ISSN (Online): 2455-9024

Determinants of Knowledge, Attitude and Practice Towards Prevention of Mother to Child Transmission of HIV/AIDS Among Pregnant Women Attending Antenatal Clinic at Urban Maternity Bauchi, Bauchi State, Nigeria

Abubakar Musa¹, Bello Mamman¹, Abubakar Kaumi Mala², Usman Abba², Mohammed Kabir Abdullahi³, Ibrahim Salim Abdullahi⁴, Mahmoud Adamu Ibrahim⁵

¹Department of Community Medicine, Abubakar Tafawa Balewa University and Abubakar Tafawa Balewa University Teaching Hospital, Bauchi – Nigeria

²Yobe State Specialist Hospital Damaturu, Yobe State – Nigeria

³Department of Obstetrics and Gynaecology, Abubakar Tafawa Balewa University and Abubakar Tafawa Balewa University Teaching Hospital, Bauchi – Nigeria

⁴Department of Anaesthesia, Abubakar Tafawa Balewa University and Abubakar Tafawa Balewa University Teaching Hospital,
Bauchi – Nigeria

⁵Department of Public Health Bauchi State University Gadau, Bauchi State-Nigeria

Abstract—Prevention of MTCT of an HIV infection is a politically and scientifically accepted approach to reduce the impact of HIV, especially on children. Prevention of Mother-To-Child Transmission services are tailored toward preventing not only the uninfected woman but also the baby, before and after delivery. The study is assessed the knowledge, attitude and practice of pregnant women towards the prevention of mother to child transmission (PMTCT) of HIV/AIDS in Urban Maternity Bauchi, Bauchi State Nigeria. A descriptive crosssectional study was conducted among pregnant women in urban maternity Bauchi, Bauchi State. A systematic sampling technique was adopted. Data gathering was done by administering a semi-structured questionnaire to 410 participants, while data analysis was done by using SPSS version 21.0 and test statistic was set at 0.05. Out of 392 respondents, majority of the antenatal attendee are within the age range of 18-27 years 258 (65.8%) while least age group of the respondents representing 16 (4.1%) was 38-47 years. Majority of the respondents, 234 (59.7%) were Hausa by tribe and predominantly Muslim 335 (85.5%), while 287 (73.2) of the respondents had secondary and 362 (92.3%) lives in urban area. The majority of the respondents 329 (83.9) had good knowledge of prevention of mother to child transmission of HIV/AIDS while 12 (3.1%) had poor knowledge. Findings on attitude of pregnant women toward the prevention of mother to child transmission of HIV/AIDS shows 93.9% and 6.1% had good attitude and poor attitudes respectively. Among them, 73.5% and 26.5% of the respondents have good and bad jobs. There was a significant relationship between level of knowledge and place of resident, for practice the relationship was significant between good practice and ethnicity, religion and place of resident. There was no significant relationship between of prevention of mother to child transmission of HIV/AIDS with practice. The study concluded that, majority of the women in the study area have high level of knowledge, good attitude and practice of prevention of mother-to-child transmission of HIV/AIDS. There is need to strengthen the prevention of mother to child transmission of HIV/AIDS among pregnant women which will reduce the transmission rate to the barest minimum.

Keywords— Knowledge, attitude, practice, prevention of mother to child transmission of HIV/AIDS, Bauchi.

I. Introduction

Human Immune Virus infection, first appeared in a big way in the 1980s, it took the world by storm. As reports of various forms of this disease spread in the media, panic arose among experts and people around the world. On July 3, 1981, the New York Times reported that a rare tumor had been found in 41 men. In that article, the "rare cancer" is Kaposi's sarcoma, and the cause of the disease is described as "unknown". This is the first proper information about this new disease in the media. After the initial phase of fear and confusion, intense scientific research started and by 1984, the virus was discovered. It has been hypothesized that humans obtain first HIV from animal sources. Animals, such as monkeys, gorillas or chimpanzees that have infected with SIV but show no sign of infections. Then these humans will carry SIV and further transform into HIV.²

Acquired Immunodeficiency Syndrome (AIDS) is a chronic disease state which is caused by Human Immunodeficiency Virus.³ Human Immunodeficiency Virus infection is caused by a human retrovirus, usually HIV-1, rarely HIV-2. HIV infects a wide range of cells, but its main targets are white blood cells, especially macrophages and T-helper lymphocytes. Untreated HIV results in the progressive destruction of CD4+ T lymphocytes making patients more vulnerable to opportunistic pathogens.⁴HIV is only transmitted through contact with blood, semen and fluids from the vagina or passed from mother to child during pregnancy or childbirth or by breastfeeding.⁵ Vertical transmission of Human Immunodeficiency Virus (HIV) is the primary route of infection among children.⁶



ISSN (Online): 2455-9024

Global HIV statistics show that 39 million (33.1 million to 45.7 million) people worldwide will be living with HIV in 2022. 1.3 million (1 million to 1.7 million) people new HIVrelated deaths in 2022. While 630 000 (480 000-880 000) people died from AIDS-related illnesses in 2022. 29.8 million People were accessing antiretroviral therapy in 2022. 85.6 million (64.8 million-113.0 million) people have become infected with HIV and 40.4 million (32.9 million–51.3 million) people have died from AIDS-related illnesses since the start of the epidemic. ⁷India has the third highest HIV prevalence. In the world, with 2.1 million people living with HIV, men have a higher incidence of 0.25% than women 0.19%, and 15-year-old children are 6.54%, while two fifth 40.5% of total HIV infections are among females. In 2017, 88,000 new HIV infection cases were reported and 69,000 AIDS related deaths occurred.8

In 2013, 1.5 million people died from HIV-related causes and there were approximately 35.0 million people living with HIV globally with sub-Saharan Africa as the most dejected region, with 24.7 million people living with HIV. Furthermore, 2.1 million people becoming newly infected with HIV worldwide.9In 2016, an estimated 85% of new infections occurred through sexual transmission, with the majority among men who have sex with men. 10 Each year approximately 1.4 million women living with HIV become pregnant globally and 98% among these clients in sub-Saharan Africa, the proportion of women living with HIV ranges from 5% to as high as 30%. With 68% of people living with HIV in 2010, Sub-Saharan Africa remains the region most heavily affected by HIV on the African continent. This region also accounted for 70% of new HIV infections, although there was a notable decline in the regional rate of new infections.11

