International Journal of Clinical Science and Medical Research

ISSN(print): Applied, ISSN(online): Applied

Volume 01 Issue 01 July 2021

Page No : 25-33

Knowledge, Attitudes and Practices of Health Care Providers towards Mother to Child Transmission of HIV among HIV Positive Mothers Who Access Care in a Hospital in Ibadan, Oyo State, Nigeria

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ABSTRACT

*Published Online: 31 July 2021

Background: Healthcare providers (HCPs) are supposed to depict a better knowledge, attitudes, and practices (KAP) in caring for HIV positive mothers. In Nigeria cultural differences, personal belief and professional ethics, could lead to conflicting attitudes, which may negatively impact caring for HIV positive mothers seeking care. Hence government should look into necessary training and programs for HCPs' KAP gaps especially those who are above 41 years old.

Study Aim: To assess knowledge, attitudes and practices of HCPs towards MTCT of HIV among HIV positive mothers accessing care in a hospital in Ibadan, Oyo State, Nigeria using a cross-sectional study.

Methods: A quantitative cross-sectional approach that employed structured questionnaire that asked closed-ended questions was used for this study in Ibadan, Oyo state. A large group of 150 HCPs who provided support was surveyed to analyse the knowledge, attitudes, and practices of the HCPs towards MTCT of HIV among HIV positive mothers. Descriptive statistics was used to determine sample characteristics. Multivariate analysis was used to measure and quantify outcomes.

Results: The knowledge, and attitudes of HCPs towards MTCT of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria was 74.7%, their practice was 92.7%. The study clearly highlighted that the KAP of HCPs who provide care to HIV positive mothers who are between 21- 40 years of age have better KAP compare to HCPs who are 41 - 60 years of age. Hence a strong association was evident mostly among doctors.

Conclusion: Government support is recommended to improve opportunities that support ongoing training and implementation of programs to addresses HCPs' knowledge gaps and research evidence on PMTCT practices

Keywords:
HCPs, MTCT of HIV, KAP, Ibadan, Oyo State Nigeria

INTRODUCTION

In 2015, 36.7 million people were predicted to have contracted Human Immunodeficiency Virus (HIV) globally (United Nations Children's Fund, 2014). Two million of which were children below the age of 15 while 15.7 million were women (United Nations Children's Fund, 2014). HIV was predicted to be the leading cause of death among reproductive women globally and contributed significantly to a child, infant, and maternal mortality and morbidity (UNAIDS, 2012; United Nations Children's Fund, 2012). According to UNAIDS (2012), over 1.8 million pregnant women were estimated to be living with HIV in low and middle-income countries such as those in the sub-Sahara areas of Africa. Many have delivered a baby without receiving any antiretroviral treatment which puts the infants at risk because one-third of

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****Cite this Article: Agnes Abiodun Adeloye, Adeloye Adewale Idowu, Ayinde Abayomi O, Agbonjimi L.A, Ohue Michael Utomiabhi (2021). Knowledge, Attitudes and Practices of Health Care Providers towards Mother to Child Transmission of HIV among HIV Positive Mothers Who Access Care in a Hospital in Ibadan, Oyo State, Nigeria. International Journal of Clinical Science and Medical Research, 1(1), 25-33***

children living with HIV die before the age of one and 50% die by age two (UNAIDS, 2012). Mother to child transmission (MTCT) of HIV occurs during pregnancy (intrauterine), at birth (intrapartum), and when breastfeeding and this leads to infant mortality in Africa with 1700 children infected daily (World Health Organisation, 2010). The risk of MTCT is between 16% to 40% without the use of antiretroviral treatment while breastfeeding caused about 10% transmission risk (De Cock et al., 2000). A Prevention of Mother to Child Transmissions (PMTCT) programme requires safe childbirth services, antenatal services for the mothers and their infants, access to antiretroviral treatment (ART), HIV test during pregnancy, and intense education programs by the health care workers (De Cock et al., 2000).

Taking care of HIV positive mothers requires health care providers (HCPs) to have a better knowledge, attitudes, and practices of their unique issues. Studies have shown that factors such as cultural differences, personal belief, and professional ethics, could lead to conflicting attitudes, which may negatively impact caring for HIV positive mothers seeking care (Makhado and Davhana- Maselesele, 2016).

