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Factors Associated with Compliance with Prevention of Mother – To – Child Transmission of HIV Among Mothers Attending Antenatal Clinics in University College Hospital, Ibadan

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Abstract:

Despite preventive strategies of mother-to-child HIV transmission, there are evidences of low compliance to prevention of mother-to-child HIV transmission hence, the transmission of HIV from mother to child has not been successfully curtailed. This study was therefore designed to investigate the social, cultural and economic factors that influence the compliance to prevention of mother-to-child transmission of HIV among mothers attending Antenatal clinics in University College Hospital, Ibadan. The study adopted the descriptive design of the survey type. The total number of HIV positive pregnant mothers attending antenatal clinics in University College Hospital, Ibadan for the past nine months were 78. Total enumeration was used. The instrument for data collection was a self-structured questionnaire which was divided into six sections (sections A-F). The data collected were subjected to descriptive and inferential statistics. Findings showed that there were significant relationship between the level of knowledge and compliance to the PMTCT of HIV (r = .518, *p* = .000); and economic factors and compliance to the PMTCT of HIV (r = .315, *p* = .009) while there were no significant relationship between social factors

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and compliance to the PMTCT of HIV (r = .180, *p* >0.05); and cultural factors and compliance to the PMTCT of HIV (r = .056, *p*>0.05). The findings revealed that knowledge (ß = 0.480; t= 5.559; *p*<0.05) and Economic Factors (ß = 0.303; t= 2.593; p<0.05) significantly contributed to on the compliance to the PMTCT of HIV among mothers attending antenatal clinics. It was recommended that an economically sustainable, culturally sensitive and primary prevention approach of mother-to-child transmission (PMTCT) of HIV is promoted, especially among mothers of reproductive age.

Keywords: Factors, Compliance, Prevention, Mother-to-Child, Transmission, HIV, Mothers,

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Introduction

HIV positive mothers are on the rise in our community but only few of them are aware of their status, many get to know during booking for ante natal care. Antenatal care booking procedures contain history taking and series of laboratory investigations on the mother by health care providers to monitor the state of health of the pregnant woman and her foetus. A core principle of the Sustainable Development Goals (SDGs), and of the AIDS response, is to leave no one behind by 2030, that is, by 2030 no one will have HIV/AIDS (UNAIDS, 2021). Eliminating mother-to-child transmission of HIV is key to the global effort to combat this sexually transmitted infections (STI's) and to end AIDS by the year 2030 (World Health Organization, 2016). Hence, ensuring compliance to prevention of mother-to-child transmission, and the determinant factors are relevant to achieving the SDGs especially in Nigeria.

Mother-to-child transmission (MTCT), which is also known as vertical transmission refers to as the transmission of HIV from an HIV-positive mother to her child during pregnancy, childbirth or breastfeeding. It accounts for the vast majority of infections among children between 0 and 14 years, which were transmitted either during pregnancy, labour, delivery or breastfeeding (World Health Organization (WHO, 2018). It is noteworthy that the incidence of HIV could reduce to 5% if prompt antiretroviral treatments are given to mother and children throughout the stages when infection can occur (WHO, 2018).

The current World Health Organization (WHO) PMTCT antiretroviral (ARV) guidelines on treating pregnant women and preventing infection in infants was issued in 2010 as a major step towards more efficacious regimens. The WHO guidelines emphasize the importance of providing lifelong antiretroviral therapy (ART) to all HIV-infected pregnant women with the recommendation of two major options of antiretroviral prophylaxis: Option A and Option B. Recently, a third option which is Option B+ to provide lifelong ART to HIV-infected pregnant women, regardless of CD4 cell count has emerged (WHO, 2018). Also, of importance is the infant feeding choice (Iwelunmor, et al, 2014). For example, Decker, et al (2017) noted that the WHO recommended continuous breastfeeding until 12 months and beyond could be widely applied by HIV-positive women under Option B+, however, low drug adherence would clearly compromise the effectiveness of Option B+, especially for those women who prolong the breastfeeding duration for their baby while at the same time not adhering to ARV intake could put their infant at high risk for infection. This could raise the chances of the mother-to-child transmission of HIV.