Nigeria has the second highest burden of HIV globally with 3.4 million People living with HIV as at 2014. There is a considerable regional and state to state variation in HIV prevalence in the country; ranging from 1% in Kebbi State to 12.7% in Benue State. Nigeria contributes up to 30% of the global PMTCT gap and coverage of PMTCT services has however remained low at less than 19% - falling short of both the universal access and National Strategic Plan targets. 12 Findings of study in Lagos State shows that 59% of the respondents are aware of the relationship between mother-tochild transmission and breastfeeding. 13A study in Maiduguri northeastern Nigeria shows that pregnant women accepted PMTCT as a veritable means of preventing infants from HIV infection and a means to determine HIV status. 14Findings of a research in Katsina state Nigeria shows that (65%) pregnant women had good knowledge towards the prevention of motherto-child transmission of HIV/AIDS.15A study in Abeokuta Nigeria shows that anaemia is more common among primigravidae compared to mulrigravidae. 16The prevalence of HIV in Nigeria as at 2018 in Abia State is 2.0%, AkwaIbom 4.3%, Anambra 2.0%, Benue 3.6%, Edo State is 1.5%, Plateau State 1.4%, Ogun State 1.4% prevalence, Ondo State 1.0%, Osun State 1.0, while in the north western Kano has prevalence of 0.6%, Katsina State 0.4%, Kebbi State has 0.6% prevalence, Kaduna State has 1.0%. In the North, Gombe State with 1.0%, Borno State with 1.1%, Adamawa State with 1.4%, Yobe State

with 0.5%, Taraba State with much of the disease. of 2.6% in the North East and Bauchi state with a maximum of 0.5% ¹⁷ The prevalence of HIV in Bauchi State in 2019 dropped to 0.4% from 0.5% in 2018. ¹⁸HIV prevalence rate of 2022/2023 for South-South is 3.1%, South-East 1.9%, South-West 1.2%, North-Central 2.1%, North-West with lowest prevalence of 0.6% and North-East 1.1%. ¹⁹

Elimination of mother to child transmission of human immune virus was a global public health priority. ²⁰Prevention of Mother-To-Child Transmission of an HIV infection is a politically and scientifically accepted approach to reduce the impact of HIV, especially on children. Mother to child transmission (MTCT) of HIV is the passing of HIV from the mother to her child during pregnancy, labor, delivery or breastfeeding and it is the primary method of infection among children. ⁸⁰Mother-to-child transmission (MTCT) of human immune deficiency virus (HIV) infection is the transmission of the virus from an HIV-infected mother to her child during pregnancy, labor, delivery or breastfeeding. ²¹

More than 90% of children were infected through Mother-To-Child-Transmission of which nearly 90% occurred in sub-Saharan Africa. Approximately half of them die before their second birth day if there is no appropriate treatment. ²²PMTCT plays a major role in limiting the number of children being infected by HIV to less than 2%. Without any intervention, 20-50% of infant would be infected; 5-10% during pregnancy, 10-20% during labor and delivery and 5-20% through breast feeding.²³ PMTCT provides services includes; HIV Counseling and Testing (HCT), Antiretroviral drug therapy, comprehensive antenatal care and safer delivery practices, appropriate infant feeding, Counselling and support.²⁴ Comprehensive PMTCT approaches include: primary prevention of HIV among women of childbearing age and their partners, prevention of unintended pregnancy in women with HIV, prevention of maternal HIV transmission to child, providing treatment, care and support for women infected with HIV and their partners, infants, and families.25

II. METHODOLOGY

Study Design

A descriptive cross-sectional designed was employed for this study and conducted from June to August, 2024.

Study Location

The study location limited to Bauchi Urban Maternity which is located within Bauchi Metropolis of Bauchi LGA of Bauchi State, Nigeria. The facility is located along Ajiya Adamu Road popularly known as Kofar Ran in Bauchi Metropolis.

Study Population

Pregnant mothers attending PMCT ANC at Urban Maternity, Kofar Ran, Bauchi Metropolis were included and those that were not around during the study were excluded.

Sample Size

The minimum sample size was calculation using the fisher's formula for cross-sectional study Z^2pq/d^2 the p was obtained



ISSN (Online): 2455-9024

from the previous study. 90 The minimum sample size was 410 after adding 10% non-response.

Sampling Procedure

The list of pregnant mothers attending PMCT ANC was obtained, then systematic sampling was carried out to selected the participants after calculating the sampling interval, the first participant was selected using simple random sampling by balloting then subsequent one was selected after adding to the sampling interval and the procedure continue until the minimum sample size was exhausted.

Data Collection Method

The semi-structured interviewer administer questionnaire was used. The questionnaire has 5 sections, Section A: comprising of general information of the respondents then section B on Knowledge of pregnant women towards prevention of mother-to-child transmission of HIV/AIDS. However, section C was on Attitude of pregnant women towards prevention of mother-to-child transmission of HIV/AIDS. In addition, Section D directed pregnant women's practices to prevent mother-to-child transmission of HIV/AIDS.

Knowledge was rated: poor knowledge 0-3, fair knowledge 4-6 and good knowledge 9-7, attitude poor attitude 3-0, good attitude 6-4 and poor performance 2 -0, good practice as 3-4.

Data Analysis

The data collected using the questionnaires were entered into Microsoft Excel Spread Sheet for data cleaning. The data was then transferred to Statistical Product and Service Solutions IBM (SPSS) version 21.0 for analysis. The data was summarized and presented as frequencies and percentages, presented in tables and charts for easy and better understanding. Chi square test and the Fisher's exact test was used to test association between categorical variables at bivariate levels. Test of significant was set at p<0.05.

Ethical Consideration

All principles that guide research designs and practice are considered and strictly adhered to. This includes free access, informed consent, anonymity, confidentiality, and potential harm after consent is obtained.

III. RESULTS

A total of 410 questionnaires were administered with response rate of 95%.

Table 1 shows that majority of ante-natal attendees are within the age group of 20-30 years with 65.8%, followed by age group of 13-19 years with a 19.9%, 31-40 years is 10.2%, while age group of 41-50 years least attendees with 4.1%. In terms of ethnic group, Hausas are the highest with 59.7% respondents, Fulani stands at 9.4%, while respondents belonging to other ethnic groups are 30.9%. Majority of the respondents resides in urban area i.e. 92.3% while 7.7% of the respondents reside in rural area. In terms of academic qualifications, 6.4% of the respondents have no education, 4.6% have primary education which is the least percentage, 73.2% have secondary education which is the majority and

15.8% have tertiary education. For religion, 85.5% of the respondents are Muslims by faith and 14.5% are Christians.