Therefore, this study will assess the knowledge, attitudes, and practices of HCPs towards MTCT of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. The information that will be provided from this study will help ascertain factors influencing levels of knowledge, attitudes, and practices among HCPs and difficulties in caring for HIV positive mothers, as well as identifying other factors which can further help in planning control program and strengthen the existing program on MTCT of HIV. It may also provide evidence for the government to set up intense education programs, and to spread information on positive attitude towards HIV positive mothers.

GENERAL OBJECTIVE

The general objective of this study is to determine the knowledge, attitudes and practices of HCPs towards MTCT of HIV among HIV positive mothers accessing care in a hospital in Ibadan, Oyo State, Nigeria using a cross-sectional study.

SPECIFIC OBJECTIVES

1. To review the literature on knowledge, attitudes, and practices of HCPs towards MTCT of HIV among HIV positive mothers in Nigeria and other sub-Saharan countries.
2. To develop a cross-sectional study, using self-administered questionnaire, to elicit information that will be used to assess the knowledge, attitudes, and practices of HCPs towards MTCT of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria.
3. To determine possible factors associated with knowledge, attitudes, practices, age, gender, professional training (education), and years of experience, using hypothesis and logistic regression model analysis.
4. To make recommendations to the facilities where HIV positive mothers access care in Ibadan, Oyo State, Public Health and Epidemiology Department as well as the individual hospitals for them to identify the gaps in performance and potential areas for improvement.

MATERIALS AND METHODS

Study Area

The study was carried out at a general hospital in Ibadan, Nigeria. Nigeria is classified as a lower income country in West Africa (figure 3.1). The economy of Nigeria is mainly supported by agriculture, industry, and other services such as oil and gas (Adegoke et al., 2007). The general hospital is located in Oyo State (one of the 36 States of Nigeria) in the South-Western region of the country. The State projected population of about 4 million (Adegoke et al., 2007). One hundred and eighty-nine HCPs were working in the hospital, and it provides maternal and child healthcare services to people in Ibadan and its surrounding. The hospital is made up of antenatal clinic, labour ward, antenatal ward, gynaecological ward, children's ward, immunization clinic, post-caesarean section ward, and family planning clinic (Emmanuel et al., 2018).

Sampling approach/frame

The study population was HCPs in Ibadan, Oyo State, Nigeria. All the categories of HCPs that provided care in the facilities were included in the study, and the sampling frame was narrowed to HCPs who provided care to HIV positive mothers. Participants were provided with an equal chance of being selected while each participant were given a number, after that, a random sample was chosen until the sample size of 150 was obtained. 150 is a proportion of HCPs working in the hospital in Ibadan, Oyo State.

Data Collection Methods

A survey was provided in a paper form. The participants took the questionnaire, completed in one sitting, posted into a secure drop box situated at the questionnaire location point, and it was anonymous. A report of the results and findings was communicated back to the participants through the list of staff email group.

Data Analysis

Data was analysed using Statistical Package for the Social Sciences (SPSS) for descriptive and multivariate analysis. Multivariate analysis was used to measure and quantify outcomes. This was done to evaluate differences in quantitative variables such as age, gender, educational level (independent variables) and knowledge, attitudes, and practices (dependent variables) of the HCPs.

To ascertain possible factors associated with knowledge, attitudes, practices, age, gender, professional training, and year of service was conducted and recorded in mean ±SD or median.

Results was express as odds ratio (OR) with 95% CI. The level of significance was set at $p \leq 0.05$.

To determine the knowledge, attitudes, and practices of HCPs towards MTCT of HIV among HIV positive mothers who access care at the general hospital in Ibadan, Oyo State. The HCPs stated the roles that individual beliefs played using three categorical point: Agree, Strongly agree and disagree.