There have been new cases of HIV transmission from mother-to-child in recent times hence, this has become major health issues not only in the nation but also at the global level (Iwelunmor, et al., 2014; Avert, 2019; WHO, 2021). Also, despite the introduction of various strategies such as the Option A and Option B and the Option B+ to provide lifelong ART to HIV-infected pregnant women to cushion and prevent HIV transmission from mother-to-child by WHO (2012; 2021) and UNICEF (2021), there are evidences of poor uptake (Gourlay, et al., 2015; Irshad, et al, 2021.), resulting in newly infected cases of HIV constantly discovered in mother-to-child transmission (Schnack, et al., 2016).

Despite this strategy to prevent mother-to-child transmission of HIV, newly infected cases of HIV are constantly discovered in mother-to-child, transmission (Schnack, et al 2016). This

implies that particular challenges occur in maintaining women living with HIV in care and on effective ART throughout both at the prenatal and post-natal stages. Hence, more cases of HIV in mother-to-child transmission are detected during the pregnancy, childbirth or breastfeeding (Schnack, et al., 2016). Mothers have to comply with treatment to prevent transmission. Several and complex factors have been associated with this continuous mother-to-child transmission of HIV during the pregnancy, childbirth or breastfeeding because of poor compliance (Lumbantoruan, et al 2018). For example, factors such as factors influencing compliance, include knowledge about mother to child transmission of HIV/AIDS (Teshale, et al, 2021); socio-cultural factors; quality post-test HIV counseling, belief in the efficacy of antiretroviral (ARV), personal or peer experiences, prevention of women from seeking PMTCT by partner (Lumbantoruan, et al., 2018); previous HIV testing and HIV status of partners, level of access to health related services, increasing duration of HIV infection, among others were noted as major factors associated with compliance to the prevention of mother-to-child HIV transmission. Also, demographic characteristics of mothers such as age, educational level, location such as whether women lived in the rural or urban area, occupation, marital status, among others are also known to influence the compliance to the prevention of mother-to-child HIV transmission (Gourlay, et al., 2015). Drawing from the compendium of these factors, this present study focuses on social, cultural and economic factors.

Social factor could influence compliance to the prevention of mother-to-child HIV transmission and could imply factors that relates to the provision of support from social institutions such as hospitals, religious bodies, among others (Iwelunmor, et al., 2014). Therefore, emphasis is drawn to the availability of and accessibility to health education programs by health care centres, provision of counseling services for HIV positive women, unfriendly attitudes of healthcare workers, long distance to the health care centers, among others. Cultural factors could also influence compliance to prevention of mother-to-child HIV transmission and could imply factors that relates to the norms, tradition of people, or set of values and ideologies of a particular community or group of individuals (Iwelunmor, et al., 2014), and cuts across beliefs in the deploying of services of traditional birth, norms and beliefs on stigmatization and discrimination especially from nurses, confidentiality of results, among others. Economic factors have also been noted as major factors affecting compliance to prevention of mother-to-child HIV transmission and could also include factors such as affordability of health education programs, counseling services cost, cost of childbirth, high treatment costs, among others.

Eliminating mother-to-child HIV transmission could be well achieved by understanding the factors associated with the compliance to the prevention of mother-to-child HIV transmission. Studies such as Madeddu, et al., (2015); Schnack, et al., (2016); Lumbantoruan, et al., (2018) among others have affirmed that despite these preventive strategies, there are evidences of low compliance to prevention of mother-to-child HIV transmission hence, the transmission of HIV from mother to child has not been successfully curtailed. Therefore, it is important to identify factors influencing the compliance to prevention of mother-to-child HIV transmission especially among pregnant mothers, this present study seeks to investigate the social, cultural and economic factors that influence the compliance to prevention of mother-to-child

transmission of HIV among mothers attending Antenatal clinics in University College Hospital, Ibadan.