TABLE 1: Socio-demographic Information of the Respondents

Variables	Frequency	Percentage (%)
Age		_
≤18 years	78	19.9
18 – 27 years	258	65.8
28 – 37 years	40	10.2
38 – 47 years	16	4.1
≥ 47 years	0	0.00
Gender		
Female	392	100
Male	0	0.00
Ethnic group of respondents		
Hausa	234	59.7
Fulani	37	9.4
Others	121	30.9
Place of residence		
Urban	362	92.3
Rural	30	7.7
Academic qual. of respondents		
None	25	6.4
Primary	18	4.6
Secondary	287	73.2
Tertiary	62	15.8
Religion		
Muslim	335	85.5
Christian	57	14.5

TABLE 2: Levels of Knowledge of Pregnant Women towards Prevention of Mother-To-Child Transmission on HIV/AIDS

Variables	Frequency	Percentage (%)
Good Knowledge	329	83.9
Fair Knowledge	51	13.0
Poor Knowledge	12	3.1

Percentage of Pregnant Women with good Knowledge on Prevention of Mother-to child Transmission on HIV/AIDS is 87.8%, while those with poor Knowledge are 12.2%.

TABLE 3: Knowledge of Pregnant Women towards Prevention of Mother-To-Child Transmission on HIV/AIDS

S/N	Variables		Frequency	Percentages (%)
1	Heard about Mother-To-Child	Yes	332	84.7
1 Transmission of HIV		No	60	15.3
	Heard about Prevention of	Yes	326	83.2
2	Mother-To-Child Transmission of HIV	No	66	16.8
	Safe delivery practice to	Yes	362	92.3
3	reduce the risk MTCT of HIV	No	30	7.7
4	Safe infant feeding practice to	Yes	307	78.3
4	reduce the risk MTCT of HIV	No	85	21.7
	HIV counseling, testing, and	Yes	386	98.5
5	treatment of STI to reduce the risk MTCT of HIV	No	6	1.5
	ART service reduce the risk	Yes	373	95.2
6	MTCT of HIV	No	19	4.8
	Prevention of unintended	Yes	332	84.7
7 pregnancy by improving FP service to reduce the risk MTCT of HIV		No	60	15.3
	Education of the community	Yes	374	95.4
8	about risky behaviors and promote condom use to reduce the risk of MTCT of HIV	No	18	4.6
	Follow up on ART clinic for	Yes	308	78.6
9	baby born from HIV-positive mother	No	84	21.4



ISSN (Online): 2455-9024

From table 3, it is shown that 84.7% of the respondents heard about mother-to-child transmission of HIV/AIDs, 83.2% heard about prevention of mother-to-child transmission of HIV/AIDs, 92.3% are aware of safe delivery practice to reduce risk of MTCT of HIV/AIDs, 78.3% of the respondents are aware of safe infant feeding to reduce risk MTCT of HIV/AIDs, 98.5% of the respondents are aware of HIV counseling, testing and treatment of STIs to reduce the risk of MTCT of HIV/AIDs, 95.2% of the respondents are aware ART services reduce the

risk of MTCT of HIV/AIDs, 84.7% of the respondents are aware that prevention of unintended pregnancy by improving family planning services reduce the risk of MTCT of HIV/AIDS, 95% of the respondents agree that educating community about risky behaviour and promoting condom use reduces risk of MTCT of HIV/AIDS and 78.6% of the respondents agree that ART clinic follow-up for babies born to HIV positive mother reduces risk of MTCT of HIV/AIDS. The per.

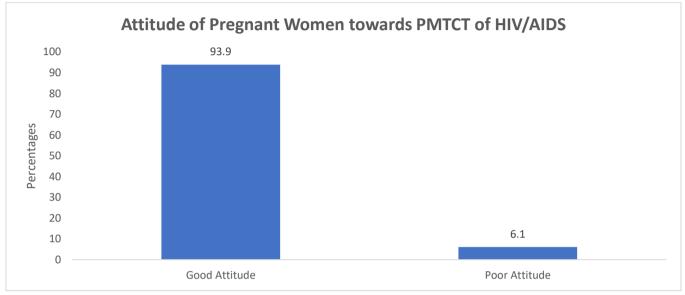


Figure 1: Bar chart on Attitude of Pregnant Women towards the Prevention of Mother-To-Child Transmission on HIV/AIDS

The percentage of Pregnant Women with good attitude of Prevention of Mother-To-child Transmission on HIV/AIDS is 85.4% while those with poor attitude is 14.3%

TABLE 4: Attitude of Pregnant Women towards the Prevention of Mother-To-Child Transmission on HIV/AIDS

S/N	Variable		Frequency	Percentage (%)
	HIV can be	Yes	368	93.9
1.	transmitted from	No	24	6.1
	mother to child	Don't know	0	0.00
	Mother-To-Child	Yes	362	92.3
2.	Transmission of HIV	No	30	7.7
	is preventable	Don't know	0	0.00
	pregnant mother	Yes	380	96.9
3.	should tell her test	No	12	3.1
	result to her husband	Don't know	0	0.00
4. Condom use with spouse	Yes	200	51.0	
		No	185	47.2
		Don't know	0	0.00
5.	HIV-positive women can have baby	Yes	361	92.1
		No	31	7.9
		Don't know	0	0.00
	Breast milk is	Yes	338	86.2
6.	nutritionally	No	54	13.8
	complete	Don't know	0	0.00

Table 4 shows that 93.9% of the respondents are aware the HIV can be transmitted from mother to child, 92.3% are aware that mother-to-child transmission of HIV is preventable, 96.9%

of the respondents are agree that pregnant mothers should tell their husbands the test result, 51.0% of the respondents will use condom with their spouses, 92.1% of HIV positive women can have babies and 86.2% of the respondents are of the opinion that breast milk is nutritionally complete.

The percentage of pregnant women with good practice of prevention of Mother-To-Child Transmission on HIV/AIDS is 72.2% while those with poor practice are 27.7%.

Survey on the practice of the pregnant women towards prevention of mother to child transmission of HIV/AIDS shows that 84.4% of the have been tested for HIV/AIDS, 84.3% of the respondents shares the HIV/AIDS test result with their spouses, 75.0% of spouses have been tested during their ANC follow-up and 45.2% of the respondents uses condom.

