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HUMAN IMMUNODEFICIENCY VIRUS COUNSELLING AND TESTING FOR PREGNANT WOMEN IN SUB-SAHARA AFRICAN GROWTH IN THE MILLENNIUM ERA (A CASE STUDY OF NIGER STATE HIV MANAGEMENT SERVICE), NIGERIA

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KEYWORDS:
Mother-to-Child Transmission, Voluntary Counselling and Testing, Antenatal.

Abstract

Mother-to-child transmission (MTCT) of HIV is responsible for more than 90% of the cases of HIV infection in infants and children in sub-Saharan Africa. Accurate data on the knowledge and perceptions of HIV among women attending antenatal clinics in Nigeria are scarce. A cross-sectional survey of 338 women attending antenatal clinics in Niger State, North-Central, Nigeria was done using structured questionnaires. This sample size was derived from a population of 2800 using Krejcie and Morgan table for determining sample size for a definition population. The consistency test of the instrument was validated using Cronbach Alpha formula at 0.72 acceptable level. Some women respondents had heard of HIV, while some knew that HIV could be transmitted from mother to child; others believed in the reality of HIV disease; in contrast, the majority believed they were not at risk of HIV infection, and a slightly greater proportion did not understand the benefits of voluntary HIV counselling and testing (VCT). Nonetheless,

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almost about half of respondents were willing to know their status following health education about VCT. Those that were older, attending public hospitals, and with a higher level of education had more knowledge and better perceptions about HIV. The results suggest an urgent need for public health education on HIV and the benefits of VCT to control MTCT, particularly targeting young pregnant women and those with little or no education.

Introduction

Human Immunodeficiency Virus infection in pregnancy has become the most common complication of pregnancy in some developing countries and Sub-Sahara African. This has a become major implication for the management of women pregnancy and birth. With an estimated one and a half million HIV-positive women becoming pregnant each year, almost 600, 000 children will be infected by mother-to-child transmission annually over 1600 each day. Maternity services in areas of high HIV prevalence have several responsibilities. Firstly, to enable women to be counselled, tested and to use these results to maintain their health in an optimal manner; also to utilize appropriate interventions to reduce the rate of mother-to-child (MTC) transmission of HIV; while providing training to staff and provide equipment to prevent nosocomial transmission of HIV and other pathogens World Health Organization (WHO, 2015)

The majority of infected children acquire HIV through mother-to-child transmission, which contributes significantly to infant mortality. In Nigeria, mother-to-child transmission of HIV (MTCT) accounts for 3–10% of all cases of infection, and MTCT is on the rise. Thus, factors contributing to this increase in the country include; perceived low vulnerability to HIV infection enforced by misconceptions about the mechanisms of HIV transmission; fear of social stigma if known to be HIV-positive; infected mothers not knowing their sero-status and proceeding to breastfeed their children; difficulty accessing antiretroviral drugs

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(ARVs) for many HIV-positive persons; and lack of voluntary HIV counselling and testing (VCT) services at most health facilities, particularly in rural communities (Balogun, 2016).

A survey carried out by Adeneye, Salami and Agomo counselled about 274 rural HIV; 79.2% of women and 82.5% of men had never been tested for HIV; and, 46% of women as compared to 56.4% of men knew that mother-to-child transmission is possible. In addition, 60% of pregnant women (83% of urban and 51% of rural women surveyed) made use of antenatal care services, while 2.5% had visited traditional birth attendants (TBAs). But only 32.6% (54.2% urban and 23.8% rural) had their babies delivered in a health facility, while 66.4% had delivered at home (National Population Commission & ORC Marco, 2004).

Antenatal voluntary counselling and testing (VCT) is one of several interventions used to reduce mother-to-child transmission (MTCT). In a survey of health and laboratory facilities in all six zones of Nigeria, the data that were collated and analysed concerning an individual's reason for HIV testing at the surveyed laboratory facilities showed that only 16.3% of those surveyed had used voluntary testing services (Olugbenga, 2013). However, there are no accurate data on the acceptability of HIV counselling and testing among pregnant women in Nigeria are scarce, but given the trend of rising HIV infection among pregnant women and the promotion of exclusive breastfeeding in the country, one would expect a high incidence of mother-to-child HIV transmission.