The main objective of the study was to determine the factors associated with the compliance to prevention of mother-to-child transmission of HIV among mothers attending antenatal Clinics in University College Hospital, Ibadan. Specifically, the study:

1. ascertained the level of knowledge of mother-to-child transmission of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan;
2. determined the level of compliance with the prevention of mother-to-child transmission (PMTCT) of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan;
3. examine the extent to social factors contribute to compliance with PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan;
4. assessed the extent cultural factors contribute to compliance with PMTCT among mothers attending antenatal clinics in University College Hospital, Ibadan; and
5. assessed the extent economic factors contribute to compliance with PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan.

Research Questions

The following research questions were used to drive the study:

1. What is the level of knowledge of mother-to-child transmission of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan?
2. What is the level of compliance with the prevention of mother-to-child transmission (PMTCT) of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan?
3. To what extent do social factors contribute to compliance with PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan?
4. To what extent do cultural factors contribute to compliance with PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan?
5. To what extent do economic factors contribute to compliance with PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan?
6.

Research Hypotheses

The following hypotheses were tested in this study:

H_o1: There is no significant relationship between the level of knowledge and compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan.

H_o2: There is no significant relationship between social factors and the level of compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan.

H_o3: There is no significant relationship between cultural factors and the level of compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan.

Ho4: There is no significant relationship between economic factors and the level of compliance to PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan.

Ho5: There is no significant contribution of the effects of knowledge, economic, social and cultural factors on the compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan.

Methodology

The study adopted the descriptive design. The survey design tends to inductively analyze existing attributes of event as related to the prevention of mother-to-child transmission of HIV among HIV positive mothers. The population of this study comprised of HIV positive pregnant mothers attending antenatal clinics in University College Hospital, Ibadan. The total number of HIV positive pregnant mothers attending antenatal clinics in University College Hospital, Ibadan for the past nine months were 78. Due to the small population size, all the respondents in the population size who consented to participate in the study were used. Therefore, total enumeration was used.

The instrument for data collection was a structured questionnaire which was divided into six sections (sections A-F). The questionnaire was presented to experts in the field of Tests and Measurement and Nursing Science to ascertain content and face validity. Reliability of the questionnaire was ascertained by pre-testing it among 23 women diagnosed of HIV attending antenatal clinics in General Hospital in Ibadan. The internal consistency method was used and the data collected were analysed using Cronbach Alpha which yielded the reliability coefficient values ranging from 0.753 – 0.882

The data for this study were collected primarily by the researcher, therefore, no need for research assistants due to the confidentiality of the respondents. Data collected in respect of the questionnaires were analyzed quantitatively using the descriptive and inferential statistics. The research questions were answered using frequency count, simple percentage and mean while hypotheses 1 – 5 were answered using Pearson correlation and multiple regression analysis.

Results

Research Question 1: What is the level of knowledge of mother-to-child transmission of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan?

Table 1: Knowledge of mother-to-child transmission of HIVN= 67

S/N	ITEMS	Correct (%)	Wrong (%)
1.	HIV can be transmitted to child from the mother during pregnancy	51 (76.1)	16 (23.9)
2.	HIV can be transmitted to child from the mother during delivery	60 (89.6)	7 (10.4)
3.	HIV can be transmitted to child from the mother during breastfeeding	61 (91.0)	6 (9.0)
4.	The transmission of HIV from mother to child could be prevented	64 (95.5)	3 (4.5)

5.	I know about the antiretroviral prevention method	61 (91.0)	6 (9.0)
6.	All pregnant women infected with HIV will have babies born with AIDS	59 (88.1)	8 (11.9)
7.	Early antenatal registration can reduce the risk of transmitting HIV from an infected mother to the foetus	60 (89.6)	7 (10.4)
8.	Use of antiretroviral drugs can prevent transmission of HIV from mother to child	60 (89.6)	7 (10.4)
9.	HIV is hereditary, so there is no prevention method for transmission of mother to child	63 (94.0)	4 (6.0)
10.	The mother may get opportunist infections at the ART clinic	63 (94.0)	4 (6.0)

To summarize the level of knowledge of mother-to-child transmission of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan, the SOLO classification was used as stated under definition of terms.