TABLE 5: Practice of the Pregnant Women towards Prevention of Mother to Child Transmission on HIV/AIDS

S/N	Variable		Frequency	Percentage (%)
1	Have you ever been tested	Yes	331	84.4
1.	for HIV infection	No	61	15.6
2	Shared result with your	Yes	332	84.3
2.	spouse	No	60	15.7
2	Spouse been tested for HIV	Yes	294	75.0
3.	during their ANC follow-up	No	98	25.0
4.	Use of condom with spouse	Yes	177	45.2
		No	215	54.8



ISSN (Online): 2455-9024

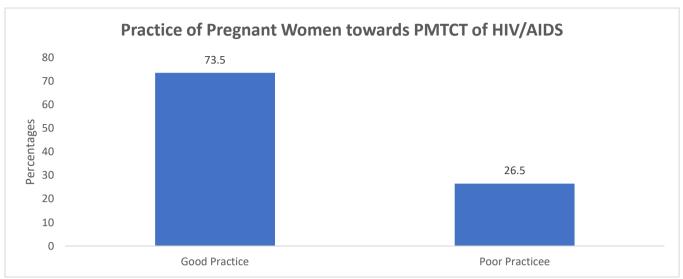


Figure 2: Bar chart on Practice of the Pregnant Women towards Prevention of Mother to Child Transmission on HIV/AIDS

Factors associated with Knowledge, Attitudes and Practice of Pregnant Women towards Prevention of Mother-To-Child Transmission on HIV/AIDS

TABLE 6: Relationship between Knowledge of Pregnant Women towards Prevention of Mother-To-Child Transmission on HIV/AIDS

Variables	Inadequate	Adequate	p-
	knowledge	knowledge	value
AGE			
<27	56 (16.7)	280 (83.3)	0.55
≥28	7 (12.5)	49 (87.5)	0.55
Academic			
Qualification			
Uneducated	3 (12.0)	22 (88.0)	0.78*
Educated	60 (16.3)	307 (83.7)	0.78**
Ethnicity			
Hausa/Fulani	42 (15.5)	229 (84.5)	0.65
Others	21 (17.4)	100 (82.6)	0.65
Religion			
Islam	51 (15.2)	284 (84.8)	0.32
Christianity	12 (21.1)	45 (78.9)	0.32
Place of resident			
Urban	51 (14.1)	311 (85.9)	0.001*
Rural	12 (40.0)	18 (60.0)	0.001**

^{*}Fisher's exact test

Table 6 shows that 83.3% of pregnant women \geq 27 years has adequate knowledge of prevention of Mother-To-Child transmission of HIV/AIDS while those with inadequate knowledge are 16.7%. Pregnant women that are \geq 28 years with adequate knowledge are 87.5% while those with inadequate knowledge are 12.5% with a p-value of 0.55.

In terms of academic qualification, 12.0% of uneducated pregnant women <27 years with inadequate knowledge of prevention of Mother-To-Child transmission of HIV/AIDS, while 88.0% have adequate knowledge. Pregnant women \geq 28 years with inadequate knowledge of prevention of Mother-To-Child transmission of HIV/AIDS are 16.3%, those with adequate knowledge are 83.7% and has a p-value of 0.78.

In terms of ethnicity, Hausa/Fulani has 15.5% pregnant women with inadequate knowledge, while 84.5% have adequate knowledge and other languages have 17.4% pregnant

women with inadequate knowledge, while 82.6% have adequate knowledge with p-value 0.65.

For religion, Islam has 15.2% pregnant women with inadequate knowledge, 84.8% have adequate knowledge. Christianity, 21.1% have inadequate knowledge, 78.9% have adequate knowledge with p-value 0.32.

For place of residence, Urban has 14.1% pregnant women with inadequate knowledge, 85.9% have adequate knowledge. Rural, 40.0% have inadequate knowledge, 60.0% have adequate knowledge with p-value 0.001.

TABLE 7: Relationship between Attitudes of Pregnant Women towards
Prevention of Mother-To-Child Transmission on HIV/AIDS Table

Variables	Poor Attitude	Good Attitude	p-value
AGE			
<27	21 (6.3)	315 (93.8)	>0.99*
≥28	3 (5.4)	53 (94.6)	>0.99
Academic Qualification			
Uneducated	0(0.0)	25 (100.0)	0.38*
Educated	24 (6.5)	343 (93.5)	0.38**
Ethnicity			
Hausa/Fulani	24 (8.9)	247 (91.1)	0.001
Others	0(0.0)	121 (100.0)	0.001
Religion			
Islam	24 (7.2)	311 (92.8)	0.034*
Christianity	0(0.0)	57 (100.0)	0.034
Place of resident			
Urban	18 (5.0)	344 (95.0)	0.006*
Rural	6 (20.0)	24 (80.0)	0.000**

^{*}Fisher's exact test

Table 7 shows that 6.3% of pregnant women \ge 27 years has poor attitude of prevention of Mother-To-Child transmission of HIV/AIDS while those with good attitude are 93.8%. Pregnant women that are \ge 28 years with adequate poor attitude are 5.4% while those with good attitude knowledge are 94.6% with a p-value of >0.99.

In terms of academic qualification, 0.0% of uneducated pregnant women <27 years with poor attitude of prevention of Mother-To-Child transmission of HIV/AIDS, while 100.0% have good attitude. Pregnant women ≥28 years with poor attitude of prevention of Mother-To-Child transmission of



ISSN (Online): 2455-9024

HIV/AIDS are 6.5%, those with good attitude 93.5% and has a p-value of 0.38.

In terms of ethnicity, Hausa/Fulani has 8.9% pregnant women with poor attitude, while 92.8% have good attitude and other languages have 0.0% pregnant women with poor attitude, while 100% have good attitude with p-value 0.001.

For religion, Islam has 7.2% pregnant women with poor attitude, 92.8% have good attitude. Christianity, 0.0% have poor attitude, 100% have good attitude with p-value 0.034.

For place of residence, Urban has 5.0% pregnant women with poor attitude, 95.0% have good attitude. Rural, 20.0% have poor attitude, 80.0% have good attitude with p-value 0.006.

TABLE 8: Relationship between Practices of Pregnant Women towards
Prevention of Mother-To-Child Transmission on HIV/AIDS

Frevention of Modulet-10-Clind Transmission on HTV/AIDS				
Variables	Poor Practices	Good Practices	p-value	
AGE				
<27	91 (27.1)	245 (72.9)	0.62	
≥28	13 (23.2)	43 (76.8)	0.62	
Academic Qualification				
Uneducated	6 (24.0)	19 (76.0)	0.82	
Educated	98 (26.7)	269 (73.3)	0.82	
Ethnicity				
Hausa/Fulani	79 (29.2)	192 (70.8)	0.08	
Others	25 (20.7)	96 (79.3)	0.08	
Religion				
Islam	91 (27.2)	244 (72.8)	0.50	
Christianity	13 (22.8)	44 (77.2)	0.52	
Place of resident				
Urban	98 (27.1)	264 (72.9)	0.50	
Rural	6 (20.0)	24 (80.0)	0.52	

Table 8 shows that 27.1% of pregnant women \ge 27 years has poor practice of prevention of Mother-To-Child transmission of HIV/AIDS while those with good practice are 72.9%. Pregnant women that are \ge 28 years with adequate poor practice are 23.2% while those with good practice are 76.8% with a p-value of 0.62

In terms of academic qualification, 24.0% of uneducated pregnant women <27 years with poor practice of prevention of Mother-To-Child transmission of HIV/AIDS, while 76.0% have good practice. Pregnant women \geq 28 years with poor practice of prevention of Mother-To-Child transmission of HIV/AIDS are 26.7%, those with good practice 73.3% and has a p-value of 0.82.

