World Journal of Research and Review (WJRR)
ISSN:2455-3956, Volume-6, Issue-3, March 2018 Pages 01-06

HIV Sero-Status Disclosure Among Pregnant Women Attending Antenatal Clinic at Usmanu Danfodiyo University Teaching Hospital, Sokoto-Nigeria

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Abstract— **Background: Partner consent, disclosure of HIV sero-status and support can substantially enhance adherence to PMTCT interventions. The study determined the prevalence, barriers and outcome of HIV sero-status disclosure among pregnant women and its implications for the prevention of mother-to-child transmission of HIV. Aim: This study aims to determine the prevalence and barriers to HIV sero-status disclosure among pregnant women attending antenatal clinic at a tertiary institution in Sokoto, Northern Nigeria. Methodology: This was a cross-sectional descriptive study that was conducted from Jan. 2014 to April 2014 at the antenatal clinic of Usmanu Danfodiyo University Teaching Hospital, Sokoto. Results: A total of 100 respondents participated in the study, all were married, 46.0% had tertiary education and mean parity of 2.4 ± 2.2. Only 97 respondents consented to HIV screening at booking, 9.3% (9) were found to be HIV positive while 79.4% were HIV negative. Six (66.7%) of the nine respondents had their results disclosed. Five made the disclosure to their husband (83.3%), while one made the disclosure to her mother. Age, educational status and duration of marriage were not significantly associated with disclosure of HIV sero-status (X^2=4.90, P=0.4, 0.33). Among respondents that disclosed their sero-status, 66.6% were still in marital relations with their spouse being supportive. In this study, the prevalence of HIV sero-status disclosure was 66.7% among HIV positive. The main barrier to non-disclosure of sero-status was fear of divorce in (50%). Conclusion: The study revealed that the rate of disclosure was high among the respondents. Disclosure was made to the husband in the majority of the respondents. The study showed no statistically significant relationship between age, level of education and duration of marriage. The most feared barrier to disclosure was divorce; in general a positive outcome followed the disclosure. It is recommended that involvement of male partner through public health awareness campaign should be early in HIV counseling and testing process to reduce and or eliminate the most feared barriers to disclosure in order to provide the needed support to the spouse.**

Index Terms— **HIV sero-status, disclosures, pregnant women.**

I. Introduction

Highlight Worldwide, Nigeria has the second highest number of new HIV infections reported each year with about 3.7% of the population is living with HIV. [1, 2] It was estimated that by the end of 2011, 3.4 million people were living with HIV.[1]Over 90% of infection in children is acquired through mother- to-child transmission (MTCT) and as more women contract the virus, the number of children infected has been growing.[3]

Disclosure of HIV serostatus to sexual partners is an important prevention goal emphasized by the WHO and the Centre for Disease Control and Prevention (CDC) for HIV testing and counselling.[4,5]It is also an important strategy in HIV prevention and treatment.[6]

Disclosure offers a number of important benefits to the infected individual and to the general public as it is associated with less anxiety and increased social support among many women.[7] In addition, HIV status disclosure may lead to improved access to HIV prevention and treatment programs, increased opportunities for risk reduction and expands the awareness of HIV risk to untested partners, which can lead to greater uptake of voluntary HIV testing and counseling and changes in HIV risk behaviours.[8,9] In relation to PMTCT, shared confidentiality is considered beneficial in order to prevent unwanted pregnancies, arrest the spread of HIV infection to uninfected partners and assist HIV infected women to plan for their future with their partners, to gain access and adhere to therapeutic regimens such as antiretroviral therapy and replacement feeding for infants.[10, 11]

Along with these benefits, however, there are a number of potential risks from disclosure for HIV infected women, including loss of economic support, blame, abandonment, physical and emotional abuse, discrimination and disruption of family relationships as well as discrimination, stigma, loss of custody of children and property.[12,13] These risks may lead women to choose not to share their HIV test results with their friends, family and sexual partners. This, in turn can lead to lost opportunities for the prevention of new infections to their partners and infants, and also loss of ability of these women to access appropriate treatment, care and support services where they are available. There is also loss of greater access to social, psychological, financial and legal support.[10,14]