Scores from 0 - 3 Poor Knowledge

4 – 6 Average Knowledge

7 – 10 High Knowledge

Table 2: Summary of level of knowledge of mother-to-child transmission of HIV

Level	Frequency	Percent
Poor	0	0.0
Average	2	3.0
High	65	97.0
Total	**67**	**100.0**

Table 2 summarises the level of knowledge of mother-to-child transmission of HIV. From the table, none of the respondents had poor knowledge of mother-to-child transmission of HIV, 2 respondents representing 3.0 percent had average knowledge of mother-to-child transmission of HIV while 65 respondents representing 97.0 percent had high knowledge of mother-to-child transmission of HIV. It could be concluded that most of the mothers attending antenatal clinics had high knowledge of mother-to-child transmission of HIV.

Research Question 2: What is the level of compliance with the prevention of mother-to-child transmission (PMTCT) of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan?

Table 3: Compliance with the prevention of mother-to-child transmission (PMTCT) of HIV N= 67

S/N	ITEMS	Yes (%)	No (%)	Mean	SD
1.	I take antiretroviral prevention method during pregnancy	52 (77.6)	15 (22.4)	1.77	0.42
2.	I will undergo cesarean delivery	19 (28.4)	48 (71.6)	1.28	0.45
3.	I will restrict from breastfeeding my baby to avoid transmission	34 (50.7)	33 (49.3)	1.51	0.50
4.	I will administer HIV medicine to my baby	36	31 (46.3)	1.54	0.50

	for some weeks after giving birth	(53.7)			
5.	I have enrolled to PMTCT clinic	54 (80.6)	13 (19.4)	1.81	0.40
6.	I encourage my partner to get and stay on treatment	63 (94.0)	4 (6.0)	1.94	0.24
7.	I will do exclusive breastfeeding to prevent transmission	28 (41.8)	39 (58.2)	1.42	0.50
8.	I attend antenatal clinics regularly	60 (89.6)	7 (10.4)	1.90	0.31
9.	I take all drugs as prescribed by the medical doctor	55 (82.1)	12 (17.9)	1.82	0.39
10.	I consider the side effects of prescribed drugs before taking it	43 (64.2)	24 (35.8)	1.64	0.48

Mean Cut-off: 1.5

To summarise the level of compliance with the prevention of mother-to-child transmission (PMTCT) of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan, the following method was used

Scores from 10 - 13 Poor Compliance

14 – 16 Average Compliance

17 – 20 High Compliance

Table 4: Summary of level of compliance with the prevention of mother-to-child transmission (PMTCT) of HIV

Level	Frequency	Percent
Poor	0	0.0
Average	32	47.7
High	35	52.3
Total	**67**	**100.0**

Table 4 summarises the level of compliance with the prevention of mother-to-child transmission (PMTCT) of HIV. From the table, none of the respondents had poor compliance with the prevention of mother-to-child transmission (PMTCT) of HIV, 32 respondents representing 47.7 percent had average compliance with the prevention of mother-to-child transmission (PMTCT) of HIV while 35 respondents representing 52.3 percent had high compliance with the prevention of mother-to-child transmission (PMTCT) of HIV. It could be concluded that a little above average of the mothers attending antenatal clinics had high compliance with the prevention of mother-to-child transmission (PMTCT) of HIV.

Research Question 3: To what extent do social factors contribute to compliance with PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan?

