another 50(30%) are using ART, 45(27%) knew about replacement feedings and only 21(13%) knew of elective caesarean section as method of PMTCT (Fig.2). In spite the majority of the mothers 159(96.5%) thought that PMTCT was beneficial, some mothers thought that PMTCT causes various health related complications including 17 (10.5%) thought that PMTCT causes infertility, 27 (16.7) abnormalities in children at birth. The tribal distribution showed that the indigenous 184(88.5%) Acholi are the main inhabitants of Laroo division although 24 (11.5%) others tribes also live in Laroo division. The majority of the respondents were married (fig3). Their HIV sera status also varied. Of the 135(81.7%) screened for HIV 42(31.2%) tested HIV positive and only 27 (64.2%) used contraceptive. All though a few of the respondents expressed knowledge of PMTCT induce health problems, the majority of them had



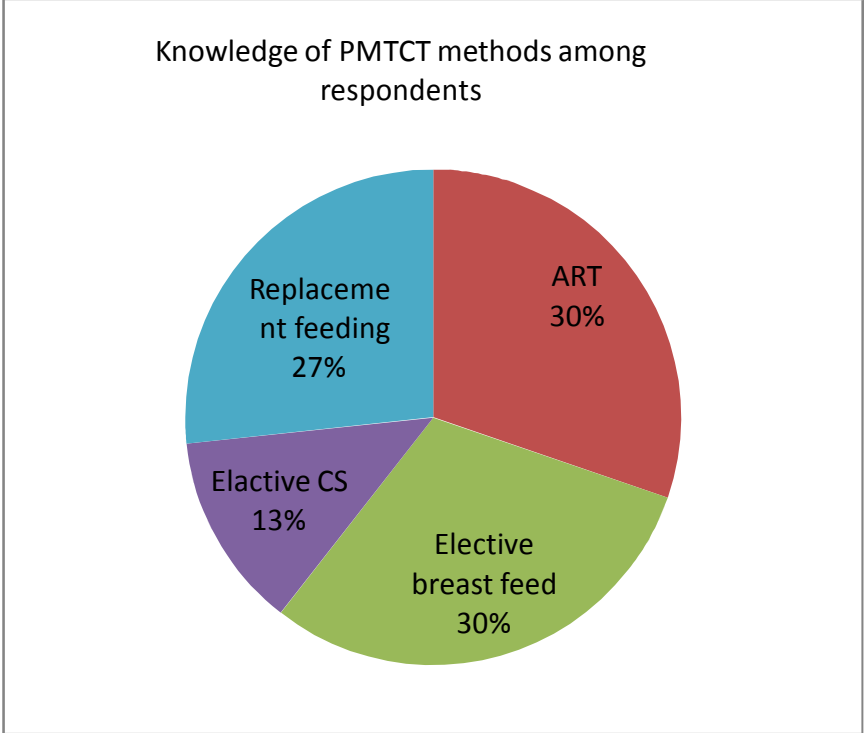
The data was entered and analyzed using Graph Pad Prism computer software.

Results

The result for knowledge, attitudes and practices of prevention of mother to child transmission of HIV among 208 women who were registered and

very positive attitude about PMTCT (fig.4) and that the same respondents practice the various PMTCT methods (figs 5 and 6). interviewed in Laroo division Gulu municipality.

Fig.2: Showing knowledge of respondents to various methods of PMTCT among the 165 mothers



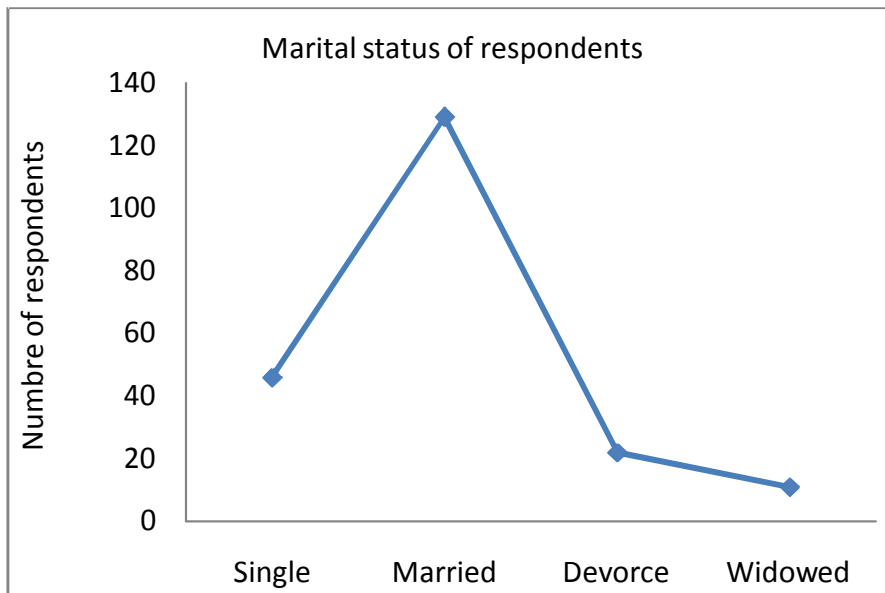


Fig 3: Showing the marital status of the 165 respondents interviewed in Laroo division