In terms of ethnicity, Hausa/Fulani has 29.2% pregnant women with poor practice, while 70.2% have good practice and other languages have 20.7% pregnant women with poor attitude, while 79.3% have good practice with p-value 0.08.

For religion, Islam has 27.2% pregnant women with poor practice 72.8% have good practice. Christianity, 22.8% have poor practice, 77.2% have good practice with p-value 0.052.

For place of residence, Urban has 27.1% pregnant women with poor practice, 72.9% have good practice. Rural, 20.0% have poor practice, 80.0% have good attitude with p-value 0.052.

IV. DISCUSSION OF FINDINGS

Findings on knowledge of pregnant women regarding PMTCT of HIV/AIDS shows that very high number of the

respondents heard about mother-to-child transmission of HIV/AIDs, about prevention of mother-to-child transmission of HIV/AIDs, aware of safe infant feeding to reduce risk MTCT of HIV/AIDs, prevention of unintended pregnancy by improving family planning services reduce the risk of MTCT, agree that educating community about risky behaviour and promoting condom use reduces risk of MTCT, and are aware of safe delivery practice to reduce risk of MTCT of HIV/AIDs. A very high number of respondents are aware; ART services reduce the risk of MTCT, that HIV counseling, testing and treatment of STIs reduce the risk of MTCT of HIV/AIDs, and that ART clinic follow-up for babies born to HIV positive mother reduces risk of MTCT of HIV/AIDS.

Findings on attitude of pregnant women toward the prevention mother-to-child transmission of HIV/AIDS shows that; almost all the respondents are aware the HIV can be transmitted from mother to child, mother-to-child transmission of HIV is preventable, pregnant mothers should tell their husbands the test result and HIV positive women can have babies. A very high number the respondents are of the opinion that breast milk is nutritionally complete while majority of the respondents will use condom with their spouses.

Findings on practice of pregnant women towards prevention of mother to child transmission of HIV/AIDS shows that; a very high number of the respondents have been tested for HIV/AIDS, partners share their HIV/AIDS test result with their spouses, spouses have been tested during their ANC follow-up while few of the respondents uses condom.

Findings on knowledge of pregnant women regarding PMTCT of HIV/AIDS shows that 84.7% of the respondents heard about mother-to-child transmission of HIV/AIDs, 83.2% heard about prevention of mother-to-child transmission of HIV/AIDs, 92.3% are aware of safe delivery practice to reduce risk of MTCT of HIV/AIDs, 78.3% of the respondents area aware of safe infant feeding to reduce risk MTCT of HIV/AIDs, 98.5% of the respondents are aware of HIV counseling, testing and treatment of STIs to reduce the risk of MTCT of HIV/AIDs, 95.2% of the respondents are aware ART services reduce the risk of MTCT of HIV/AIDs, 84.7% of the respondents are aware that prevention of unintended pregnancy by improving family planning services reduce the risk of MTCT of HIV/AIDS, 95% of the respondents agree that educating community about risky behaviour and promoting condom use reduces risk of MTCT of HIV/AIDS and 78.6% of the respondents agree that ART clinic follow-up for babies born to HIV positive mother reduces risk of MTCT of HIV/AIDS. Finding of this study is in line with that of 99 and 95 that 91% and 50.8% of pregnant women are aware of mother-to-child transmission of HIV/AIDS.

Findings on attitude of pregnant women toward the prevention mother-to-child transmission of HIV/AIDS shows that 93.9% of the respondents are aware the HIV can be transmitted from mother to child, 92.3% are aware that mother-to-child transmission of HIV is preventable, 96.9% of the respondents are agree that pregnant mothers should tell their husbands the test result, 51.0% of the respondents will use condom with their spouses, 92.1% of HIV positive women can have babies and 86.2% of the respondents are of the opinion



ISSN (Online): 2455-9024

that breast milk is nutritionally complete. This finding is not inline with that of ⁹⁹ because only 7% of the respondents area aware of prevention of mother-to-child transmission of HIV/AIDS. The finding is in-line with that of ⁹⁵ that 96% of the respondents agree that spouses should tell their partners their test result.

Findings on practice of pregnant women towards prevention of mother to child transmission of HIV/AIDS shows that 84.4% of the have been tested for HIV/AIDS, 84.3% of the respondents shares the HIV/AIDS test result with their spouses, 75.0% of spouses have been tested during their ANC follow-up and 45.2% of the respondents uses condom. This findings is inline with that of ⁹⁹ that several women had practiced prevention of mother-to-child transmission of HIV/AIDS or has had advice. Similarly, finding of ⁹⁵ is in-line with this study that 91.5% of pregnant women have been tested for HIV.

V. CONCLUSIONS

In conclusion, majority of the women in the study area have high level of knowledge in regards to prevention of mother-to-child transmission of HIV/AIDS. Pregnant women have extremely good attitude toward the prevention mother-to-child transmission of HIV/AIDS. The practice of pregnant women towards prevention of mother to child transmission of HIV/AIDS is very good. Hence there is need to strengthen the prevention of mother to child transmission of HIV/AIDS to reduce the transmission rate and its consequences.

REFERENCES

- Rudrajit P. The History of HIV. Journal of the Indian Medical Association, Vol 118, no 08, August 2020.
- Keele BF., Van Heuverswyn, F., Li, Y., Bailes, E., Takehisa, J., et al. Chimpanzee reservoirs of pandemic and non-pandemic (2006) HIV-1. Science. 313: 523-526.
- UNAIDS & WHO. AIDS Epidemic Update 2009. Geneva, UNAIDS; 2009.
- Communicable Disease Management Protocol HIV; 2024.
- 5. UNAIDS, Report on the Global HIV/AIDS Epidemic. Geneva; 2019. Available at: https://www.unaids.org/sites/default/files/media_ass et/2019-UNAIDS-data_en.pdf. In: Mohsina M, Ruqia Q, Suhail N, Bhat SM,Salim K. Knowledge, attitude and practice regarding mother-to-child transmission of HIV, its prevention, and associated factors among antenatal women attending a health care facility in district Srinagar, North India: a cross sectional study. Int J Community Med Public Health. 2020 Jul; 7(7):2622-2627.
- Yibeltal AY, Daniel MB, Birhanu WD, Zeleke AM. Mother to Child Transmission of HIV and Associated Factors among HIV Exposed Infants at PublicHealth Facilities, Dessie Town, Ethiopia. Research and Palliative Care 343-350; 2019.
- 7. UNAIDS. Fact Sheet: world AIDS Day; 2023.
- 8. HIV and AIDS in India Key affected populations in India. 2017. Available at: https://www.unaids.org /en/regionscountries/countries/india. In: Mohsina M, Ruqia Q, Suhail N, Bhat SM,Salim K. Knowledge, attitude and practice regarding mother-to-child transmission of HIV, its prevention, and associated factors among antenatal women attending a health care facility in district Srinagar, North India: a cross sectional study. Int J Community Med Public Health. 2020 Jul; 7(7):2622-2627.
- Hailu D, Nigussie W, Gudeta TA, Abdu M, Molla Y, et al. Assessment of Knowledge and Attitude towards Prevention of MotherTo Child Transmission of HIV/AIDS among Antenatal Care Client in Mizan-Aman Town Public Health Facilities, Benchi-Maji Zone, South Nation Nationalities and People Region, Southwest Ethiopia, 2017. Clinics in Mother and Child Health. 15:1. DOI: 10.4172/2090-7214.1000280.
- Ministry of Health Malysia. Elimination of mother-to-child transmission of HIV and syphilis in Malaysia; 2019.