Table 5: Contribution of Social Factors to compliance with PMTCT of HIV N= 67

S/N	ITEMS	SA (%)	A (%)	D (%)	SD (%)	Mean	SD
1.	Health education programs are made available for pregnant women	19 (28.4)	36 (53.7)	10 (14.9)	2 (3.0)	3.07	0.74

	with HIV						
2.	Health education programs are made accessible to pregnant women with HIV	18 (26.9)	32 (47.8)	14 (20.9)	3 (4.5)	2.97	0.82
3.	Counseling services are provided for HIV positive women	19 (28.4)	31 (46.3)	15 (22.4)	2 (3.0)	3.00	0.80
4.	Healthcare workers presents unfriendly attitudes to pregnant women with HIV	0 (0.0)	15 (22.4)	44 (65.7)	8 (11.9)	2.10	0.58
5.	My residence is far from the health care center	8 (11.9)	33 (49.3)	23 (34.3)	3 (4.5)	2.69	0.74

Mean Cut-off: 2.50 ***SA- Strongly Agree; A- Agree; D- Disagree; SD- Strongly Disagree***

To summarize the extent social factors contribute to compliance with PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan, the following method was used

Mean = 13.83

SD = 2.17

Min = 10

Max = 18

$\overline{X}$ – SD = 13.83 – 2.17 = 11.16

$\overline{X}$ + SD = = 13.83 + 2.17 = 16.0

Range

Scores from 10 - 11 Low

12 – 15 Moderate

16 – 18 High

Table 6: Summary of extent social factors contribute to compliance with PMTCT of HIV

Level	Frequency	Percent
Low	11	16.4
Moderate	40	59.7
High	16	23.9
Total	**67**	**100.0**

Table 6 summarises the extent social factors contribute to compliance with PMTCT of HIV. From the table, 11 respondents representing 16.4 percent agreed that the extent social factors contribute to compliance with PMTCT of HIV was low, 40 respondents representing 59.7 percent agreed that the extent social factors contribute to compliance with PMTCT of HIV was moderate while 16 respondents representing 23.9 percent agreed that the extent social factors contribute to compliance with PMTCT of HIV was high. It could be concluded that the extent social factors contribute to compliance with PMTCT of HIV was moderate.

Research Question 4: To what extent do cultural factors contribute to compliance with PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan?

Table 7: Contribution of Cultural Factors to compliance with PMTCT of HIV N= 67

S/N	ITEMS	SA (%)	A (%)	D (%)	SD (%)	Mean	SD
1.	Services of traditional birth is the known preferable culture	0 (0.0)	8 (11.9)	46 (68.7)	13 (19.4)	1.93	0.56
2.	Health workers have the culture of stigmatization of HIV pregnant mothers	1 (1.5)	6 (9.0)	48 (71.6)	12 (17.9)	1.94	0.57
3.	Health workers have the culture of discrimination of HIV pregnant mothers	0 (0.0)	6 (9.0)	38 (56.7)	23 (34.3)	1.75	0.62
4.	I am afraid that my case would not be kept confidential by the health workers	0 (0.0)	18 (26.9)	41 (61.2)	8 (11.9)	2.15	0.61
5.	I am more safe with religious health centres	0 (0.0)	14 (20.9)	44 (65.7)	9 (13.4)	2.07	0.59

Mean Cut-off: 2.50 ***SA- Strongly Agree; A- Agree; D- Disagree; SD- Strongly Disagree***

To summarize the extent cultural factors contribute to compliance with PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan, the following method was used

Mean = 9.84

SD = 1.23

Min = 7

Max = 13

$\overline{X}$ – SD = 9.84 – 1.23 = 8.61

$\overline{X}$ + SD = 9.84 + 1.23 = 11.07

Range

Scores from 7 - 8 Low

9 – 11 Moderate

12 – 13 High

Table 8: Summary of extent cultural factors contribute to compliance with PMTCT of HIV

Level	Frequency	Percent
Low	8	12.0
Moderate	52	77.5
High	7	10.5
Total	**67**	**100.0**

Table 8 summarises the extent cultural factors contribute to compliance with PMTCT of HIV. From the table, 8 respondents representing 12.0 percent agreed that the extent cultural factors contribute to compliance with PMTCT of HIV was low, 52 respondents representing 77.5 percent agreed that the extent cultural factors contribute to compliance with PMTCT of

HIV was moderate while 7 respondents representing 10.5 percent agreed that the extent cultural factors contribute to compliance with PMTCT of HIV was high. It could be concluded that the extent cultural factors contribute to compliance with PMTCT of HIV was moderate.