One of the reasons for low participation of HIV positive women in PMTCT is the non-disclosure of HIV test results to sexual partner. The uptake and adherence to PMTCT programmes is difficult for women whose partners are unaware of their HIV status. In African societies women lack power to make independent decisions with regard to the safety of their own and that of their children's health. It is therefore, difficult for HIV positive women to seek social and medical support from care and support programs for themselves and their infants without disclosing their HIV status to their partners.[10,15]

With increasing uptake of HIV counseling and testing

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among pregnant women, there has been increasing concern about whether those found to be positive would report the results of the test to their spouses or sexual partners, as the importance of involving partner has increased as we move from PMTCT to PMTCT-Plus. It can therefore be seen that sero-status disclosure is one of the factors that account for the success or failure of PMTCT programmes and therefore the need to study the prevalence, outcome and obstacles towards disclosure in order to develop appropriate interventions for increasing disclosure and thereby improving the uptake and success of PMTCT programs and also this will encourage partners to know there status and take preventive measures if found to be negative. Against this background this study aimed to determine the prevalence and barriers to HIV sero-status disclosure among pregnant women attending antenatal care at a tertiary institution in northern Nigeria.

II. METHODOLOGY

This was a cross sectional descriptive study conducted at the UsmanuDanfodiyo University Teaching Hospital, from January 2014 to April 2014. The hospital provide healthcare services to the population in Sokoto and those referred from the other local government areas in the State; likewise the neighboring Kebbi and Zamfara States. The department of Obstetrics and Gyneacology offers a comprehensive package on the Prevention of mother- to- child transmission of HIV (PMTCT) since 2008 to all women attending the booking/antenatal clinic, where voluntary counseling and confidential testing (VCT) is employed by trained counselors as the entry point to the PMTCT, care and support. The women receive HIV group pretest counseling with provision for individual counseling and offered HIV testing with the option to opt out if they so desire, partner notification and testing is also encouraged. The PMTCT and PMTCT plus services are rendered free of charge

The study population consisted of all pregnant women who have had at least two or more ante natal clinic visit (this is to allow them to have enough time to discuss and disclose their sero-status test result) were considered eligible for enrolment into the study. The sample size was estimated at 100 using the formula for calculating sample size in a population < 10,000, adjusted for non – response. $n_f = n/1 + (n/N)$.

The study subjects were selected by convenience sampling, those that gave informed consent to participate in the study after explaining the objectives of the study to them were recruited consecutively as they present. A standardized semi-structured, interviewer administered questionnaire was used to obtain the required data.

The data collected was analyzed using SPSS version 22. All statistical analysis was set at 5% level of significance (95% confidence interval). The indicators used to measure the variables include: percentages, rates, and frequencies. X^2 and t-test were used to test for significance of association between variables Permission for the study was obtained from Ethics committee of UDUTH. Informed consent of the respondents also obtained, after the full explanation of the purpose of the study. Respondents were given opportunity to opt out when they so wished and all information obtained was treated with utmost confidentiality

III. RESULTS

The age of the respondents ranged from 17 to 42 years with a mean age of 27.45 ± 4.92 years and modal age of 30 years. Most of the respondents were in the 25 – 29 year age group, followed by 30 – 34 years age group with 27 .0%. A lower proportion of the respondents, 3.0% were within the 35 – 39 and 40– 44 years age groups. The mean parity of the respondents was 2.39 ± 2.20 with a minimum parity of 0 and maximum of 9. Majority of the respondents 65.0% fell within 0 – 2 parity group. Majority 46 (46.0%) of the respondents had tertiary education, followed by secondary education with 33%, while 16% had quranic education. Hausa/Fulani constituted 59 (59.0%) of the respondents. The Igbo tribe was next with 14%, other tribes (Igbira, Zuru, Nupe, etc) also constituted the same number with the Igbo tribe of 14%. The least tribe was the Yoruba tribe. The two main religions of the respondents were Islam (67%) and Christianity (33%).

The mean duration of marriage was 5.96 ± 5.46 years with minimum of 4 months and maximum of 26 years. Majority of the respondents 37 (31.9%) were within the range of 2 – 6 years marriage duration. This is followed by those that are less than one year in marriage with 25% and between 7 – 11 years with 20%.

