

ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICE OF PREGNANT WOMEN ATTENDING ANTENATAL CLINIC TOWARDS THE PREVENTION OF MOTHER TO CHILD TRANSMISSION OF HIV/AIDS IN GWAGWALADA AREA COUNCIL

¹Okoroiwu.I.A.G, ²Ubosi.I.N, ³Ukwunna.B-P

^{1,2&3}Department of Public Health Science, Faculty of Health Sciences, National Open University of Nigeria, Jabi, Abuja, Nigeria.

Corresponding Author: Dr Gideon.I.A.Okoroiwu

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Abstract: Mother-to-Child transmission of HIV (MTCT) remains a key Public Health problem and continues to account for a substantial proportion of new HIV infections among young children. This study was conducted to assess Knowledge, Attitude and Practice of pregnant women attending Antenatal Clinics (ANC) towards mother-to-child transmission of HIV at various primary healthcare centers across Gwagwalada Area Council. A descriptive cross-sectional survey design was employed and data obtained through self-administered questionnaire. Data was collected from 414 pregnant women residing and attending antenatal unit in the primary healthcare centers, hospitals and teaching hospital within Gwagwalada Area Council and the data collected was analyzed using Statistical Package for Social Sciences (SPSS) Version 24.0. The result showed that about a half (48.7%) them had fair knowledge regarding MTCT. The proportion of those that had good and poor knowledge were 29.2% and 22.1% respectively. Of the majority (96.4%), reported to have been tested for HIV during ANC, more than two-third (67.1%) claimed of putting personal effort to prevent MTCT. About three-quarter (72.0%) of the respondents considered level of education as a factor affecting the attitude of pregnant women towards the PMTCT, majority considered factors such as lack of partner involvement (88.0%), lack of information about PMTCT (96.8%), stigma (97.8%), distance (98.3%), unavailability of PMTCT services (97.1%) and husband permission (93.5%) as contributory factors that affect the pregnant women's attitude towards the PMTCT services. The study showed that there was a relationship between the age of the respondents and the practice of PMTCT ($P = 0.003$). Therefore, educational campaigns should be continued at all levels of healthcare to create more awareness of HIV/AIDS and PMTCT among pregnant women, in order to promote their understanding about the disease to reduce stigma and discrimination as well as provide support for those who are affected.

Keywords: Knowledge, Attitude, Practice, PMTCT, Relationship, Education.

1. INTRODUCTION

The pandemic of Human Immunodeficiency Virus (HIV) is the most severe health challenge affecting children across the world and it is estimated that more than 90% of all HIV infections in children result from Mother-to-Child Transmission (1). Mother-to-Child Transmission (MCT) of HIV which is otherwise known as the perinatal transmission of HIV is when

HIV is passed from a woman with HIV to her child during pregnancy, childbirth or breastfeeding. The spread of Human Immunodeficiency Virus from a mother to her child still stands as a crucial Public Health Challenge that accounts for a considerable fraction of new infectious cases among young children. Moreso, the greatest challenge to humankind in the 21st century is the epidemic of Acquired Immuno-deficiency Syndrome (AIDS) which was first discovered in the year 1981. Despite exercises taken to curb HIV/AIDS spread, there is still a worrisome rate of increase in the infection (2).

According to Joint United Nations Programme on HIV/AIDS, 3, in 2020, an estimated 79.3 million people have become infected with HIV since the start of the epidemic. In 2020, 37.7 million people were living with HIV, out of which 36 million were adults and 1.7million were children below 15 years, 53% of all people living with HIV were women and girls. Among the 36.3 million people that have died from AIDS-related illnesses since the commencement of the epidemic, the vast majority of them are living in Sub-Saharan Africa with about 22.5 million infected people. Over 55% of these people living with HIV are women of reproductive age who become pregnant (4). Furthermore, HIV infection in women of reproductive age increases the epidemic of perinatal transmission of the infection, resulting into about 2.5 million children living with HIV globally, out of which 1.8 million of them are from Sub-Saharan Africa and worldwide, over 1,700 children per annum become infected with HIV daily (3).