Research Question 5: To what extent do economic factors contribute to compliance with PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan?

Table 9: Contribution of Economic Factors to compliance with PMTCT of HIV N= 67

S/N	ITEMS	SA (%)	A (%)	D (%)	SD (%)	Mean	SD
1.	Health education programs are not affordable	0 (0.0)	12 (17.9)	47 (70.1)	8 (11.9)	2.06	0.55
2.	Counseling services are not affordable	3 (4.5)	5 (7.5)	43 (64.2)	16 (23.9)	1.93	0.70
3.	Cost of childbirth in the health care centres is very high	9 (13.4)	39 (58.2)	18 (26.9)	1 (1.5)	2.84	0.67
4.	The treatment costs for prevention of HIV from mother-to-child is high	0 (0.0)	6 (9.0)	52 (77.6)	9 (13.4)	1.96	0.47
5.	Cost of transportation to obtain the prevention services of HIV transmission from mother-to-child is high	4 (6.0)	25 (37.3)	33 (49.3)	5 (7.5)	2.42	0.72

Mean Cut-off: 2.50 ***SA- Strongly Agree; A- Agree; D- Disagree; SD- Strongly Disagree***

To summarise the extent economic factors contribute to compliance with PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan, the following method was used

Mean = 11.19

SD = 1.17

Min = 9

Max = 14

$\overline{X}$ – SD = 11.19 – 1.17 = 10.02

$\overline{X}$ + SD = 11.19 + 1.17 = 12.36

Range

Scores from 9 - 10 Low

11 – 12 Moderate

13 – 14 High

Table 10: Summary of extent economic factors contribute to compliance with PMTCT of HIV

Level	Frequency	Percent
Low	23	34.3
Moderate	16	23.9
High	28	41.8
Total	**67**	**100.0**

Table 10 summarises the extent economic factors contribute to compliance with PMTCT of HIV. From the table, 23 respondents representing 34.3 percent agreed that the extent economic factors contribute to compliance with PMTCT of HIV was low, 16 respondents representing 23.9 percent agreed that the extent economic factors contribute to compliance with PMTCT of HIV was moderate while 28 respondents representing 41.8 percent agreed that the extent economic factors contribute to compliance with PMTCT of HIV was high. It could be concluded that the extent economic factors contribute to compliance with PMTCT of HIV was high.

Test of Hypotheses

$H_0$1: There is no significant relationship between the level of knowledge and compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan

Table 11: Pearson Correlation between level of knowledge and compliance to the PMTCT of HIV

		Knowledge	Compliance
Knowledge	Pearson Correlation	1	.518**
	Sig. (2-tailed)		.000
	N	67	67
Compliance	Pearson Correlation	.518**	1
	Sig. (2-tailed)	.000	
	N	67	67

**. Correlation is significant at the 0.01 level (2-tailed).

The results in Table 11 revealed a significant relationship between the level of knowledge and compliance to the PMTCT of HIV (r = .518, p = .000). This implies that the level of knowledge and compliance to the PMTCT of HIV is directly related. Therefore, the hypothesis stating no significant relationship between the level of knowledge and compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan is hereby rejected.

$H_0$2: There is no significant relationship between social factors and the level of compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan

Table 12: Pearson Correlation between social factors and compliance to the PMTCT of HIV

		Social Factors	Compliance
Social Factors	Pearson Correlation	1	.180
	Sig. (2-tailed)		.144
	N	67	67
Compliance	Pearson Correlation	.180	1
	Sig. (2-tailed)	.144	
	N	67	67

The results in Table 12 revealed no significant relationship between social factors and compliance to the PMTCT of HIV (r = .180, *p* = .144>0.05). This implies that social factors and compliance to the PMTCT of HIV are not related. Therefore, the hypothesis stating no significant relationship between social factors and the level of compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan is hereby not rejected. The hypothesis is retained.