- 11. UNAIDS; 2011.
- Federal Ministry of Health. Guidelines for Prevention of Mother-to Child Transmission of HIV in Ethiopia; 2011
- Federal Ministry of Health: Accelerated Plan for scaling Up Prevention of Mother to Child Transmission (PMTCT) Services in Ethiopia. Adis Ababa: Federal ministry of Health; 2011.
- 14. Moses A., Chama C, Udo S,Omotora, B. Knowledge, Attitude And Practice Of Ante-Natal Attendees Toward Prevention Of Mother To Child Transmission (PMTCT) Of Hiv Infection In A Tertiary Health Facility, Northeast-Nigeria. The Internet Journal of Third World Medicine Volume 8 Number 1; 2009.
- Ezenkiri JN, Ezeani U,Okonkwo IM. Knowledge and attitudes towards preventive measures of mother-to-child transmission of HIV/AIDS among expectant mothers at the federal medical centre, Katsina State, Nigeria. J Med SciClin Res. 2020;8:128–135. doi:10.18535/jmscr/v8i9.25.
- Idowu OA, Mafiana CF, Sotiloye D. Anaemia in pregnancy: a survey of pregnant women in Abeokuta, Nigeria. African Health Science vol. 5 No. 4 December 2005.
- O'brien C, Steuben K, Stafford KA, Aliogo R, Alagi M, Johanns CK., et al. Mapping HIV prevalence in Nigeria using small area estimates to develop a targeted HIV intervention strategy. PLoSONE 17(6): e0268892; 2022.
- Ishola M. Bauchi Records reduction in HIV prevalence. Nigerian Tribune 1/December/2023. Retrieved on 1/2/2024, from: https://tribuneonlineng.com/bauchi-records-reduction-in-hiv-prevalence/
- Udomoh E. 2023 List of states with the highest HIV rate in Nigeria.
 Retrieved on 1/2/2024 from: https://nimedhealth.com.ng/2019/11/16/2023-list-of-states-with-the-highest-hiv-rate-in-nigeria/.
- Mesfin WK, Ayele MA, Biruk BA, Mikiyas AG, Alemu BZ. International Journal of Infectious Diseases 2020. S1201-9712(20)30125-9
- The Working Group on Mother-To Child Transmission of HIV, (2005).
 Rates of mother-to-child transmission of HIV-1 in Africa, America, and Europe: results from 13 perinatal studies. J Acquir Immune DeficSyndr Hum Retroviral 2005. 8: 506-510.
- WHO. Guidance on Global Scale up of the Prevention of PMTCT of HIV. Toward Universal access for Eliminating HIV and AIDS among children; 2007.
- WHO/UNAIDS/UNICE. Towards universal Access scaling up priority HIV/AIDS Intervention in the health sector. Progress report, Ethiopia; 2007.
- Adewole I, Oluwole O, Sagay A. Prevention of Mother-to-Child transmission of HIV: The Nigerian PMTCT Programme; 2006.
- De Cock KM, Fowler MG, Mercier E, de Vincenzi I, Saba J. et al. Prevention of mother-to-child HIV transmission in resource-poor countries: Translating research into policy and practice. JAMA 2000. 283:1175-1182
- Amobi A O., Adedayo A., David O., Michael K., Baboyma K. &Melaku D. et al., (2023). Estimation of HIV prevalence and burden in nigeria: a bayesian predictive modeling study. The lancet. Vol. 62, 102098, August 2023.s
- 27. Kapoor & Vani (2004)
- 28. FMOH Nigeria (2010).
- 29. UNICEF (2012).
- Swaziland Government: Swaziland demographic health survey 2006-2007. Mbabane: Swaziland Ministry of Health.
- UNAIDS report on the global AIDS epidemic 2010. Joint United Nations Programme on HIV/AIDS; 2010.
- Guay LA, Musoke P, Fleming T, Bagenda D, Allen M, Nakabiito C, et al. Intrapartum and neonatal single-dose nevirapine compared with zidovudine for prevention of mother-to-child transmission of HIV-1 in Kampala, Uganda: HIVNET 012 randomised trial. *Lancet* 1999; 354:795-802.
- WHO Rapid advice: use of antiretroviral drugs for treating pregnant women and preventing HIV infection in infants. Geneva, World Health Organization. 2009
- Ethiopia Ministry of Health (2007) Guidelines for Prevention of Motherto- Child transmission of HIV in Ethiopia.
- Magadi MA. Understanding the gender disparity in HIV infection across countries in sub-Saharan Africa: evidence from the Demographic and