The ,3, developed a worldwide plan with the aim of eradicating new HIV infection which consisted of all individual, particularly women of reproductive age possessing adequate and updated knowledge about HIV transmission, the risk of spread to babies and interventions accessible to minimize and probably eradicate the spread of the infection to the babies. Quite a number of studies have been done in trying to improve the knowledge, attitude and practice of breastfeeding and pregnant mothers attending antenatal clinics, for instance, 5, working in four hospitals in Ethiopia, revealed that majority (99.1%) of women studied were aware of HIV/AIDS, out of them, 491(92.7%) were able to state the main routes of spread, while, 437(94.8%) knew it can be spread from an infected mother to her newborn. A larger percent (93.9%) also knew that MTCT of HIV is preventable. In Togo, 6, in a similar survey, among 210 pregnant women attending Antenatal Clinic in a facility in Togo, demonstrated a good level of knowledge of HIV/AIDS, as the participants stated unprotected sex (93.8%), sharing of sharp objects (80.5%) as the main route of transmission, only 27.1% believed that MTCT as a mode of HIV spread, with 77.1% having the opinion that unprotected sex increases the risk of spread. Moreso, 7, in a pilot study of 36 literate women registered in a PMTCT program at a facility in Western Cape reported a high level of knowledge among the majority, with 88.9% of the women scoring 80% and above.

In Nigeria, 8, working on 172 pregnant women attending antenatal clinic in a tertiary healthcare facility in North Eastern Nigeria, showed a high level of knowledge among the participants, however, according to the report, only 42% of them had accurate knowledge of preventive measures to babies. In the same vein,9, did a study in a South-Western Nigeria and revealed a high level of awareness (99.8%) about HIV/AIDS among 420 women of reproductive age who consented to be part of the study.

The intervention with PMTCT to HIV positive pregnant women has led to 1.4 million HIV infections among children being prevented between 2010 and 2018(10) and the success of mother-to-child prevention requires that women be empowered with knowledge regarding HIV and the risk of transmission to her baby as well as services available to reduce the risks of transmission.

11, on attitude of pregnant women towards PMTCT services, revealed that majority (93.3%) had positive attitude toward it, nevertheless, they said that only 6.7% demonstrated negative attitude, as 97.0% of the participants had interest in knowing their HIV status, whereas the remaining 3.0% had no interest with the reason being fear of stigmatization and discrimination. The participants acknowledged PMTCT as an absolute way of avoiding the spread of the infection from infected mothers to their newborn as well as means to know ones HIV status through voluntary testing, and also noted that majority better participation of their partners and other important relatives in the course of PMTCT counselling sessions to stand against expulsion, stigma and discrimination if found positive, while, training, awareness creation and community mobilization were key to success of PMTCT programs and fight against stigmatization and discrimination. 8, in Maiduguri, discovered that women educated beyond primary level and illiterate women were three and two times more likely to accept testing respectively.

Furthermore, 12, in their survey of practice of pregnant women towards PMTCT of HIV/AIDS, among 320 pregnant women in Malawi attending antenatal clinic showed that majority (98.1%) needed to give birth in the hospital, while, the remaining proportion considered delivering at home either by Traditional Birth Attendants (TBAs) or at home as well as noted that educational level, spousal involvement and the level of knowledge of the pregnant women as hindering factors to the utilization of PMTCT.

The chances of transmitting HIV from a mother to her child can be diminished to less significant percentage when a proper intervention is rendered to the infected woman. However, the coverage of these preventive services to the pregnant women is still low as it remains at 13.0%, which is clearly insufficient of what is required to achieve the goal of eradicating the challenge in the nation (4). Previous data revealed that greater number do not have up to four antenatal attendance, with about two-third of the delivery taking place at home, receiving the attention of a poorly qualified personnel. This denies majority of the women and their newly born children who might require preventive service of HIV from having access to it, due to the fact that in Nigeria, such services are chiefly accessible only in public hospitals (4). At present, Nigeria as a country is working hard to meet up the demand of PMTCT services to poorly served population at both rural and municipal regions.