$H_0$3: There is no significant relationship between cultural factors and the level of compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan

Table 13: Pearson Correlation between cultural factors and compliance to the PMTCT of HIV

		Cultural Factors	Compliance
Cultural Factors	Pearson Correlation	1	.056
	Sig. (2-tailed)		.652
	N	67	67
Compliance	Pearson Correlation	.056	1
	Sig. (2-tailed)	.652	
	N	67	67

The results in Table 13 revealed no significant relationship between cultural factors and compliance to the PMTCT of HIV (r = .056, *p* = .652>0.05). This implies that cultural factors and compliance to the PMTCT of HIV are not related. Therefore, the hypothesis stating no significant relationship between cultural factors and the level of compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan is hereby not rejected. The hypothesis is retained.

$H_0$4: There is no significant relationship between economic factors and the level of compliance to PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan

Table 14: Pearson Correlation between economic factors and compliance to the PMTCT of HIV

		Economic Factors	Compliance
Economic Factors	Pearson Correlation	1	.315**
	Sig. (2-tailed)		.009
	N	67	67
Compliance	Pearson Correlation	.315**	1
	Sig. (2-tailed)	.009	
	N	67	67

**. Correlation is significant at the 0.01 level (2-tailed).

The results in Table 14 revealed a significant relationship between economic factors and compliance to the PMTCT of HIV (r = .315, *p* = .009). This implies that economic factors and compliance to the PMTCT of HIV is directly related. Therefore, the hypothesis stating no significant relationship between economic factors and the level of compliance to PMTCT of

HIV among mothers attending antenatal clinics in University College Hospital, Ibadan is hereby rejected.

$H_0$5: There is no significant contribution of the effects of knowledge, economic, social and cultural factors on the compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan

Table 15: Linear regression analysis showing the medication adherence and quality of life

R= 0.495, R^2=0.245, Adjusted R^2=0.201, Standard error of estimate= 1.067						
Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Remark
	B	Std. Error	Beta			
(Constant)	21.944	1.802		12.180	.000	
Knowledge	.567	.102	.480	5.559	.000	Sig.
Social Factors	.057	.064	.110	.901	.371	Not Sig.
Cultural Factors	.024	.108	.026	.224	.823	Not Sig.
Economic Factors	.249	.096	.303	2.593	.012	Sig.

($F_{(4, 62)}$ =2.858; $p < 0.05$).

Table 15 showed that the independent variables (knowledge, social factors, cultural factors and economic factors) account for 24.5% of the variance on the compliance to the PMTCT of HIV (R^2 = 0.245). The analysis of variance of the multiple regression data yielded an F-ratio value which was found to be significant at 0.05 alpha level ($F_{(4, 62)}$ = 2.858; $p < 0.05$). This implies that the null hypothesis was rejected. Knowledge (ß = 0.480; t= 5.559; p <0.05) and Economic Factors (ß = 0.303; t= 2.593; p<0.05) significantly contributed to on the compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan. Hence, Knowledge is the highest contributor to compliance to the PMTCT of HIV among mothers.

Discussion of Findings

The findings revealed that most of the mothers attending antenatal clinics had high knowledge of mother-to-child transmission of HIV. In line with this finding, Liu, et al., (2017) noted that the increasing knowledge about mother-to-child transmission of HIV could make pregnant mothers seek for the underlying mechanisms on the search for interventions to prevent or reduce the risk of transmission. The study of Boateng, et al., (2013) however contradicted this finding as they found that only 27% had good knowledge about ART and PMTCT. However, more than 90% of the HIV positive women had inadequate knowledge about ART and PMTCT and these women were more likely to default in ART usage. Irshad, et al., (2021) and Olopha, et al., (2021) found that a very high percentage of the HIV positive women had inadequate knowledge about ART and PMTCT and these women were more likely to default in ART usage hence, may have a high tendency of mother-to-child transmission.

The level of compliance with the prevention of mother-to-child transmission (PMTCT) of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan was high. Teshale, et al., (2021) found that maternal knowledge about mother to child transmission

(MTCT) of HIV/AIDS and its prevention is a cornerstone for elimination of MTCT of HIV/AIDS. Liu, et al., (2017) noted that the increase knowledge of mother-to-child transmission of HIV propels individuals such as pregnant women to search for interventions to prevent or reduce the risk of transmission of mother-to-child transmission of HIV.