Ethical Considerations

Ethical approval was gained from Public Health and Epidemiology Department (Nigerian Institute of Medical Research) and the local government of the region (Appendix IX) to gain access to the general hospital on the PMTCT. The ethics approval was obtained from the University of Liverpool (UoL) (Appendix X), primary data collected will be kept securely for five years, according to the UoL requirement and a report of the results and findings was communicated back to the participants. However, there was no reward or compensation for participation.

RESULTS

This chapter presents the results of the study in relation to its aim and the objectives. First, the result of the socio economic or demographic details of the HCPs are presented in Table 4.1, then data analysis with the KAP of the healthcare professionals towards MTCT of HIV positive mothers are described in Table 4.2, 4.3, and 4.4 respectively. Followed by inferential statistics analysis to determine the association of the outcome variables with the independent variables.

Demographic Data

The sample was composed of 150 HCPs. The socio-economic or demographic and clinical characteristics of the study participants are summarised in Table 4.1. A greater majority of the study participants 67 (44.7%) were between age 21 and 30 years, while a lesser majority 62 (41.3%) were between age 31 and 40 years, a minority of 20 (13.3%) were between age 41 and 50 years, and the mean is 1.70 and Standard deviation is 0.7212. The majority of the participants were female 84 (56.0%), while a lesser majority 66 (44.0%) were Female with mean 1.56 and standard deviation 0.498. The majority of the participants 81(58.0%) went to college, 41(27.3%) had a Bsc, 22(14.7%) had a masters degree. A greater majority of the participants 76(50.7%) were doctors, 33(22.0%) were nurses, 22(14.7) were midwives and 19(12.7%) were pharmacist. A total of 134(89.3%) were Christians, 15(10.0%) were Muslim, and 1(0.7%) were traditionalist. 124(82.7%) were single, and 26(17.3%) were married.

Table 1. 1. Demographic Data details of the HCPs.

Age of the participants	**Frequency (n)**	**Percentage(%)**	**Mean± SD**
21-30	67	44.7	
31-40	62	41.3	
41-50	20	13.3	
51-60	1	0.7	
Total	150	100.0	
Age, Years			1.70 ± 0.7212
Gender			
Male	66	44.0	
Female	84	56.0	
Total	150	100.0	
Gender			1.56 ± 0.498
Level of Education			
College	87	58.0	
BSc	41	27.3	
Masters	22	14.7	
Total	150	100.0	
Professional Status			
Doctors	76	50.7	
Nurses	33	22.0	
Pharmacists	19	12.7	
Midwives	22	14.7	
Total	150	100.0	

Religion			
Christian	134	89.3	
Islam	15	10.0	
Traditional	1	0.7	
Total	150	100.0	
Marital Status			
Single	124	82.7	
Married	26	17.3	
Total	150	100.0	

Knowledge

Appendix II shows the result of the knowledge of the participants. All the participants have the knowledge and also have heard of MTCT of HIV. A greater majority of the respondents 129 (86.0%) said that they have heard of MTCT of HIV in medical school, 11(7.3%) heard from peer group while 10(6.7%) said they heard among family member. A greater majority of the participants 98(65.3%) thinks MTCT occurs during pregnancy, 31(20.7%) said it could occur through breastfeeding while 21(14.0%) said it can only occur during labour. A greater majority of the participants 106 (70.7%) said the used of anti-retroviral therapy (ART) is the best method of the prevention of HIV during pregnancy. There were participants 95 (63.3%) who mentioned that rapid weight loss is the symptom of HIV, 21(14.0%) mentioned that unexplained tiredness is the symptoms of HIV, 20(13.3%) said severe nights sweat is the symptoms of HIV while 14(9.3%) said continual fever is the symptoms of HIV. All the participants identified that the causes of HIV is virus. A greater majority of the respondents 120 (80.0%) defined MTCT as transmission of HIV during pregnancy, child delivery and breast feeding from mother to child, while 30(20.0%) of the participants defined it as transmission of inherit traits from mother to child during child birth. Out of 150 respondents , 112(74.7%) had good knowledge of MTCT of HIV while 38(25.3%) had poor knowledge of MTCT of HIV.