Warren (2017), explained that the success of antenatal Voluntary Counselling and Testing (VCT) is dependent upon pregnant women's and communities' knowledge and perceptions of HIV. Thus, despite increasing HIV prevalence among pregnant women using antenatal clinics in Nigeria, very little is known about their knowledge and perceptions of HIV as they do not come forward for voluntary counselling. Such information is important for understanding and determining the likelihood that pregnant women will accept and seek VCT which would contribute to preventing mother-to-child transmission

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(MTCT), through increased acceptability and demand for confidential antenatal HIV counselling and testing and so prepare for the scaling-up of antiretroviral therapy in the country.

For over two decades, client-initiated HIV testing and counseling has helped millions of people know their HIV status, particularly in Niger State, Nigeria. Counselling and testing if emphasized it will decrease mortality rate of pregnant women and prevent mother to child transmission. This will encourage growth and development in the Sub-Sahara African and Niger State in particular. Nevertheless, global coverage of HIV testing and counseling programs remains low, particularly in rural areas. This has necessitated a global drive for increased provision of HIV testing through a wider range of effective and safe options.

The World Health Organization (2015) issued guidance on provider-initiated HIV testing and counseling (PITC) in health facilities to increase uptake and improve access to HIV health services. HIV counselling testing is a critical entry point to life-sustaining care for pregnant women living with HIV, and service delivery models need to be expanded to testing in antenatal care, sexually transmitted infection clinics, in-patient wards, as well as free-standing, client-initiated testing centers. Therefore, women who test HIV negative should receive counseling on how to reduce exposure to HIV and stay negative.

In this millennium era, HIV counselling and testing will be of benefits to the pregnant women, the male, and the community as a whole. It will empowers the clients to make informed decision to know their HIV status, empowers the uninfected person to protect himself or herself from becoming infected with HIV, assists infected persons to protect others and to live positively and seek other support services, and offers the opportunity for treatment of HIV and associated illnesses.

It is against this background that the paper tends to examine HIV counselling and Testing for pregnant women in Sub-Sahara Africa

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Growth in the Millennium Era (A case study of Niger State HIV Management Services), Nigeria.

Statement of the Problem

The prevalence of mother to child transmission of HIV in Sub-Sahara African is on the increase. Children born with HIV infection in this region is astronomical in the millennium era. This is basically hindering growth and development in Sub-Sahara Africa. Therefore, mortality and morbidity rate resulting from mother to child transmission has been adduced to lack of voluntary counselling and testing of HIV status of pregnant women. Knowledge of HIV infection is necessary to access many forms of HIV-related support, care, and treatment. It is the absence of this knowledge among the people that is resulting to this prevalence rate, particularly among the rural people. The society, customs and stigmatization are affecting the level of HIV voluntary counselling and testing (VCT), which will translate to the reduction of mother to child transmission (MTCT). It is against this background that this paper tends to examine HIV counselling and testing for pregnant women in Sub-Sahara African Growth in the Millennium Era (A case study of Niger State HIV Management services), Nigeria.

Scope of the Study

This paper intends to examine the HIV counselling and testing for pregnant women in Sub-Sahara African Growth in the Millennium Era using Niger State HIV Management services as a case study. Four secondary health facilities were considered for use in this paper randomly selected within the State. The author emphasize here that there was no clinical testing or analysis of clinical lab results either pretest or posttest of respondents with the intent to establish their HIV status. Therefore, the paper is concerned about providing an in depth analysis on the effect the scourge has had on the growth and development of

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Niger State as the case study. This was achieved using personal prepared instrumentation.

Purpose of the Study

The main purpose of this paper is to examine HIV counselling and testing for pregnant women in Sub-Sahara African Growth in the Millennium Era using Niger State HIV Management services as a case study. Specifically, the study will focus on the following objectives to.

1. Determine HIV mother to child transmission prevalence rate and Niger State HIV management to this group.
2. Determine level of HIV voluntary counselling and testing among pregnant women in both rural and urban centres in Niger State.
3. Determine the effect of HIV infected pregnant women is having on the human, economic growth and development of Niger State.

Research Questions

The following research question were formulated guide this presentation:

1. What is the level of HIV mother to child transmission prevalence rate and management in Niger State?
2. What is the level of HIV voluntary counselling and testing among pregnant women in both rural and urban centres in Niger State.
3. What is the effect of HIV infected pregnant women is having on the human, economic growth and development of Niger State.

Hypothesis

The following null hypothesis was formulated and tested at 0.05 level of significance.

Ho: There is no significant relationship between HIV counselling and testing for pregnant women and growth and development of Niger State.

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Research Methodology

The descriptive survey design was used for the study. The design was considered appropriate because it provided a suitable modality to obtain information from a sample size.

