MOTHER TO CHILD TRANSMISSION SERVICE UTILIZATION AND LEVEL OF WOMEN SATISFACTION AMONG HIV POSITIVE PREGRANT WOMEN IN ABUJA METROPOLIS, NIGERIA

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Abstract

Prevention of maternal-to-child transmission of HIV(PMTCT) services is an effective strategy in the prevention of pediatric HIV/AIDS. Maternal-to-Child transmission of HIV (MTCT) is responsible for about 20% of all HIV transmissions and more than 90% of worldwide pediatric HIV. Lack of sufficient clinical resources, staff shortage, low level of knowledge and low satisfaction level are partly responsible for low utilization of PMTCT services which may affect the women's compliance to treatment regimen. A cross-sectional descriptive design was used for the conduct of this study with a mixed method for data collection (Structured interview and Focus Group Discussion). A stratified sampling technique was used to select the facilities while random selection was used to select the respondents across the three selected facilities (National Hospital Abuja, Wuse General Hospital, Asokoro General Hospital) within the Abuja Metropolis. A total of 240 HIV positive pregnant women (15- 49years) were recruited. The quantitative data was analyzed using SPSS version 24 while the Focused Group Discussion was recorded and narrated. The result of the study revealed that the mean age of the women was 36.8 years. Only 15% of the respondents were satisfied with the quality of PMTCT services meaning there was low level of satisfaction. Also, 97.9% of the women utilized PMTCT services. There was high prevalence of utilization of PMTCT services despite so many barriers discouraging the mothers. The level of satisfaction was low due to waiting time, attitude of workers and hospital environment.

Keywords: *HIV, MTCT, Pregnant, Prevalence, Satisfaction.*

Introduction

Human Immunodeficiency Virus (HIV) is a virus that gradually attacks the immune system which is the body's natural defence against infections and destroy the CD4 cells and replicates (World Health Organization {WHO}, 2015). Mother to Child Transmission (MTCT) of HIV is high especially in Africa despite improvements in Prevention of Mother to Child Transmission (PMTCT) services over the years (Robert, Taratisio, Stephen & Simon, 2015). As of 2015, approximately 37 million people were infected with HIV worldwide of which half were women, with the number of new infections being 2 million (WHO, 2015). UNAIDS (2015) stated that Nigeria carries the second

highest HIV/AIDS burden in the world with 3.4 million Nigerians living with the virus in 2014 and 60,000 children were infected. Mother-to-child transmission (MTCT) of HIV is the spread of HIV from an HIV-infected mother to her child during pregnancy, labour and delivery, or breastfeeding (UNAIDS, 2015). Despite the many challenges and obstacles, there have been striking successes of PMTCT services in a number of Sub-Saharan African countries, including South Africa, Botswana, Malawi, Zambia, Zimbabwe, Mozambique, and Namibia, which have reported greater than 80 percent uptake of antenatal testing (Penazzato, Bendaud, Nelson, Stover & Mahy, 2014). In South Africa, Botswana, Swaziland, Lesotho, Namibia and Nigeria, greater than 90 percent of pregnant women identified as HIV infected have received effective combination PMTCT regimens through Maternal and Child Health (MCH) clinical services (Penazzato, et. al., 2014). During pregnancy, 5-10% of all exposed fetus are infected while during labour and delivery, 10-20% of all children will get infected. Most (about 70%) of all the MTCT occur during labour and delivery. During breastfeeding, a further 5-15% of infants will be infected (Newell, Gray & Bryson, 2008).

Previous studies have shown mixed levels of awareness regarding HIV and its transmission routes including MTCT, but low levels of awareness regarding PMTCT (Addo, 2005). HIV positive pregnant women have explicit desires or request for services when in PMTCT clinic and inadequate discovery of their needs may result in patient dissatisfaction (Tateke, Woldie & Ololo, 2012). Moreover, patient satisfaction indicators remain stable over time while clinical indicators change with technology and the pace of medical progress (Anand, Kaushal & Gupta, 2012). Thus, to make better health policies and to develop measures to increase the utilization of PMTCT services, patients' views, the understanding and perceptions of quality of care are very critical and important (Murti, Deshpande & Srivastava, 2013). Patient satisfaction in PMTCT clinics has recently emerged as an important measure of the quality of health care delivery, alongside the more traditional health status measurements and quality of life indicators (Murti, et al, 2013). Despite increasing availability to HIV/AIDS care services, there are limited data on the effects of this scale-up on the quality of care. One of the pillars of improving quality of health services is addressing client satisfaction and which revealed the level of utilization.