Attitudes

As shown in Appendix III, the attitudes of the participants were analysed. 101(67.3%) strongly agree that reporting HIV cases is necessary, 38(25.3%) disagree, while 11(7.3%) only said they agree. 121(80.7%) strongly agree that programs on MTCT of HIV should be taught in details to HCPs,18(12.0%) disagree while 11(7.3%) only agreed.

A total of 120(80.0%) participants strongly agree that programs on MTCT of HIV should be taught in details to HCPs in every hospital, 20(13.3) agree to that while 10(6.7%) disagree. 112(74.7%) had good attitudes about MTCT of HIV while 38(25.3%) had poor attitudes.

Practices

Appendix IV shows the result of the practices of the HCPs towards MTCT of HIV of HIV positive mothers. A total of 105(70.0%) strongly agree that they have experienced MTCT of HIV during their professional practice, 34(22.7%) disagree, while 11(7.3%) agreed. 117(78.0%) strongly agree that they will have intense education program set up on MTCT of HIV in their facility, while 33(22.0%) disagreed. 98(65.3%) strongly agree that they will always attend a control program on MTCT of HIV, 41(27.3%) disagreed, while 11(7.3%) agreed. The participants that strongly agree that they have been trained on how to report MTCT of HIV is 106(70.0%), 30(20.0%) disagreed while 14(9.3%) agreed. 141(94.0%) strongly agreed that HIV- infected pregnant mothers must be delivered with skilled person, while 9(6.0%) disagreed. In conclusion, 139(92.7%) had good practices of the healthcare professionals towards MTCT of HIV among HIV positive mothers, while 11(7.3%) had poor practice.

Hypothesis I

The relationship between demographic variable of the participants and the knowledge of the participants towards MTCT of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria are analysed in this section and in reference to Table 4.2.

Age Vs knowledge scored of the participants: Based on the responses in Table 4.2, it was discovered that majority of the participants 52 (46.4%) where between the ages of 31 and 40 years, they have good knowledge of child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria, and also a lesser majority 40 (35.7%) who were between the ages of 21 and 30 years also said they have good knowledge of child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria, while 19(17.0%) and 1(0.9%) that were between ages 41 and 50 years, and ages 51 and 56 years respectively also have good knowledge of child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. Which also shows a statistical association with p-value less than 0.05.

Gender Vs knowledge scored of the participants: The majority of the participants 56 (50.0%) were male and they have good knowledge of child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. Moreover, a lesser majority 10 (26.4%) who were female also have good knowledge of child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. Which also shows a statistical association with p-value less than 0.05.

Professional status Vs. knowledge scored of the participants: The majority of the participants 76 (67.9%) were doctors and they have good knowledge of child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. A lesser majority 18 (16.9%) who were midwives also have good knowledge of child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. Which also shows a statistical association with p-value less than 0.05.

Level of education Vs. knowledge scored of the participants: The responses of the participants in relation to their education shows that majority of the participants 87(100%) were from college, 22(100%) had Masters degree, 3(7.3%) had BSc. and they have good knowledge of child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. Which also shows a statistical association with p-value less than 0.05.

Religion Vs. knowledge scored of the participants: 96 (71.6%) of the participants were Christian, 15(100%) were Islam, and 1(100%) were traditional. They all have good knowledge of child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. Which also shows a statistical association with p-value less than 0.05.

Marital status Vs. knowledge scored of the participants: The majority of the participants 86 (71.6%) were single, while 26(100%) were married all have good knowledge of child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. Which also shows a statistical association with p-value less than 0.05.