The extent social factors contributed to compliance with PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan was moderate. Iwelunmor, et al., (2014) found that social factors are very important variables that posed significant influence on the compliance to the prevention of mother-to-child HIV transmission. Boateng, et al., (2013) found that social factors are very germane to influencing the compliance to the prevention of mother-to-child HIV transmission. Dirisu, et al., (2020) found that social factor play an important role in compliance and adherence to the prevention of mother-to-child transmission of HIV. These imply that social factors are germane to the compliance to the prevention of mother-to-child transmission of HIV.

The extent cultural factors contributed to compliance with PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan was moderate. Iwelunmor, et al., (2014) found that cultural factors posed significant influence on the prevention of mother-to-child HIV transmission. Boateng, et al., (2013) and Erwin, et al. (2010) revealed that cultural factors are important variables affecting the adherence to ART among HIV positive women in the Ashanti Region, Ghana.

The extent economic factors contributed to compliance with PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan was moderate. Gourlay, et al., (2015) found that economic factors are germane to the uptake of services to prevent mother-to-child transmission of HIV. Balogun and Odeyemi (2010) found that economic characteristics are very important factors that influence compliance to prevention of mother-to-child HIV transmission.

The findings of the study revealed that there was significant relationship between the level of knowledge and compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan. Avert (2019) and Olopha, et al., (2021) found that knowledge and practices on HIV/AIDS, PMTCT and ARTs pose significant influence on the motivation and uptake of ARVs for PMTCT among pregnant women.

It was also revealed that there was no significant relationship between social factors and the level of compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan. In line with this finding, Gourlay, et al., (2015) found that social factors do not pose significant influence on compliance to prevention of mother-to-child HIV transmission. Schnack, et al., (2016) however found that social factors or status of pregnant women pose significant influence on the compliance and adherence to the prevention of mother-to-child transmission of HIV. The study revealed that there was no significant relationship between cultural factors and the level of compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan.

It was revealed that there was significant relationship between economic factors and the level of compliance to PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan. This contradicted the findings of Gourlay, et al., (2015) who found

that economic factors do not pose significant influence on compliance to prevention of mother-to-child HIV transmission.

The study further revealed that there was significant contribution of the effects of knowledge, economic, social and cultural factors on the compliance to the PMTCT of HIV among mothers attending antenatal clinics in University College Hospital, Ibadan. Knowledge was the highest contributor to compliance to the PMTCT of HIV among mothers. Addo (2005); Falnes, et al (2010) and Avert (2019) noted that a good understanding and knowledge that ART is effective and could prolongs life and that the recognition that poor adherence may cause increase in viral resistance and treatment failure could propel individuals to adhere to the preventive mechanism of the transmission of mother-to-child transmission of HIV.

Conclusion

Sequel to the findings of this study, it is concluded that most of mothers attending antenatal clinics have high knowledge of mother-to-child transmission of HIV while a little above average have high compliance with the prevention of mother-to-child transmission (PMTCT) of HIV. It is also concluded that the extent social and cultural factors contributed to compliance with PMTCT of HIV was moderate while that of economic factor was high. It was further concluded that Knowledge was the highest contributor to compliance to the PMTCT of HIV among mothers.

Recommendations

Based on the findings of this study, the following recommendations were made;

1. It is important that an economically sustainable, culturally sensitive and primary prevention approach of mother-to-child transmission (PMTCT) of HIV is promoted, especially among mothers of reproductive age.
2. A community-based approach dedicated to enlightening mothers on prevention of mother-to-child transmission (PMTCT) of HIV may contribute to improving the compliance to prevention of mother-to-child transmission of HIV among mothers.
3. There should be mass media orientation using native language on prevention of HIV and prevention of mother-to-child transmission (PMTCT) of HIV. This will help to enlighten larger populace who are not educated.

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