Globally there are 40,385 new HIV infections weekly. Over 4,600 babies and 7,000 young women are infected each week (President Emergency Plan for Aid Relief (PEPFAR), 2014). In Africa, women of childbearing age comprise 61% of people living with HIV, accounting for over 12 million women. In 2009, around 400,000 children under 15 became infected with HIV, mainly through mother-to-child transmission. About 90% of these MTCT infections occurred in Africa where AIDS is beginning to reverse decades of steady progress in child survival (Adam, Marion & Peter, 2014). In developing countries such as Nigeria, new infections of paediatric HIV are mostly acquired through mother to child transmission. MTCT is responsible for about 20% of all HIV transmissions and more than 90% of worldwide paediatrics HIV infections and 95% of them are in the Sub-Saharan Africa (UNAIDS, 2015). Without any preventive interventions, nearly 50% of HIV positive mothers will transmit HIV to their children during pregnancy, labour and breastfeeding (Petrie, 2007). Low level of knowledge and low satisfaction level will lead to low utilization of PMTCT services. Ashipa, Ofili and Ighedosa (2015) quantitatively assessed womens' satisfaction level of PMTCT services in Benin City and found out that only 39% of women were satisfied with PMTCT services provided. Despite the fact that PMTCT services are provided free of charge in all the centres, several cases of preventable paediatric mortality as a result of HIV/AIDS are witnessed. This raised questions on PMTCT service provided. The following research questions were addressed in this study

i. What is the level of utilization of PMTCT services?

ii. What is the level of satisfaction of women with PMTCT services?

Conceptual Framework: Donabedian Model of Satisfaction

This model is a Structure - Process - Outcome model of health care quality. This model was adopted because the research was on mother-to-child transmission service utilization and level of satisfaction among HIV positive pregnant women in Abuja Metropolis, Nigeria. It was used as a framework to guide in assessing women's utilization, satisfaction and those factors that influence them in practical terms.

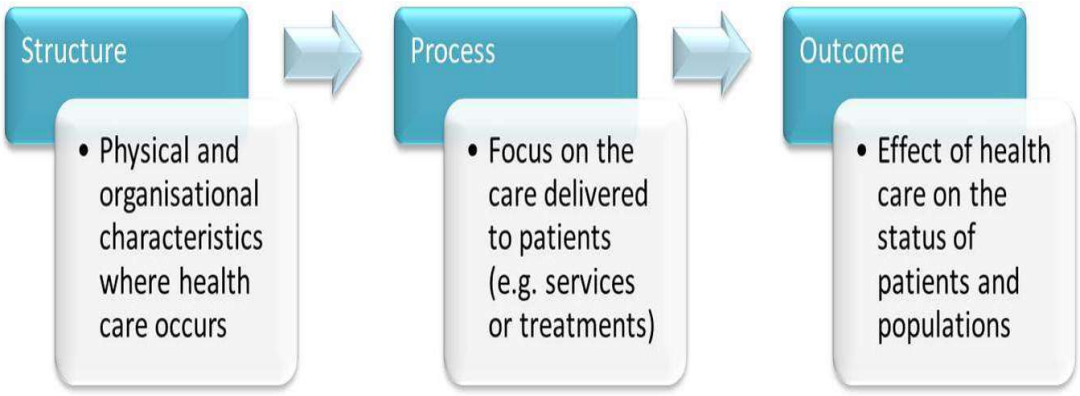

Figure1: Donabedian model (2003).

Application of Donabedian Model.

Structure: - This includes trained staff, drugs, laboratory and test facilities. In this context it includes Availability of health workers, Availability of ART drugs, Laboratory and test facilities, Clean and Conducive environment.