ISSN (Online): 2455-9024

- Health Surveys. Sociol Health Illness. 2011;33(4):522–539. doi:10.1111/j.1467-9566.2010.01304.x
- Yah CS, Tambo E. Why is mother to child transmission (MTCT) of HIV a continual threat to new-borns in sub-Saharan Africa (SSA). J Infect Public Health. 2019;12(2):213–223. doi:10.1016/j.jiph.2018.10.008.
- 37. Goga AE, Dinh T-H, Essajee S, et al. What will it take for the Global Plan priority countries in Sub-Saharan Africa to eliminate mother-to-child transmission of HIV? BMC Infect Dis. 2019;19(1):1–13. doi:10.1186/s12879-019-4393-5.
- Goga A, Singh Y, Jackson D, et al. How are countries in sub-Saharan African monitoring the impact of programmes to prevent vertical transmission of HIV? BMJ. 2019;364:2.
- Mutabazi JC, Zarowsky C, Trottier H. The impact of programs for prevention of mother-to-child transmission of HIV on health care services and systems in sub-Saharan Africa-A review. Public Health Rev. 2017;38(1):1–27. doi:10.1186/s40985-017-0072-5.
- Teshome GS, Modiba LM. Strategies to Eliminate Mother-to-Child Transmission of HIV in Addis Ababa, Ethiopia (Qualitative Study). HIV/AIDS Res Palliative Cares. 2020;12:821. doi:10.2147/HIV.S277461.
- Connor EM, Sperling RS, Gelber R, Kiselev PSG. Reduction of maternalinfant transmission of human immunodeficiency virus type 1 with Zidovudine treatment. N Engl J Med. 1994;331:1173-80.
- World Health Organization (WHO). Global guidance on criteria and processes for validation: elimination of mother-to-child transmission of HIV and Syphilis. Geneva, Switzerland; 2017.
- Guidelines for prevention of mother-to- child transmission of HIV in Ethiopia. Available at https://www.ilo.org/wcmsp5/groups/public/--ed_protect/---protrav/---ilo_aids/documents/legaldocument/wcms 125389.pdf.
- Karim, S.A., Karim, Q.A., Adhikari, M., Cassol, S., Chersich, M., Cooper, P., Wovadia, A., et al. Vertical HIV transmission in South Africa: translating research into policy and practice. The Lancet, 2002; 359:992-003
- Federal Ministry of Health (FMOH). Nigeria: HIV/AIDS Country Report, 2005 p. 1-60.
- National Action Committee on AIDS (NACA). Technical Report: National HIV/Syphilis Sero-prevalence Sentinel Survey, 2005.
- Anas-Kolo, S. Nigerian National PMTCT pilot programme: Successes, challenges and opportunities. 14th International Conference on AIDS/STIs in Africa, 4-9 December, Abuja, Nigeria, 2005.
- 48. A Moses, A., Chama, C.,Udo, S.,Omotora, B. Knowledge, Attitude And Practice Of Ante-Natal Attendees Toward Prevention Of Mother To Child Transmission (PMTCT) Of Hiv Infection In A Tertiary Health Facility, Northeast-Nigeria. The Internet Journal of Third World Medicine Volume 8 Number 1, 2009.
- 49. Hausermann, N. Women and education, eradication of illiteracy, employment, health and social services, including population issues and child care: the need for social support measures. Commission on the Status of Women. United Nations Economic and Social Council, 33rd Session, Vienna, 29 March 7 April, 1989.
- World Health Organisation. Consensus statement by the WHO/UNICEF consultation of HIV transmission and breastfeeding. Geneva: World Health Organisation, 1992.
- Bulterys, M., Chao, A., Dushimimana, A., Habimana, P., Nawrocki, P., Kurawige, J. et al. Multiple sexual partners and mother-to-child transmission of HV-1. AIDS 1993;7:1639-1645.
- Mang E., Gyang, C.P., Datong, P., Datiri, R., Dalyop, R., Villalba-Diebold, P. et al. Male partner involvement: A necessary component of successful PMTCT programmes. A paper presented at 14th International Conference on AIDS and STIs in Africa. Book of Abstract No. TuOrB095, 2005 p.35).
- 53. Chin J. Current and future dimensions of the HIV/AIDS pandemic in women and children. Lancet ii 1990:221-24).
- Wolinsky, S.M., Wikie, C.M., Korber, B.T., et al. Selective transmission of HIV-1 variants from mothers to infants. Science 1992; 255:1134-1137.
- Ariyoshi, K., Weber, J., Walters, S. Contribution of maternal viral load to HIV-1 transmission. Lancet 1992; 340:435.
- Chao, A., Butlerys, M., Musanganire, F., Habimana, P., Nawrocki, Taylor, E. et al. Risk factors associated with prevalent HIV-1 infection among pregnant women in Rwanda. International Journal of Epidemiology 1994; 23:371-380.

- 57. Rogers A., Meundi A., Amma A., Rao A., Shetty P., Antony J., et al. (2006). HIV-related knowledge, attitudes, perceived benefits, and risks of HIV testing among pregnant women in rural Southern India. AIDS patient care and STDs, 20(11), 803–811. https://doi.org/10.1089/apc.2006.20.803 PMID: 17134354.
- 58. Rates of mother-to-child transmission of HIV-1 in Africa, America, and Europe: results from 13 perinatal studies. The Working Group on Mother-To-Child Transmission of HIV. (1995). Journal of acquired immune deficiency syndromes and human retrovirology: official publication of the International Retrovirology Association, 8(5), 506–510. https://doi.org/10.1097/00042560-199504120-00011.
- Ghys P. D., Walker N., McFarland W., Miller R., & Garnett G. P. (2008).
 Improved data, methods, and tools for the 2007 HIV and AIDS estimates and projections. Sexually transmitted infections, 84 Suppl 1 (Suppl_1), i1–i4. https://doi.org/10.1136/sti.2008.032573 PMID: 18647859
- UNICEF Data: Monitoring the situation of children and women: https://data.unicef.org/topic/hivaids/ paediatric-treatment-and-care/
- Ruszel K, Piecewicz-Szczęsna H. The epidemiological situation of morbidity and mortality on HIV/AIDS cases in Poland and globally in recent years. Journal of Education, Health and Sport. 2020 Aug 15; 10 (8):189–98.
- 62. WHO. PMTCT stratagic vision 2010–2015. Available from: www. who.int.hiv.mtct.strategy, 2010.
- Workagegn F, Kiros G, Abebe L. Predictors of HIV-test utilization in PMTCT among antenatal care attendees in government health centers: institution based cross-sectional study using health belief model in Addis Ababa, Ethiopia. HIV/AIDS (Auckland, NZ). 2015; 7:215.
- UNAIDs. Progress report on the global plan towards the elimination of new HIV infections among children and keeping their mothers alive. Geneva 27 Switzerland. 2015..
- 65. Sidibe M., Global Report: UNAIDS Report on the Global AIDS Epidemic: UN Joint Programme on HIV/AIDS, 2010.
- UNAIDS. Towards an AIDS-Free World for Children; A Global Push to End Pediatric AIDS. Geneva, Switzerland: 2016.
- Hassan AS, Sakwa EM, Nabwera HM, et al. Dynamics and Constraints of Early Infant Diagnosis of HIV Infection in Rural Kenya. AIDS Behav. 2012; 16(1):5–12.
- Tejiokem, M.C., Faye, A., and Penda, I.C., et al. Feasibility of Early Infant Diagnosis of HIV in Resource-Limited Settings: The ANRS 12140-PEDIACAM Study in Cameroon. PLoS ONE, 2011. http://dx.doi.org/10.1371/journal.pone.0021840.
- 69. World Health Organization. Consolidated Guidelines on the Use of Antiretroviral Drugs for Treating and Preventing HIV Infection: Recommendations for a Public Health Approach. Geneva, Switzerland: World Health Organization; 2013.
- TolessaOlana, TigistBacha, WalelignWorku, et al. Early infant diagnosis
 of HIV infection using DNA-PCR at a referral center: an 8 years
 retrospective analysis. AIDS Research and Therapy. AIDS Res Ther,
 2016, 13:29 DOI 10.1186/s12981-016-0112-0.
- FissehaWudineh and BereketDamtew. Mother-to-Child Transmission of HIV Infection and Its Determinants among Exposed Infants on Care and Follow-Up in Dire Dawa City, Eastern Ethiopia. Hindawi Publishing Corporation AIDS Research and Treatment Volume 2016, available from http://dx.doi.org/10.1155/2016/3262746.
- Koye N, Zeleke BM. Mother-to-child transmission of HIV and its predictors among HIV-exposed infants at a PMTCT clinic in northwest Ethiopia. BMC Pub Health. 2013; 13:398.
- Hussein M, Jira C, and Girma B. Assessment of effective coverage of HIV
 prevention of pregnant mother to child transmission services in Jimma
 Zone, South West Ethiopia Ethiopian Journal of Health Sciences, vol.21,
 no.1, pp.1–7, 2011.
- World Health Organization. HIV/AIDS; 2021. Available from: https://www.who.int/news-room/facts-in-pictures/detail/hiv-aids.
- World Health Organization. HIV/AIDS: key facts; 2021 [updated July 14, 2021]. Available from: https://www.who.int/news-room/fact-sheets/detail/hiv-aids.
- World Health Organization. Mother-to-child transmission of HIV; 2021.
 Available from: https://www.who.int/teams/global-hiv-hepatitis-and-stisprogrammes/hiv/prevention/mother-to-child-transmission-of-hiv.
- World Health Organization. Global Guidance on Criteria and Processes for Validation: Elimination of Mother-To-Child Transmission of HIVand Syphilis. 2nd ed. 2017.