The population for the study consisted of 2800 hospital personnel from four selected public secondary health providers in the Niger State. To determine a manageable size from the population Krejcie and Morgan table for determining sample size for a definite population was adopted. The sample size used was achieved at 338.

The Instrumentation used for this study was personal questionnaire design by researcher. The consistency test of the instrument was validated using Cronbach alpha formula at 0.72. The validity of the instrument was subjected to face and content redacted validation by a medical expert from the Niger State Hospital Management Board. All observations and suggestions were noted and corrected to prepare the final draft of the instrument used for the study.

The study adopted personal structure questionnaire for collection of response to the research questions using Likert five point scale on judgemental perspective of the respondents

Data collected from the respondents were analyzed using mean, standard deviation statistical tool. While frequency count and percentage were used analysed the demographic information of the subjects. The data were analyzed to answer the research questions and test the hypotheses at 0.05 level of significance. Data used in the study were analyzed using Pearson Product Moment Correlation Coefficient (PPMC) (x^2=r). The t-test (ANOVA) comparison mean of the result were correlated at 0.05 significance level.

Decision Rule: The cut off point for decision making in answering the research questions was 3.0 and above. This was considered and adopted for this analysis. Therefore, the decision to accept or reject the response to the research questions formulated for this study was based on 2.5

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average mean and standard deviation. This criterion value 2.5 was considered for this study and calculated using Likert five point scale.

Demographic Information of the Respondents

The demographic variable for this study are gender, age and marital status and qualification of respondents respectively. The breakdown of the these variables are shown in table 1, as gender, marital status, age, and qualification respectively

Table 1: Demographic classification of Respondents

Gender		**Percentage**
Male	130	38.46
Female	208	61.54
Total	**338.0**	**100.00**
Marital Status		
Single	138	40.83
Married	200	59.17
Total	**338.0**	**100.00**
Age		
25 – 30	80	23.67
31 – 40	150	44.38
41 – 50	58	17.16
51 and above	50	14.79
Total	**338.0**	**68.05**
Qualification		
BS.c (Surgery)	10	2.96
BS.c (Pharmacy)	50	14.79
BS.c (Nursing)	200	59.17
Lab Technician	78	23.08
Total	**338.0**	**100.00**

Source: Field Survey, 2019

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Table 1 revealed that the highest responses were from female 208 (61.54%), while male were 130 representing (38.46%) of the sampled population. Majority of the respondents are married of 200 representing (59.17%), while 138 or 40.83% of singles follow suit respectively. Classification of age shows that majority of the respondents were within the ages of 31-40 years totally 150 representing (44.38%) of the sampled population. It was also revealed that respondent within the age of 25-30 years with total number of 80 (23.67%) was the second higher. The data also revealed that respondents within the age of 41-50 representing 58 or 17.16% and 51 above years with total number of 50 (14.79%), followed respectively.

Data Analysis and Interpretation of Results

Research Question 1: What is the level of HIV mother to child transmission prevalence rate management in Niger State?

Table 2: Level of HIV mother to child transmission prevalence rate

		Urban			Rural				
Item	**Statements**	**High**	**Low**	**None**	**Avg.**	**Below avg.**	**x**	**SD**	**Decision**
1	Level of counselling and testing of HIV infected persons	120	80	0	38	100			
		600	**320**	**0**	**76**	**100**	**5.5**	**2.25**	**Rejected**
2	Level of antenatal visits to clinics for VCT	50	150	0	38	100			
		250	**600**	**0**	**76**	**100**	**5.1**	**2.18**	**Rejected**
3	Level of voluntary counselling and testing	60	140	0	0	138			

	of pregnant women (VCT)								
		300	**560**	**0**	**0**	**138**	**5.0**	**2.15**	**Rejected**
4,	Utilization of HIV testing facilities for pregnant women	220	0	0	18	100			
		1100	**0**	**0**	**0**	**18**	**5.6**	**4.14**	**Accepted**
5	Pregnant women aware of existence of HIV	180	40	0	20	98			
		900	**200**	**0**	**100**		**6.0**	**3.51**	**Accepted**
	Source: Field Survey, 2019			**Total**			**275**		
		Average mean =		**5.44**					
	Deviation = SD =	**Average**			**Standard**	**2.85**			

Research Question 2: What is the level of HIV voluntary counselling and testing among pregnant women in both rural and urban centres in Niger State.