Process: - This is how care is delivered to the women. Example attitude of health workers, waiting time, HIV Counseling and testing, diagnosis and treatment.
Outcome: - Decrease rate of HIV among newly born, increase patient satisfaction.

The outcome of clinical care depends on both good structure & process. The outcome of care for HIV positive mothers does not only depend on the availability of healthcare facilities/ equipment, it also depends on carrying out the process of care appropriately according to the recommended guidelines for PMTCT of HIV, use of antiretroviral drugs, laboratory and clinical follow up of HIV pregnant women to prevent MTCT. There should be increased level of satisfaction, decreased incidence of HIV infection for a positive outcome.

Materials and Methods

Study Design

A cross-sectional descriptive design was adapted to conduct this study on pregnant women with HIV/AIDS who are attending antenatal care in Abuja metropolis. A mixed method was used for data collection (quantitative and qualitative).

Sample Size

A total of 240 HIV positive pregnant women were recruited. The sample size was determined according to Kish (1965) calculated as follows:

$$n = \frac{Z^2 p q}{d^2}$$

Where: n = the desired sample size

z = the standard normal deviate 1.96 at 95% confidence level

q (complementary probability) =1-P

p = prevalence of level of satisfaction= 0.19

d = degree of accuracy set at 0.05

Therefore, n = 236.5. The sample size therefore was rounded up to 240 respondents to make up for non- response.

Sampling Technique

Stratified and purposive sampling techniques were used for the selection of facilities and simple random sampling was used for the selection of respondents. Three facilities were selected for the study. The facilities were grouped into: primary, secondary and tertiary health facilities respectively. There were no primary health facilities in the Abuja Metropolis where PMTCT services is rendered and moreover PMTCT services are mostly accessible at the secondary and tertiary level respectively, hence no primary health facility was selected. Moreover, two secondary health facilities were selected purposively to cover up for the lack of selection of primary health facility. One tertiary health facility was selected.

Selection of respondents for Focus Group Discussion:

Random selection of two women from the five antenatal days in the three selected health facilities. Making ten participants from each hospital. There were three sessions of FGD with the participants from each of the three selected hospitals. The women were pulled together on particular day for FGD.

Instrument for data collection

Two tools were used for data collection: Interview and Focus Group Discussion (FGD) guide.

Ethical consideration

Approval to conduct the research was obtained from the ethical committee of the Federal Capital Development Authority. Participation was voluntary. All confidentiality, privacy and respect were maintained during data collection. Collected data were coded during analysis.

Methods of Data analysis

Data obtained through interview were analyzed with the aid of SPSS Software Version 24. Information obtained through FGD was analyzed manually.

Results

This sections presents the analysis of data collected through interview and FGD.

Table 1: Socio - demographic characteristics, n= 240

Variables	NO	(%)
Age		
• No response	2	0.8
• 18- 28 years	19	7.9
• 29-38 years	93	38.8
• 39- 48 years	124	51.7
• 49 and above	2	0.8
Mean Age±SD = 36.8±0.683		
Marital Status		
• Married	173	72.1
• Single	39	16.2
• Divorced/Separated	15	6.3
• Widowed	13	5.4
Educational Qualification		
• Primary	26	10.8
• Secondary	62	25.8
• Tertiary	152	63.4
Ethnicity		
• No response	10	4.2
• Yoruba	41	17.1
• Ibo	67	27.9
• Hausa	51	21.3
• Other tribes (Idoma, Tiv…)	71	29.5

Table 1, describes the distribution of the respondents according to their socio-demographic characteristics. Majority of the women are within the ages of 16 to 45 years with a mean age of 36.8. This shows that women were within the ages of conception. Table 1 shows the marital status of the respondents whereby 173 respondents (72.1%) are married. With regards to the levels of education all the respondents have one form of education or the other. The distribution shows

on the average a population of literate pregnant women. Equally it is reflected that the majority of the ethnicity are other tribe such as Idoma, TIV… (29.5%) of the respondents while minority (4.2%) refused to respond, an indication of low self-esteem as a result of the HIV infection. By and large the study cut across a verse different ethnic groups in the country.