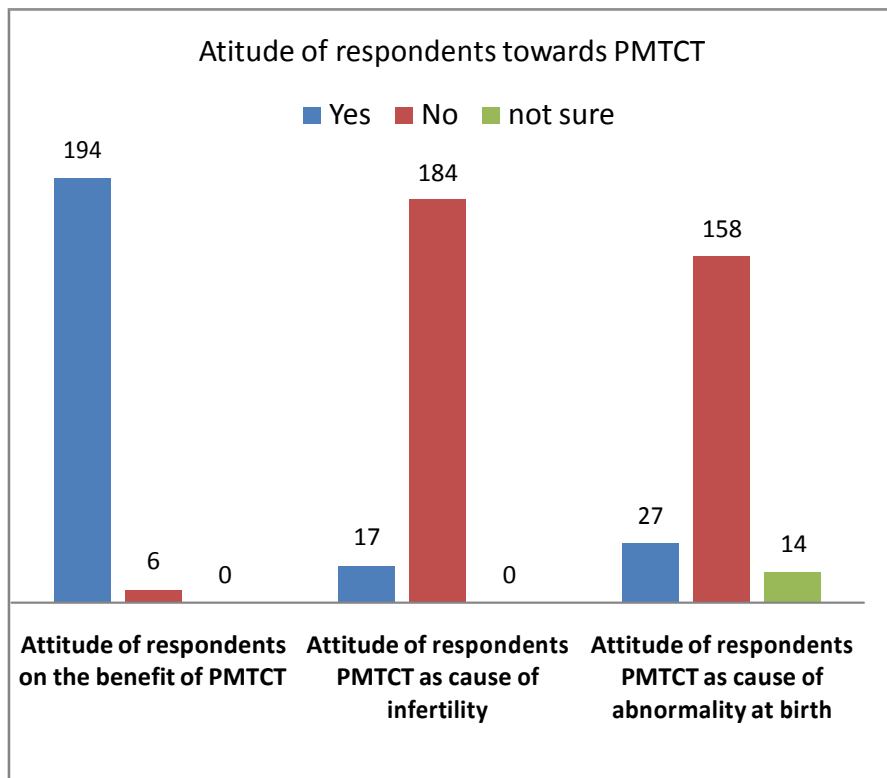


Fig.4: Showing attitude of respondents towards PMTCT

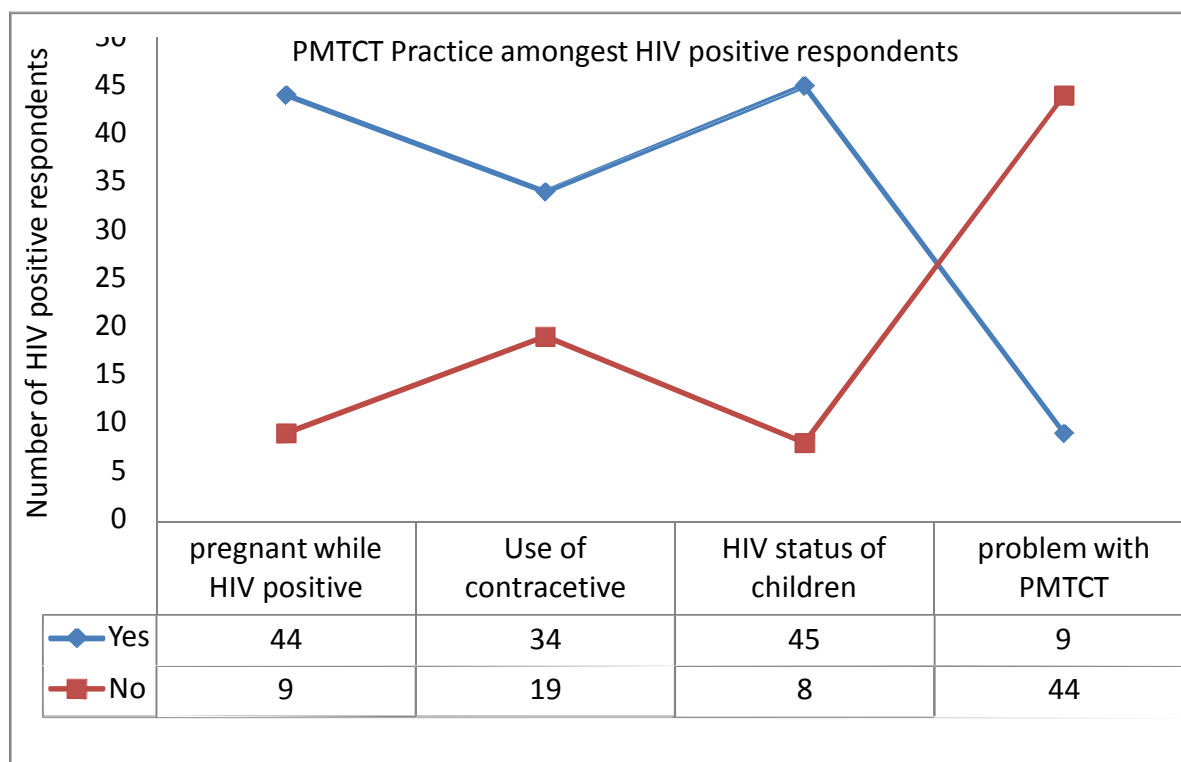


Fig. 5: Shows the majority of respondents in Laroo division practice different methods of PMTCT.

Table 1: showing pregnancies in which PMTCT was practiced among respondents who got pregnant after testing HIV positive.

Number of pregnancies	Number of respondents
All	30
Some	11
None	3

DISCUSSION:

A total of 208 respondents were interviewed in Laroo division in a period of one month. The respondents were randomly drawn from queens parish one of the four parishes in Laroo division. The respondents were stratified according to Age, Tribe, Occupation, Religion, and Level of education and marital status. According to the

The majority of the respondents as noted above in the age range of 15-23, most of which were married, had attained a low level of education and were unemployed (house wives). With these

distribution of respondents by Age group (figure 1), the majority of respondents (43.3%) were in the age group of 15-23 years. Most of the respondents (88.8%) were Acholi by tribe. 