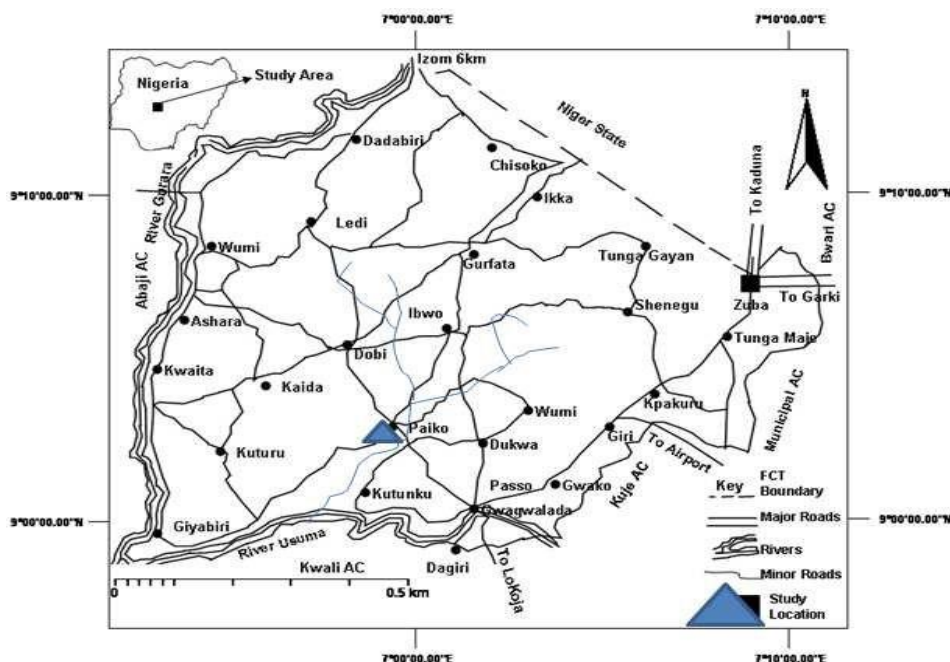
Despite the efforts made towards enhancing accessibility to the services, the Knowledge, Attitude and Practice (KAP) of pregnant women attending Antenatal Clinics in the country remains very low according to records (4) and in Federal Capital Territory, Abuja, especially Gwagwalada Area Council, no such records has ever taken place as there is no documented evidence as regards the level of KAP in the study area. Therefore, this study is aimed at the assessment of KAP of pregnant women attending ANC on PMTCT in Gwagwalada Area Council in order to create more awareness and provide baseline data for future references and proffer solutions towards reducing the gap among the study population and indeed in Nigeria.

2. METHODOLOGY

This was a cross-sectional descriptive study of Knowledge, Attitude and Practice of pregnant women attending antenatal units on Prevention of Mother To Child Transmission (PMTCT) of HIV/AIDS at the University of Abuja Teaching Hospital, Hospitals and Primary Health Centers in Gwagwalada Area Council, FCT, Abuja

STUDY LOCATION

University of Abuja Teaching Hospital(UATH), Primary Health Centers and Hospitals in Gwagwalada Area Council are the study locations. The Area Council housing UATH is one of the area councils in Federal Capital Territory(FCT), Abuja and has an area of 104Km² and a population of 157,770 as at the 2006 census. It is estimated to have a 6.26% expanse rate before 2025, the biggest increase in the whole of Africa and has a Latitude of 8.9393 and Longitude of 7.078700000 with 902101 as the area postal code. Gwagwalada was part of Kwali District which is the current day Suleja emirate and was founded on 15th of October, 1984. The Council comprises of 10 wards namely; Gwako, Paikonkore, Zuba, Ibwa, Dobi, Kutunku, Tunga Maje, Ikwa, Quarters and Central and is bordered by Abuja Municipal Area Council (AMAC) to the East, Kwali to the South, Abaji to the West and some parts of Niger State by the North. The School for the gifted as well as UATH are located in the Council (13).



Map of Gwagwalada Area Council

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STUDY POPULATION

The study population comprised of pregnant women residing and attending antenatal units in the primary healthcare centres, hospitals and UATH within Gwagwalada Area Council.

INCLUSION CRITERIA

The study included pregnant women who met the following criteria:

- Pregnant women who have lived in Gwagwalada for more than 6 months
- Pregnant women consenting to participate in the study
- Pregnant women attending antenatal unit/clinic at the time of the study
- Literate and non-literate pregnant women/mothers who met all the above criteria.

EXCLUSION CRITERIA

The study excluded the pregnant women with the following characteristics

- Non-consenting pregnant women
- Pregnant women attending the clinic/unit but not residing in Gwagwalada

ETHICAL CONSIDERATION

The clearance to carry out the study was obtained from Gwagwalada Area Council and Research Ethics Committee of the University of Abuja Teaching Hospital. Informed consent was obtained from the respondents that participated after explaining the benefits they will get from participation and were guaranteed and assured that all information they gave will be kept confidential and purely for the research.

SAMPLE SIZE DETERMINATION

The sample size was determined using 14:

$n = Z^2 pq/d^2$; where n = minimum sample size for the study; Z = Statistical constant(1.96);

d = desired level of precision (0.05); p = 50% (0.5) was considered since there is no previous prevalence and q = complementary probability(1-p)

$n = Z^2 pq/d^2 = 3.8416 \times (0.5)(0.5) / 0.0025 = 384.18 = 384$

Attrition rate of 10.0% was added = 38 + 384 = 422.