Table 2: Prevalence of utilization of PMTCT services
n= 240

Variables	Frequency	Percentage
Utilization of PMTCT services	235	97.9
• Yes	5	2.1
• No		
First time of antenatal visit at		
• 1-10 weeks	15	6.3
• 11- 20 weeks	113	47. 1
• 21-30 weeks	96	40.0
• 31-40 weeks	16	6.6
Have you missed any ANC visit?		
• No response	35	14.6
• Yes	87	36.3
• No	118	49.1
Reason for missed visit n=87		
• Spouse refusal	40	46.0
• Not feeling strong	18	20.7
• Other reasons (transport's cost)	29	33.3

Table 2 describes the distribution of the respondents according to the Prevalence of Utilization of PMTCT services. The result revealed that majority 235 (97.5%) of the women utilize PMTCT services. The data shows that majority of the women book for antenatal within 11-20 weeks of gestation 112 (46.7%). This describes the consistency of the pregnant women visit to PMTCT service Center. Tables equally shows that 118 of the respondents (49.1%) have not missed their appointment before, while 87 of the women (36.5%) for one reason or the other had missed their appointment once or more. The Table also reveals that 40 (46.0%) of the respondents missed appointed as a result of spouse refusal. Majority of the mothers see the need for utilization of PMTCT services so as to prevent their unborn children from contacting HIV virus but due to one reason or the other they are discouraged.

When asked about PMTCT services some participants (mothers) said the following on the services during FGD:

A 27-year-old primp *said "Antenatal is always stressful. I have to queue and get card then go to the nurses, be on queue for a long time. Sometimes if I leave my house in the morning, I will be going home late, it is not always easy. I have missed once because of the stress involved ".*

A 35-year-old gravida-4 para-3 stated *"If it is antenatal care I cannot count the number of times I miss; it I will not lie to you. I do not always go for it because of the people I will meet, they will treat me as if am not human ……Who is even there to encourage me to attend? My husband will even tell me not to go, nothing to motivate me ……Sometime I go to the hospital when I'm not feeling too good but the services are not encouraging, they treat me as a nobody……."*

Another woman said *"I usually feel depressed and I miss antenatal appointment too, but knowing what am into……but at times am always encouraged after the visit…."*

The respondents' statements on the prevalence of utilization of PMTCT services shows that the women are not happy with the services but they have to keep utilizing the services because of their unborn children.

Table 3: Level of women's satisfaction with PMTCT services

Statement	**Satisfied 2**		**Not satisfied 1**		**Undecided 0**		**Mean**
	NO	%	NO	%	NO	%	
Communication							
• Counseling skills `	56	23.3	167	69.6	17	7.1	1.16
• Clarity of information	40	16.7	198	83.0	2	8.3	1.16
• Manner of approach	36	15.0	203	84.6	1	0.4	1.14
• Explanation by health care givers	36	15.0	191	79.6	13	5.4	1.09
• Answers to questions	37	15.4	202	84.2	1	0.4	1.15
• **Mean Percentage**	-	17.8	-	80.2	-	4.3	1.1
Health care providers							
• Privacy	34	14.2	199	82.9	7	2.9	1.1
• Confidentiality	29	12.1	204	85.0	7	2.9	1.09
• Time spent	27	11.3	207	86.2	6	2.5	1.08
• Respect	32	13.3	195	81.3	13	5.4	1.07
• Overall attitude	30	12.5	206	85.8	4	1.7	1.10
• **Mean Percentage**	-	12.7	-	84.2	-	3.1	1.08
Environment							
• Cleanliness	31	12.9	205	85.4	4	1.7	1.1
• Condition of consulting rooms	35	14.6	204	85.0	1	0.4	1.1
• **Mean Percentage**	-	13.8	-	85.2	-	1.1	1.1
Availability of equipment	31	12.9	208	86.7	1	0.4	1.1