Table 1. 2. Demographic Data Vs knowledge scored of the participants

Age	**Knowledge scored of the participants**				
	Good knowledge n (%)	**Poor knowledge n (%)**	**Total n (%)**	**Chi-square**	**(p-value)**
21-30 yrs	40 (35.7)	27(71.1)	76 (44.4)	15.420	0.001
31-40 yrs	52 (46.4)	10 (26.3)	62 (41.3)		
41-50 yrs	19 (17.0)	1 (2.6)	20 (13.3)		
51-60 yrs	1 (0.9)	0 (0.0)	1 (0.7)		
Gender	**Knowledge scored of the participants**				
	Good knowledge n (%)	**Poor knowledge n (%)**	**Total n (%)**	**Chi-square**	**(p-value)**
Male	56 (50.0)	56(50.0)	112 (100.0)	6.459	0.011
Female	10 (26.4)	28 (73.7)	38 (100.0)		
Professional status	**Knowledge scored of the participants**				
	Good knowledge n (%)	**Poor knowledge n (%)**	**Total n (%)**	**Chi-square**	**(p-value)**
Doctors	76 (67.9)	0(0.0)	76 (50.5)	88.444	0.000
Nurses	18 (16.1)	15 (39.5)	33 (22.0)		
Pharmacist	0 (0.0)	19 (50.0)	19 (12.7)		
Midwives	18 (16.9)	4 (10.5)	22 (14.7)		
Level of Education	**Knowledge scored of the participants**				
	Good knowledge n (%)	**Poor knowledge n (%)**	**Total n (%)**	**Chi-square**	**(p-value)**
College	87 (100.0)	0(0.0)	87 (100.0)	135.301	0.000
BSc.	3 (7.3)	38 (92.7)	41 (100.0)		

Masters	22 (100.0)	0 (0.0)	22 (100.0)		
Religion	**Knowledge scored of the participants**				
	Good knowledge n (%)	**Poor knowledge n (%)**	**Total n (%)**	**Chi-square**	**(p-value)**
Christian	96 (71.6)	38(28.4)	134 (100.0)	6.007	0.048
Islam	15 (100.0)	0 (0.0)	15 (100.0)		
Traditional	1 (100.0)	0 (0.0)	1 (100.0)		
Marital status	**Knowledge scored of the participants**				
	Good knowledge n (%)	**Poor knowledge n (%)**	**Total n (%)**	**Chi-square**	**(p-value)**
Single	86 (69.4)	38(30.6)	124 (100.0)	10.671	0.001
Married	26 (100.0)	0 (0.0)	26(100.0)		
Traditional	1 (100.0)	0 (0.0)	1 (100.0)		

Hypothesis II

The relationship between socio-demographic variable of the participants and the attitudes of the participants towards MTCT of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria are analysed in this section and in reference to Table 4.3.

Age Vs. attitudes of the participants: According to Table 4.3, it was discovered that majority of the participants 52 (46.4%) were between age 31 and 40 years, 40(35.7%) were between age 21 and 30 years,19(17.0%) were between age 41 and 50 years, and 1(0.9%) were between age 51 and 60 years. They have good attitude towards child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. Which also shows a statistical association with p-value less than 0.05.

Gender Vs. attitudes of the participants: From the responses in the Table 4.3, it was discovered that majority of the participants 56 (84.8%) were male and 56(66.7%) were female and they have good attitude towards child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. Which also shows a statistical association with p-value less than 0.05.

Level of education Vs. attitudes of the participants: Table 4.3 shows that majority of the participants 87 (100%) were from College, 22(100%) had Masters degree while 3(7.3%) had BSc. and they have good attitude towards child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. Which also shows a statistical association with p-value less than 0.05.

Professional status Vs. attitudes of the participants: From the responses of the participants in Table 4.3, it was discovered that majority of the participants 76 (100.0%) were doctors, 18(81.8%) were midwives, 18(54.5%) were nurse and they have good attitude towards child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. Which also shows a statistical association with p-value less than 0.05.

Religion Vs. attitudes of the participants: Table 4.3 shows that the majority of the participants 96 (71.6%) were Christian, 15(100%) were Islam, and 1(100%) were Traditional and they have good attitude towards child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. Which also shows a statistical association with p-value less than 0.05.

Marital status Vs. attitudes of the participants: From the responses in Table 4.3, it was discovered that majority of the participants 86 (69.4%) were single, 26(100%) were married, and they have good attitude towards child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. Which also shows a statistical association with p-value less than 0.05.