Table 3: Level of HIV voluntary counselling and testing among pregnant women

		Urban			Rural				
Item		**High**	**Low**	**None**	**Avg.**	**Below avg.**	**X**	**SD**	**Decision**
1	Strongly Agree	200	40	0	50	48			
		1000	**160**	**0**	**100**	**48**	**6.5**	**3.63**	**Accepted**

2	Agree	150	50	0	100	38			
		750	200	0	200	38	5.9	2.70	Accepted
3	Undecided	0	0	0	0	0			
		0	0	0	0	0	0.0	0.02	Rejected
4,	Disagree	200	0	0	0	138			
		1000	0	0	0	0	5.0	3.77	Accepted
5	Strongly Disagree	250	0	0	0	88			
		1250	0	0	0		6.3	5.09	Accepted
Source: Field Survey, 2019				Total			24		
							5		
		Average mean =		4.75					
	Average Standard Deviation = SD =					3.04			

Research Question 3: What is the effect of HIV infected pregnant women is having on the human, economic growth and development of Niger State.

Table 4: Effect of HIV infected pregnant women is having on the economic growth

Item	Statements	SD	A	U	D	SD	x	SD	Decision
1	Financial Burden on family relations	210	98	0	0	0			
		1050	392	0	0	0	7.2	3.99	Accepted
2	Denial of work and stigmatization	230	50	0	50	8			
		1150	200	0	100	8	7.3	4.21	Accepted

3	Death of mother and child for lack of care	138	200	0	0	0			
		690	**800**	**0**	**0**	**0**	**7.5**	**3.64**	**Accepted**
4,	Investment on retroviral drugs for their management	90	200	0	48	0			
		450	**800**	**0**	**0**	**48**	**6.5**	**3.16**	**Accepted**
5	Consider as taboo among family members	280	58	0	0	0			
		1400	**290**	**0**	**0**		**8.5**	**5.59**	**Accepted**
Source: Field Survey, 2019				**Total**			37		
							5		
	Average mean =			**7.38**					
	Average Deviation = SD =				**Standard**		**4.12**		

Testing of Hypothesis

The following null hypotheses was tested using Pearson Product Moment Correlation Coefficient at 0.05 level of significance.

H_0: There is no significant relationship between HIV counselling and testing for pregnant women and growth and development of Niger State.

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Table 5: Determining the relationship between HIV Counselling and Testing for pregnant women in relation to growth and development

O	E	O-E	$(O-E)^2$	$\Sigma (O-E)^2/E$
338	310	23	784	2.53
				$X^2 = 2.53$**

Source: Field Survey, 2019 (** Significant at (x^2), p= 2.53>2.5at 0.05 level

Table: t-test mean and standard deviation variance of table 2, 3, 4 to determine HIV Counselling and Testing relevance to growth and development

Variable	n	Mean	SD	t-value	p-value	Remarks
HIV Counselling and Testing for pregnant women	338	17.57	10.01	5.86	3.34	0.00 Sig*
			N		00	2800
Economic, Growth and Development	338	17.57	10.01	5.86	3.34	0.00 Sing*

****Significant at p=3.34>2.5at 0.05 level of significance***

Interpretation of Results

The focus of this paper was to investigate HIV counselling and testing for pregnant women. The findings shows that in Niger State level of counselling and testing of HIV infected persons is high in urban centres than rural areas. This shows a response rate of both high and low in urban centres at 200 (59.17%) of sampled population, hence the respondents that posits that it is both average and below average is 138 (40.83%). Pregnant women who visit clinics for antenatal for voluntary counselling was revealed high in urban centre than rural areas. The mean value was x=5.1>3.0, α2.18 indicating that the statement was accepted. Also, level of VCT in urban centre was rated low and below average in rural areas. The major cause of this low responses was due to societal views about the possible positive outcome if the test is conducted. It was revealed that utilization of HIV testing and counselling facilities for pregnant

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women was high in urban centre than rural centres with 220 (69.09%) and rural 118 (34.91%) respectively. The awareness of women to the existence of HIV was higher in urban centres than rural areas. This suggest that prevalence rate will possibly be higher in rural areas, therefore increasing the level of mother to child transmission of the scourge.