SAMPLING TECHNIQUE

A two-stage cluster sampling was employed whereby Gwagwalada Area Council was grouped into 10 clusters each including the respective wards mentioned after which the clusters were selected based on the probable number (either even or odd number) chosen at random. A simple random sampling was employed to obtain the required sample size for the study from the primary health centers in the selected clusters. A fish-bowel approach was used in which papers were labeled with the political wards and placed in a container, which were picked by the casual persons.

RESEARCH INSTRUMENT

A self-administered interview questionnaire was used as the research instrument for collecting data. The questionnaire was adapted from a study done by 8, and comprised of five sections (A,B,C,D&E).

Section A: Socio-demographic characteristics of the participants/respondents

Section B: Knowledge of pregnant women about PMTCT services

Section C: Practice of women on PMTCT services

Section D: Attitude of pregnant women towards PMTCT services

Section E: Factors affecting attitude of pregnant women towards PMTCT services

VALIDITY OF RESEARCH INSTRUMENT

A face and content validity method was employed to validate the instrument used. A copy of the questionnaire was submitted to other experts in the department of Public Health Science to evaluate the clearness of the statements, applicability of the content and its logical exactitude and the corrections and observations they made were used to modify and give finishing touches to the research instrument before it was put into use.

RELIABILITY OF THE RESEARCH INSTRUMENT

A test retest reliability method was used and a measure of internal consistency (Chronbach alpha) was calculated using the statistical package for social sciences (SPSS) version 24.0 to determine the coefficient value and all was found to be consistence and reliable.

METHOD OF DATA COLLECTION

Eligible respondents/participants were interviewed using the questionnaires and the responses elicited during the process of the interview were used to fill the questionnaires which were analyzed.

METHOD OF DATA ANALYSIS

Data obtained were analyzed using Statistical Package for Social Sciences (SPSS) version 24.0. Descriptive statistics was done and presented in frequency tables and simple percentages. The level of knowledge was analyzed by scoring the responses provided by the respondents whereby correct responses were scored 1 and wrong ones with 0. The total obtained from each participant was converted to percentage and the knowledge was considered based on the following categories: less than 45% (Poor), between 45%-60% (Fair) and above 60% (Good). A five-point likert scale was used to determine the compliance level as follows: Strongly Agree (5), Agree (4), Neutral (3), Disagree (2) and Strongly Disagree (1). An assume mean was taken as the cut-off for making conclusion. An aggregate mean score greater than the assume mean indicated positive compliance otherwise, negative compliance. Chi-square was used for the inferential statistics (P<0.05).

3. RESULTS

Table 1. Distribution of Respondents according to Knowledge towards PMTCT

KNOWLEDGE	NO OF RESPONDENTS	FREQUENCY (%)
Heard about PMTCT?		
Yes	316	73.3
No	98	23.7
If Yes, sources of information (N=316)		
Media	57	18.2
Healthcare provider	220	69.6
Family	16	3.1
Friends	23	7.1
Likelihood of a pregnant woman to spread HIV to her newborn?		
Yes	367	88.6
No	47	11.4
If Yes, period of occurrence (N=367)?		
Pregnancy	159	43.4
Labour	94	25.6
Breastfeeding	100	27.3
All of the above	14	3.7
Mother to Child Transmission of HIV is Preventable?		
Yes	297	71.7
No	117	28.3
If Yes, ways to prevent it include (N=297)?		
HCT prior to and during pregnancy	112	27.1
Hospital delivery	94	22.7
Taking ARVs prescribed by health professionals	100	24.2
Modified infant feeding	14	3.4
Diagnosing the child of HIV at early years	94	22.6
Best method for PMTCT during pregnancy?		
Use of antiretroviral therapy	186	44.9
Use of condom	228	55.1
Cesarean Section helps prevent MTCT?		
Yes	113	27.3
No	301	72.7
Abstinence from Breastfeeding helps prevent MTCT?		
Yes	366	88.4
No	48	11.6

Using the scoring system, table 1 showed that about half of the study population had fair Knowledge (48.7%) of PMTCT, while the proportion of them that good and poor Knowledge were 29.2% and 22.1% respectively.