54% of the respondents had only attained primary level of education and most of the respondents (34.6%) were house wives (figure 3). 62% of the respondents were Catholics and the majority (62%) were married.

early marriages, low level of education and unemployment, the women are prone to early and frequent pregnancies, putting them at risk of contracting HIV and passing it on to their babies.

KNOWLEDGE

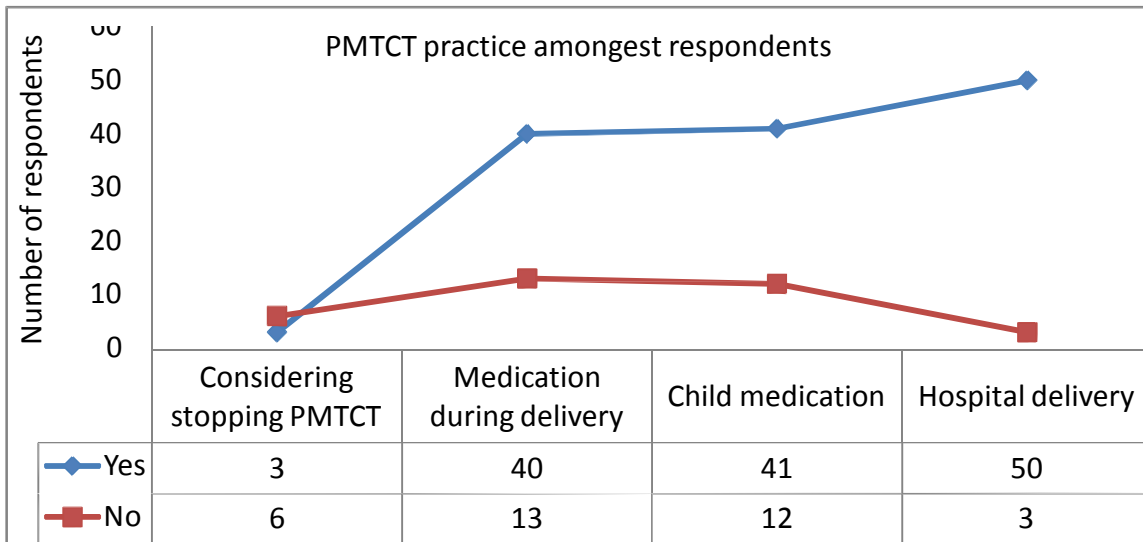
The majority of the respondents (79.3%) had knowledge about PMTCT, most of which (52%) first had of it from hospital, 34% from radio, 9% from community health workers and 5% from other sources. The majority of the respondents (77.9%) had attended ANC before and this contributed to the largest proportion of respondents (52%) who first heard of PMTCT from hospital. Despite the low level of education among most of the respondents, our study shows a relative increase in the knowledge of PMTCT among women. The increase in knowledge is attributed to the increased number of ANC attendance where health education is always provided to the mothers and their husbands on each visit.