Table 1. 3. Demographic Data Vs. attitudes of the participants

Age	**Attitudes of the participants**				
	Good attitude n (%)	**Poor attitude n (%)**	**Total n (%)**	**Chi-square**	**(p-value)**
21-30 yrs	40 (35.7)	27(71.1)	76 (44.4)	15.420	0.001
31-40 yrs	52 (46.4)	10 (26.3)	62 (41.3)		

41-50 yrs	19 (17.0)	1 (2.6)	20 (13.3)		
51-60 yrs	1 (0.9)	0 (0.0)	1 (0.7)		
Male	56 (84.8)	10(15.2)	66 (100.0)	6.459	0.011
Female	56 (66.7)	28 (33.3)	84 (100.0)		
Level of education	**Attitudes of the participants**				
	Good attitude n (%)	**Poor attitude n (%)**	**Total n (%)**	**Chi-square**	**(p-value)**
College	87 (100.0)	0(0.0)	87 (100.0)	135.301	0.000
BSc.	3 (7.3)	38 (92.7)	41(100.0)		
Masters degree	22 (100.0)	0 (0.0)	22 (100.0)		
Professional status	**Attitudes of the participants**				
	Good attitude n (%)	**Poor attitude n (%)**	**Total n (%)**	**Chi-square**	**(p-value)**
Doctor	76 (100.0)	0(0.0)	76 (100.0)	89.444	0.000
Nurse	18 (54.5)	15 (45.5)	33(100.0)		
Pharmacist	0 (0.0)	19 (100.0)	19 (100.0)		
Midwives	18(81.8)	4(18.2)	22(100.0)		
Religion	**Attitude of the participants**				
	Good attitude n (%)	**Poor attitude n (%)**	**Total n (%)**	**Chi-square**	**(p-value)**
Christian	96 (71.6.)	38(28.4)	134 (100.0)	6.077	0.048
Islam	15 (100.0)	0 (0.0)	15(100.0)		
Traditional	1 (100.0)	(0.0)	1 (100.0)		
Marital status	**Attitudes of the participants**				
	Good attitude n (%)	**Poor attitude n (%)**	**Total n (%)**	**Chi-square**	**(p-value)**
Single	86 (69.4)	38(30.6)	124 (100.0)	10.671	0.001
Married	26 (100.0)	0 (0.0)	26(100.0)		

Hypothesis III

The relationship between knowledge and attitudes of the HCPs towards MTCT of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria are analysed in this section.

Knowledge score of the participants Vs Attitudes of the participants

From the responses in Table 4.14, the majority of the participants 112 (100%) that have good knowledge of child transmission of HIV among HIV positive mothers also have good attitude towards child transmission of HIV among HIV positive mothers who access care in a hospital in Ibadan, Oyo State, Nigeria. Which also shows a statistical association with p-value less than 0.05.

Table 1. 4. Knowledge score of the participants Vs. Attitude of the participants

Knowledge score of the participants	**Attitudes of the participants**				
	Good attitude n (%)	**Poor attitude n (%)**	**Total n (%)**	**Chi-square**	**(p-value)**
Good knowledge	112(100.0)	0(0.0)	112 (100.0)	150.000	0.000
Poor knowledge	(0.0)	38 (100.0)	38(100.0)		

DISCUSSION AND CONCLUSION

The study was a cross-sectional descriptive design to assess knowledge, attitudes and practices of HCPs towards MTCT of HIV among HIV positive mothers accessing care in a hospital in Ibadan, Oyo State, Nigeria. The KAP of HCPs was higher at the time of this study than the national average rate and effort to

support ongoing training and implementation of programs should be continued to achieve better results. The study found moderate sufficient KAP of HCPs in PMTCT of HIV in the region. The lack of knowledge especially among nurses, pharmacists, and midwives can partly clarify the high MTCT of HIV. From this point, government should look into necessary training and programs for HCPs, especially nurses, pharmacists, and midwives who directly care for HIV positive mothers. The socio-economic or demographic such as age, gender, level of education, professional status, religion, and marital status are associated with KAP of HCPs who provide care to HIV positive mothers.

The study clearly highlighted association between KAP of HCPs who provide care to HIV positive mothers who are 21-40 years of age, male, and single. Hence a strong association was evident mostly among doctors. Government support is recommended to improve opportunities that support ongoing training and implementation of programs to addresses HCPs' knowledge gaps and research evidence on PMTCT practices.

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