Table 2. The distribution of respondents according to Practice towards PMTCT

Statements	Yes	No
	Frequency (%)	Frequency (%)
Ever been tested for HIV during ANC	399(96.4)	15(3.6)
Personal effort to prevent PMTCT	278(67.1)	136(32.9)
Participation in HIV education and counseling session	263(63.5)	151(36.5)
Testing practice every three months	79(19.1)	335(80.9)
Had pre-testing counseling during HIV testing	302(72.9)	112(27.1)

Table 2. indicated that majority(96.4%) reported to have been tested for HIV during ANC, more than two-third (67.1%) claimed of putting personal effort to prevent MTCT, majority (63.5%) claimed to have participated in HIV education and counseling session, only 79(19.1%) of them get tested every three months, about three-quarter(72.9%) of them reported to have had pre-testing counseling during HIV testing.

Table 3. Distribution of the Respondents according to Attitude of Pregnant women towards PMTCT

Items	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean
1. All pregnant women should be offered HIV test during ANC	78(18.8)	123(29.7)	200(48.3)	9(2.2)	4(1.0)	3.6
2. Partners of pregnant Women should get tested for HIV	101(24.4)	225(54.3)	69(16.7)	11(2.6)	8(2.0)	4.0
3. PMTCT is an actual means of preventing infants from HIV infection	137(33.1)	197(47.6)	56(13.5)	21(5.1)	3(0.7)	4.1
4. PMTCT counselling sessions should be provided to all HIV+ pregnant women	167(40.3)	87(21.0)	143(34.5)	14(3.5)	3(0.7)	3.9
5. PMTCT is important to both the mother and the unborn child	177(42.7)	148(35.7)	78(18.8)	9(2.3)	2(0.5)	4.2
6. HIV+ pregnant women should take ARV during pregnancy to decrease the risk of PMTCT	194(46.8)	114(27.5)	99(23.9)	5(1.3)	2(0.5)	4.2
7. PMTCT help improves child health and survival	202(48.8)	116(28.0)	78(18.8)	17(4.1)	1(0.3)	4.2
8. Absence of PMTCT services increase the risk of mother to child transmission of HIV	92(22.2)	189(45.6)	67(16.2)	43(10.4)	23(5.6)	3.7
9. PMTCT be available and accessible for women seeking maternal care services	101(24.4)	148(35.7)	163(39.4)	2(0.5)	0(0.0)	3.8
Decision mean = 2.5; Overall = 3.9						

Table 3. showed that majority agreed that items (1), (2), and (3) regarding their views on PMTCT having a mean score above the decision mean of (3.6), (4.0) and (4.1) respectively. Similar views were expressed among the majority about items (4), (5), (6), (7), (8) and (9) having a score of (3.9), (4.2), (4.2), (4.2), (3.7) and (3.8). The overall mean is (3.9) and was found to be greater than the decision mean (2.5) which showed a unanimous agreement by the participants, indicating a positive attitude.

Table 4. Distribution of Respondents according to Factors affecting Attitude of Pregnant Women towards PMTCT.

Factors	Yes	No
	Frequency (%)	Frequency (%)
Level of Education	298(72.0)	116(28.0)
Lack of partner involvement in ANC	364(88.0)	50(12.0)
Lack of information about PMTCT services	401(96.8)	13(3.2)
HIV related stigma and discrimination	405(97.8)	9(2.2)
Discriminated by healthcare personnels	399(96.4)	15(3.6)
Distance of healthcare facilities	407(98.3)	7(1.7)
Unavailability of PMTCT services	402(97.1)	12(2.9)
Fear of being abandoned by husbands and relatives.	317(76.6)	97(23.4)
Husband permission to do HIV testing	387(93.5)	27(6.5)

Table 4. indicated that about three-quarter(72.0%) of the respondents considered level of education as a factor affecting the attitude of pregnant women toward PMTCT, majority considered factors such as lack of partner involvement (88.0%) , lack of information about PMTCT (96.8%), Stigma(97.8%), Distance(98.3%), unavailability of PMTCT services (97.1%) and husband permission(93.5%) to be contributory factors that affect the pregnant woman’s attitude towards PMTCT services.

Table 5. Relationship between the age of the respondents and their level of Knowledge

Variables	Level of Knowledge				
	Good	Fair	Poor	X ²	P-value
Age					
<20	18	20	4		
20-24	20	47	13		
25-29	45	96	34	2.456	0.424
30-34	11	35	13		
35 & above	14	39	5		
	Practice				
	Good	Poor			
<20	28	73			
20-24	64	25			
25-29	102	16	0.976	0.003*	
30-34	34	16			
35 & above	44	14			
	Attitude				
	Positive	Negative			
<20	32	10			
20-24	58	22			
25-29	106	69	15.32	0.112	
30-34	47	12			
35& above	39	19			

There is relationship between the age of the respondents and their Practice towards PMTCT(P=0.003). Nevertheless, there is no relationship between their Knowledge(P=0.424) and Attitude(P=0.112) of the participants.