Access to Drugs							
• Services at dispensary points	29	12.1	210	87.5	1	0.4	1.1
• Availability	27	11.3	209	87	4	1.7	1.1
• Accessibility	61	25.4	171	71.3	8	3.3	1.2
• Cost	56	23.3	175	72.9	9	3.8	1.2
• Refilling	56	23.3	176	73.4	8	3.3	1.2
• **Mean Percentage**	-	19.1	-	78.4	-	2.5	1.2

Table 3 which shows women level of satisfaction with PMTCT services indicates that 17.8 % of the respondents are satisfied with the services rendered on communication, 80.2% of the respondents are not satisfied while 4.3% are undecided. With regard to health care givers attitude, 12.7% of the respondents are satisfied, 84.2% are not satisfied while 3.1% are undecided. Equally, Table 3 shows that 13.8% of the respondents were satisfied with the hospital environment where they receive care, 85.2% are not satisfied while 1.0% are undecided. The Table describes that 12.9% of the women are satisfied with the issue on availability of equipment in the facility, 86.7% are not satisfied, while 1.1% are undecided. The Table also states that 19.1% of the respondents are satisfied with access to drugs, 78.4% are not satisfied and 2.5% of the women are undecided.

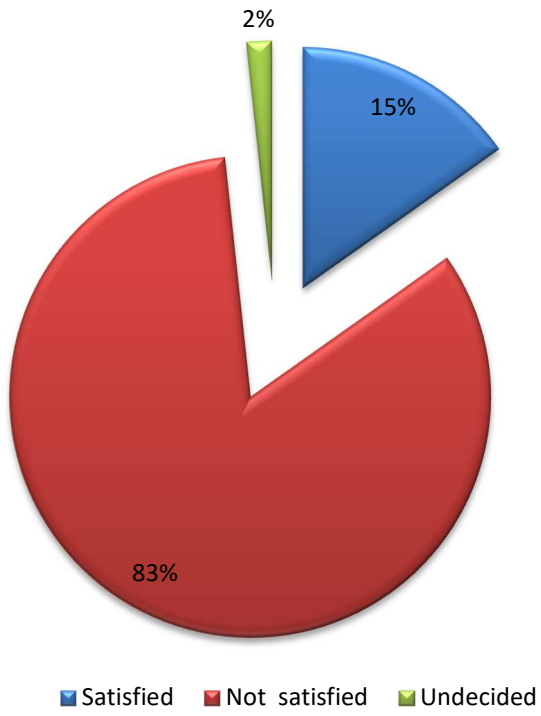

Fig 2: Summary of level of satisfaction

Figure 2 shows the summary of level of satisfaction of respondents as indicated in Table 3. The results indicates that 83% are not satisfied, 15% are satisfied and 2% are undecided.

During the FGD, some of responses from the women on how satisfied they are on PMTCT services rendered during antenatal care include:

When asked about drugs, some participants said the following: -

> One of the women stated *"sometimes we go to the hospital they will tell us the drugs are out of stock, come back the next day. We have to go and come back again for us to get the drugs..."*
>
> Another mother *stated that ''at times you will come and have easy access to the drugs but in most cases the drugs are not available and they will tell you to hold on."*

Some participants said the following concerning the interaction and attitude of health workers toward them: -

> A -29-year-old multiparous stated *"before the doctor does anything he will wear many gloves ……. but he will wear only one or none for others, so I felt very bad"*.
>
> Another 35 years multiparous said *"the way the card guy looked at me from head to toe as if is a new thing to get HIV. The doctors anyway are trying at least they understand the psychological aspect. The nurses at times will behave well very well then…..in fact the interaction generally starting from the card point is discriminatory as if he will get HIV virus through the cards. Sometimes I ask myself if it is not through blood again….."*
>
> Another multiparous equally said" …*when we talk about care givers, they have turned themselves to second God that we should worship…. even the card you want to collect they will say madam sit down there…. you need to see the way they gossip, you will feel embraced. Those nurses are not good people. The doctors even better because he will ask you if you are taking your drugs, hope you are doing this and that. The worst people are the pharmacists. Their attitudes are very bad. The nurses can gossip for Africa, no respect"*
>
> A-30 years old primigravida stated*" to me some of them are trying, some are disgusting."*
>
> Another woman said *"we are humans sometimes they are nice, some other times are aggressive…. maybe the work load makes them aggressive sometimes……"* Also, one of the respondents said" *some of them when you meet them, they will stigmatize you more than the society itself…. they should be friendlier…."*
>
> Another woman stated *"some of them are very nice and most of them are very rude…."*