ISSN (Online): 2455-9024

- Myer L, Essajee S, Broyles LN, et al. Pregnant and breastfeeding women: a priority population for HIV viral load monitoring. PLoS Med. 2017;14 (8):e1002375. doi:10.1371/journal.pmed.1002375.
- UNAIDs, UNICeF, World Health Organization. Global HIV/AIDS response: epidemic update and health sector progress towards universal access: progress report 2011. Geneva Switzerland; 2011.
- Dunn DT, Newell ML, Ades AE, Peckham CS. Risk of human immunodeficiency virus type 1 transmission through breastfeeding. Lancet. 1992;340(8819):585–588. doi:10.1016/0140-6736(92)92115-V.
- Robert MBF, Joseph W, Nina F, Richard E. Nelson Textbook of Pediatrics. 20th ed. Philadelphia: Elsevier; 2016.
- 81. Abajobir AA, Zeleke AB. Knowledge, Attitude, Practice and Factors Associated with Prevention of Mother-to-Child Transmission of HIV/AIDS among Pregnant Mothers Attending Antenatal Clinic in Hawassa Referral Hospital, South Ethiopia. J AIDS Clin Res 4: 215, 2013. doi:10.4172/2155-6113.1000215.
- Ahmad, S., Wasim, S., Irfan, S., Gogoi, S., Strivastava, A. &Farheen, Z. (2019). Qualitative V/s. Quantitative Research- A Summarized Review. Journal of Evidence Based Medicine and Healthcare. 6(43), 2828 – 2832.
- Kabir, S. M. Sample and Sampling Designs. Retrived on 24/1/2020 from https://www.researchgate.net/publication/325846997_METHODS_OF_ DATA_COLLECTION.
- Kapur, R. Research Methodology: Methods and Strategies. University of Delhi, India. 2018
- 85. Ponto, J. (2015). Understanding and evaluating survey research. Advanced Practitioner Oncol 6(2), 168 – 171.
- Alvi, M. H. (2016): A Manual for Selecting Sampling Techniques in Research. Retrieved June 18, 2012 from: https://mpra.ub.unimuenchen.de/70218/
- 87. Dorneyei, Z. (2007). Research Methods in Applied Linguistics. Oxford: Oxford University Press.
- Young, T. J. and Schartner, A. (2014). The effects of cross-cultural communication education on international students' adjustment and adaptation. *Journal of Multilingual and Multicultural Development*.
- 89. Kish, L. (1965). Survey sampling. New York: John Wiley and sons, Inc.
- Simarjeet Kaur, 2017. "Sample size determination (for descriptive studies)" International Journal of Current Research, 9 (03).

- Igwenagu, C. Fundamentals of Research Methodology and data collection. LAP Lambert Academic Publishing. 2016
- Castillo, R. C. (2014). Research Methodology guidelines. The art of mentoring research Conference 4/4/2014, Batang State University, Batang City, Philippines.
- Linda, D. G., Wikke, W. & Richard, H. M. (1987). Questionnaire development: 2. Validity and reliability. CMAJ, Vol. 136, April 1 1987.
 Retrived from; https://www.researchgate.net/publication/19332862_Questionnaire_development_2_Validity_and_reliability/link/0046353c0220340545000000/d
- 94. Hailu, D., Nigussie, W., Gudeta, T. A., Abdu, M. and Molla, Y., et al. Assessment of Knowledge and Attitude towards Prevention of MotherTo Child Transmission of HIV/AIDS among Antenatal Care Client in Mizan-Aman Town Public Health Facilities, Benchi-Maji Zone, South Nation Nationalities and People Region, Southwest Ethiopia, 2017. Clinics in Mother and Child Health. 15:1. DOI: 10.4172/2090-7214.1000280.
- Mohsina, M., Ruqia, Q., Suhail, N., Bhat, S. M., Salim, K.. Knowledge, attitude and practice regarding mother-to-child transmission of HIV, its prevention, and associated factors among antenatal women attending a health care facility in district Srinagar, North India: a cross sectional study. Int J. Community Med Public Health. 2020 Jul; 7(7):2622-2627.
- Abajobir, A. A. and Zeleke A. B. Knowledge, Attitude, Practice and Factors Associated with Prevention of Mother-to-Child Transmission of HIV/AIDS among Pregnant Mothers Attending Antenatal Clinic in Hawassa Referral Hospital, South Ethiopia. J AIDS Clin Res 2013; 4: 215. doi:10.4172/2155-6113.1000215.
- Asefa, A. and Beyene H. Awareness and knowledge on timing of motherto-child transmission of HIV among antenatal care attending women in southern Ethiopia: a cross sectional study. *Reproductive Health 2013*, 10:66.
- Yeshaneh A, Abebe H, Tafese FE, Workineh A. Knowledge, attitude, and practice towards prevention of mother-to-child transmission of HIV among antenatal care attendees in Ethiopia, 2020. PLoS ONE 18(2): e0277178.https://doi.org/10.1371/journal.pone.0277178