Thus, effect of HIV mother to child transmission to the economic growth and development in Niger State is a serious concern to government. Though, Niger State is not classified among the most endemic states in Nigeria because of the level of creation of awareness and continued effort in providing HIV counselling and testing centres in her secondary health care centres. The finding revealed that there is heavy financial burden on family relations on mean $x=7.2>3.0=\alpha 3.99$ indicating that family earning is dwindling. Similarly, denial of work and stigmatization of infected woman who is the breadwinner of the family affect the economic status and growth of the family, therefore reducing the per capital income of the state. However, respondents that strongly agree and agree wholly concurred that the death of mother to child and for lack of care is extremely high at 338(100%) of the entire sample. The mean score is $x=7.3>3.0$ with $sd.\alpha=4.21$ making the decision to be accepted. Although, the death rate is particularly found in the rural areas where traditional practices and taboo is hindering access to care and prevention. On the part of Niger State Government, annual budgetary provision for the procurement of free antiretroviral drugs continued to take chunk of amount from the state ministry of health budget for control and prevention, particularly mother to child transmission. The finding revealed that 290(85.80%) of the respondents affirmed while 48(14.20%) simply disaffirmed. The mean scores was $x=6.5>3.0$ with $sd.\alpha=3.16$ that make the decision to be accepted.

Discussion

HIV counselling and testing (HCT) is a key intervention for HIV control, and new strategies that have been developed for expanding coverage in developing Sub-Sahara African. HCT increases knowledge of HIV status,

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encourages safer sex, and is an entry point for HIV care and treatment and management services. Increasing HCT coverage can reduce HIV-associated denial, stigma, and discrimination, and mobilize communities to respond to the HIV epidemic.

The United Nations and other institutions have been adapting testing policy to promote the offer of routine HIV Testing and Counseling by healthcare providers. With this approach, testing is provider-initiated rather than client-initiated, giving clients the ability to "opt-out" if they do not want to get tested as a result of several variables. HIV voluntary counselling and testing is still very low among pregnant women as a result of societal view, stigmatization and neglect. The routine offer of testing integrates HIV screening into mainstream health service delivery, dramatically increasing the number of individuals benefiting from improved treatment, care, and prevention services.

Knowledge of HIV infection is necessary to access many forms of HIV-related support, care, and treatment. Programs are in place to increase the access to antiretroviral drugs in general and in particular, to prevent mother-to-child transmission in Niger State. Further, where treatment, care, and support have become more widely available, stigma and discrimination, which have always been disincentives to HIV voluntary counselling and testing.

Hospital-based HIV Counselling and Testing (HCT) most readily identified HIV-infected individuals eligible for treatment, whereas home-based strategies more efficiently reached pregnant women with low rates of prior testing and HIV-infected mothers with higher CD4 cell counts. Providing HIV counselling and testing (HCT) to pregnant women is also important for HIV prevention, and so hospital-based HCT appears to be a reasonable strategy for advancing both treatment and prevention goals.

Conclusion

HIV can be transmitted from an HIV-positive woman to her child during pregnancy, childbirth and breastfeeding. Mother-to-child transmission

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(MTCT), which is also known as 'vertical transmission', accounts for the vast majority of infections in children (0-14 years). Therefore, when there is HIV counselling and testing for pregnant women in Sub-Sahara African, it will engender growth and development in the sub-region. Without prevention and treatment, if a pregnant woman is living with HIV the likelihood of the virus passing from mother-to-child is high. However, antiretroviral treatment (ART) and other interventions can reduce this risk to below 5%.

The study revealed that there is an average knowledge of the existence of the scourge in Niger State. Thus, obvious lack of knowledge about the existence of HIV among pregnant women in Niger State is a contributing factor why mother to child HIV transmission is not reducing. This prevalence is adjudged to be higher in the rural areas, where cultural belief, taboo and lack of education in rural areas is barrier to HIV prevention. Although, awareness of the HIV counselling and testing for pregnant women in urban centre is high, but voluntary counselling and testing is low among pregnant women visiting clinics.

The State Government has intensified efforts through its relevant agency to ensure there is HIV mother to child transmission, by increasing counselling and testing units in the secondary health care centres. Comprehensive and effective public health strategies include programming for behaviour change, among pregnant women to prevent exposing the unborn baby to HIV infection.

Recommendations

From the research findings the following are hereby recommended:

1. HIV Counselling and testing centres should be established in every local government council primary health centre to provide functional counselling and testing window for more pregnant women in the rural areas.
2. Aggressive awareness campaigns should be instituted so as to enlighten the pregnant women on the effect of mother to child HIV transmission.

3. Genetic counselling can prevent incidences of HIV mother to child transmission, to ensure that family members remove stigmatization and taboo among already infected women.
4. Provision of antiretroviral drugs for HIV management among infected pregnant women should be increased in these counselling centres.
5. Public health education on HIV and the benefit of VCT to control MTCT, particularly targeting young pregnant women and those with little or no education should be vigorously pursue by the government.

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