Some participants when asked on HIV testing and counseling services, said the following about it: -

> One of respondents said "*the person I met did not explain well to me so I had to go to the internet to read for myself*."
>
> Another respondent exclaimed*" they should employ more workers and teach them how to talk to people on this matter because we are humans too."*

The women lamented that they are not satisfied with the services they receive in the PMTCT clinic. This is far different from what is being displayed on the social media (TV, radio….)

Discussion

The mean age of the women is 36.8years. The same result was found in a study conducted by Maputle and Jali in Natal (2008) on Awareness of HIV/AIDs where most of the respondents were within the ages of 18 to 49years with a mean age of 36.9. This means that the study covered all the women of child bearing age between 15-50 years. The study revealed that most of the mothers have one form of education or the other, possibly due to presence of a number of schools which were accessible. There is a tendency to think that it is the literate ones who use PMTCT services, since they hold high level of knowledge and with the view that the study was carried out in an urban setting. The study also revealed that a significant percentage of the respondents were married.

With regards to utilization of PMTCT services it is really good to note that 97.9% of the women utilize PMTCT services generally which shows there is high prevalence in service utilization. The high level of utilization could be as a result of awareness of MTCT of HIV among women accessing antenatal care. Also, in contrast with a study in Uganda, where an unacceptably low level of uptake of PMTCT services in fifty-three (53) rural villages in South Western Uganda was found, only 33% of mothers delivered in a health facility, (Barigye, 2013). The contrast may be due to the difference in the setting of the studies where the women in urban settings utilize PMTCT services than women in rural settings. This shows that despite the high level of utilization these women are not really happy with the services. They are only managing the services so as not to infect their unborn babies based on their knowledge of MTCT of HIV.

> A woman said "I usually feel depressed and I miss antenatal appointment too, but knowing what am into……but at times I'm always encouraged after the visit…."

The women are not constrained to utilize the PMCT service knowing what they are into, hence the reason for high level of utilization.

From the result of the study, it is noted that there is a low level of satisfaction with PMTCT services among the women with a total mean percentage of 15.2%. In contrast to this finding, a study conducted in Benin City, Edo state of Nigeria by Ashipa, Ofili and Ighedosa (2015) who assessed women's satisfaction level of PMTCT services found out that only 39% of women were satisfied with PMTCT services provided. In their study, staff attitude and service environment affect the women adherence to antenatal visits and treatment regimen. The low level of satisfaction in this study may be due to the disappointment of the women from PMTCT services especially from the long waiting time, poor attitude of care providers and unavailability of antiretroviral drugs.

> A respondent from National Hospital stated" *they should employ more workers and teach them how to talk to people on this matter because we are humans too."*
>
> Another respondent from Wuse General Hospital put it this way: *" some of them when you meet some of them, they will stigmatize you more than the society itself…. they should be friendlier…."*
>
> From Asokoro General Hospital a respondent stated that *"… there is low number of staff to attend to the large number of patients".*

The women have bad perception regarding satisfaction of PMTCT from the three facilities. The dissatisfaction on the services rendered could be seen from long waiting time during antenatal services (3 to 4 hours) due to long queues from large number of patients. Poor attitude of the

care giver could be as a result of large influx of patients with few staff to attend to them which might be the cause of care giver intolerance.

Recommendations

The following recommendations are made:

i. The health care providers should do more to improve on their attitude to the patients while rendering care.
ii. Health care providers should promote and educate the husband of these women to support them, that is male involvement should encourage as this will promote compliance and reduce stigmatization.
iii. Educational campaigns should be continued by health care providers to create more awareness of HIV/AIDS, promote understanding about the disease to reduce stigma and discrimination as well as provide support for those who are infected.

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