4. DISCUSSION

The pandemic of Human Immunodeficiency Virus (HIV) is the most severe health challenge affecting children across the world and it is estimated that more than 90% of all HIV infections in children result from Mother-To-Child Transmission (1). This study assessed the Knowledge, Attitude and Practice of pregnant women attending antenatal units/clinics towards the prevention of mother to child transmission of HIV/AIDS in Gwagwalada Area Council and the result showed that about half (48.7%) of them had fair knowledge of PMTCT, while the proportion of those that had good and poor knowledge were 29.2% and 22.1% respectively. This is not in line with a similar one conducted on more than 10,000 women in Tanzania (6), which posited that 46.0% of the respondents had an adequate awareness of MTCT and PMTCT, two-thirds(65.0%) were reported to have the knowledge that mother to child transmission is preventable, supporting the findings of 6, 9, revealed a larger proportion(76.0%) of mothers being aware of the availability of ARV prophylaxis for HIV positive pregnant mothers. In the same vein, this survey was not in agreement with that of 15 and 16, who variously reported 30.0% and 6.0% knowledge among pregnant women in their respective studies. Also, this study did not corroborate with that of 8, who reported a high level of Knowledge among 172 pregnant women attending ANC in a tertiary healthcare facility in North Eastern Nigeria. The differences in the results may be as a result of low level of sensitization among the study population, approach as well as the pattern of the study.

On the practice of PMTCT among the study population, this study found that majority (96.4%) of the women have been tested for HIV during ANC, while, more than two-thirds (67.1%) of them were putting personal effort to prevent MTCT, as majority (63.5%) participated in HIV education and counselling sessions, however, only 19.1% of them get tested every three months. This corresponds with a result obtained by 17, where they reported that a majority (88.4%) of the participants were willing to accept ARV preventive intervention as a greater percentage (81.2%) of them said that testing should be done as a routine check during ANC and available all the time.

The Attitude of the study population in this study was high and commendable, as the majority of the participants have correlated view towards PMTCT (aggregate means = 3.9) and this corroborates the findings of 18 in a similar study in Ile-Ife, where among 224 pregnant women, a high correlated view of the majority of the participants were recorded, as the majority (84.4%) of them agreed that service providers were friendly. 8, has no choice than to agree with the findings of this, when they reported 93.3% of their study population having a favourable attitude towards prevention of PMTCT of HIV. However, our results contradicted the findings of 19, who reported that majority of the respondents in a similar study had unfavourable attitude towards PMTCT. The discrepancies in practice and attitude may be purely due to knowledge and understanding of the various study population, level of educational as well as cultural practices (8).

Furthermore, the survey, established that level of education(72.0%), lack of partner involvement (88.0%), lack of information about PMTCT(96.8%), Stigma(97.8%), distance(98.3%), unavailability of PMTCT services(97.1%) and husband permission (93.5%) as contributory factors militating against, and affecting the attitude of the pregnant women towards prevention of mother to child transmission of HIV. These findings were agreed upon and supported by ,17, which revealed that low level of education, lack of information about PMTCT were hinderances by majority of pregnant women to comply with PMTCT, and 20, who said that husbands resistance, lack of spousal participation and stigma are hindering factors to utilizing PMTCT. 21, agreed when they identified consent from husbands and partner involvement as factors that affect the attitude and utilization of PMTCT among the pregnant women studied. It is also worthy to note that 22 joined in the chorus of accepting the findings of this study when they concluded that involving men in PMTCT programs could help in ensuring their role in decision making and confer mutual understanding between couples.

5. CONCLUSION

In conclusion, only 29.2% of the pregnant women had good knowledge of PMTCT, while, majority (48.7%) of them had fair knowledge, as the level of practice and attitude towards PMTCT were good, high and commendable.

6. RECOMMENDATIONS

It is therefore, necessary that Public Health Education campaigns should be sustained in order to create more awareness about PMTCT program among the pregnant and future mothers, and maintaining confidentiality in all meetings with the infected mothers will go a long way in providing them with the needed support to enable them utilize the services, and government should implement the policy of penalizing those discriminating and stigmatizing people living with HIV.

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