Of the respondents who had knowledge about PMTCT, 30% new about Exclusive breast feeding,

30% knew about ARVs, 27% about replacement feeding and 13% knew about Elective caesarean section as methods of PMTCT. Most of the respondents (98.6%) new the importance of breast feeding to the child just as most of the respondents (90.9%) knew that breast feeding was a means of mother to child transmission of HIV.

Among the respondents there were perceived advantages of PMTCT which included prevention of transmission of HIV from mother to the baby, helps support children who get infected from their mothers, provides good health to the child, you get to know the HIV status of the baby early, it generally reduces chances of transmission of HIV, it is easy to raise a child free from HIV, saves the child born to an HIV positive mother from early death, eases doctors' work and it prevents HIV in children.

Fig.6: Shows the willingness of the respondents who are HIV positive to practice the various PMTCT methods in Laroo division Gulu municipality.



However a small proportion of the respondents were not sure and others did not know of any advantages of PMTCT. On the other hand there were perceived disadvantages among the respondents which include: The available methods are expensive for example replacement feeding, the child misses value in breast milk, the child can still get HIV, it can lead to divorce, Children can lose the love from their mothers, it can lead to death of the child, Mother can forget to swallow the drugs or give it to the child, it is not widely known to most mothers, it can lead to mental retardation of the child, it can lead to delivery of a sickly child, it leads to child with very low immunity, people talk about you if they discover that you are practicing PMTCT (stigma), Child does not grow healthy, in case of a bad operation, child can get infected and exclusive breast feeding can lead to infection of the child through breast milk. However the majority of the respondents (52%) thought there was no disadvantage of PMTCT and 19.2% of the respondents were not sure of any disadvantage.

ATTITUDES

Among the respondents that heard of PMTCT, the majority (96.3%) thought that PMTCT was beneficial. This to these respondents was because of the same advantages of PMTCT listed above. Some of the respondents (16.7%) who had knowledge about PMTCT thought PMTCT causes abnormalities in children, 74.7% did not think PMTCT could cause abnormalities in children and 8.6% were not sure of any.

However, PMTCT was thought to cause infertility by 10.5% of the respondents who had knowledge about PMTCT. Among the respondents who thought that PMTCT methods cause infertility, Exclusive breast feeding was cited to be the leading cause of infertility followed by Elective caesarean section, ARVs and abnormalities caused by PMTCT. Among the respondents who thought that PMTCT causes abnormalities in children, ARVs were the leading cause followed by replacement feeding.

Despite the low level of education among the majority of the respondents, the attitude towards PMTCT was generally good. This can be attributed to the increased number of ANC attendance among respondents with most of them having heard of PMTCT for the first time in hospital and radio stations where correct PMTCT is disseminated through health education and radio health talks respectively.

PRACTICE:

Of the 208 respondents interviewed, the majority of the respondents (81.7%) had tested for HIV of which 65.3% had tested more than once and 34.5% had tested only once. This may be attributed to the

increased ANC attendance where routine counseling and testing services are offered.

Among the respondents who had tested for HIV before, 31.2% had a positive result from their last HIV test and 68.8% tested negative in their last HIV test. From our study, we can attribute this to the low level of education and early marriages among the respondents.

Among the respondents who tested positive in their last HIV test, the majority (64.2%) had ever used contraceptives methods to prevent pregnancy and 35.8% had never used any contraceptive method to prevent pregnancy while they are HIV positive. However, among the respondents who tested positive in their last HIV test, the majority (83%) had had pregnancies after testing positive and 17% had never gotten pregnant after testing positive (Fig. 5).

From the study, we realized that there was increased number of pregnancies among the respondents who were HIV positive despite increased use of contraceptive methods. This may be attributed to irregular use of contraceptives, improper use of contraceptive methods and Cessation of use of contraceptives after initiation.

Among the respondents who got pregnant after testing HIV positive, the majority (68.2%) practiced PMTCT in all the pregnancies, 25% practiced in some and 6.8% did not practice PMTCT (table 1). This may be attributed to the thought among some respondents that it causes infertility and abnormalities in children, and also the disadvantages amongst the respondents as discussed above.

Among HIV positive respondents who got pregnant after testing positive, the majority (84.9%) had all their children free from HIV and 15.1% had some children who got infected with HIV. This may be attributed to the 6.8% of the respondents who did not practice PMTCT.

Of the respondents who practiced PMTCT, 22% experienced problems with PMTCT of which 55.6% attributed to ARVs, and 44.4% to replacement feeding. These problems were attributed to the side effects and the expenses respectively. However, only 33.3% of those who experienced problems with PMTCT were considering stopping irrespective of its advantages (figure 6) Among the respondents who got pregnant after testing HIV positive, 92.7% had their deliveries in hospital and 7.3% had their deliveries at home. (figure 6). **ACKNOWLEDGEMENT**

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