Table 1: Sociodemographic characteristics

VARIABLES	FREQUENCY (%)
Age (yrs)	n= 100
15-19	5 (5.0)
20-24	20 (20.0)
25-29	42 (42.0)
30-34	27 (27.0)
35-39	3 (3.0)
40-44	3 (3.0)
Parity	n= 100
0-2	65 (65.0)
3-5	23 (23.0)
6-8	11 (11.0)
9-11	1 (1.0)
Educational Status	n = 100
Quranic	16 (16.0)
Primary	5 (5.0)
Secondary	33 (33.0)
Tertiary	46 (46.0)
Ethinicity	
Igbo	14 (14.0)
Hausa	59 (59.0)
Yoruba	13 (13.0)
Others	14 (14.0)
Religion	
Islam	67 (67.0)
Christianity	33 (33.0)
Duration of Marriage (yrs)	
≤ 1	25 (25.0)
2-6	37 (37.0)
7-11	20 (20.0)
12-16	14 (14.0)
17-21	3 (3.0)
22-26	1 (1.0)

Ninety – seven (97) of the 100 respondents were screened for HIV at booking. Nine (9.3%) of the 97 respondents that were screened, were found to be HIV positive, 77(79.4%) were found to be HIV negative. While 11(11.3%) were unaware of their screening result (the result was not communicated to them by the doctor). The study found that 4(44.4%) out of the 9 respondents that were found to be HIV positive at screening have been diagnosed HIV positive for about five years. This was followed by the respondents that were diagnosed HIV positive for less a year with 33.3%.

Table 2: HIV Screening Profile of Respondents

VARIABLE	FREQUENCY (%)
HIV Screening	n = 100
Yes	97 (97.0)
No	3 (3.0)
Result of HIV Screening Test	n = 97
Positive	9 (9.3)
Negative	77 (79.4)
Not Aware	11 (11.3)
Duration of HIV Seropositivity(yrs)	n = 9
≤1	3 (33.3)
2	0 (0.0)
3	1 (11.1)
4	1 (11.1)
5	4 (44.4)

Out of the 9 respondents with HIV positive result, 6(66.7%) had their result disclosed. Two (33.3%) of the 6 respondents that had their result disclosed, made it by themselves, while 4 (66.7%) had the disclosure of their positive result made by the healthcare worker.

The result was disclosed to the husbands in 5 (83.3%) of the 6 respondents with positive result, and to the mother in the remaining 16.7%. Four (66.6%) out of 6 respondents that disclose their positive made the disclosure between 4 and 11 months of diagnosis while the remaining made the disclosure between 1 and 3 months.

Table 3: Disclosure of HIV Positive Result by Respondents

VARIABLE	FREQUENCY (%)
Disclosure of HIV positive result	n = 9
Yes	6 (66.7)
No	3 (33.3)
Disclosure of positive result was made by	n=6
Self	2 (33.3)
Healthcare worker	4 (66.7)
Positive result disclosure pattern	n = 6
Husband	5 (83.3)
Mother	1 (16.7)
Time from diagnosis to disclosure/months	n = 6
1	1 (16.7)
3	1 (16.7)
4	2 (33.3)
11	2 (33.3)

The disclosure of HIV positive result was more (66.6%) in the age group of 25 – 29 years, followed by 30 – 34 age groups. There was no statistically significant difference in the distribution of disclosure of positive result by age (p = 0.4).

Disclosure of positive result was found to be more among respondents with tertiary level of education. All respondents with tertiary level of education disclosed their HIV positive result (66.7%), 1 (16.7%) respondent with Quranic level of education disclosed her result but all the 3(100.0%) respondents that did not disclose there positive have secondary level of education. There was no statistically significant difference found in the association between educational status and disclosure of positive result (p = 0.33).

Disclosure of HIV positive result was also more with increasing duration of marriage or relationship. The highest (50.0%) disclosure was found in women that were between 17 and 21 years of marriage followed by those within 12 – 16 years of marriage duration (33.3%). There was no statistically significant association between the duration of marriage/relaship and disclosure (p = 0.33).

All the three respondents that reported non-disclosure of their HIV positive result gave fear of divorce as their main reason for not disclosing their HIV positive result.

One (16.7%) of the 6 respondents that disclosed their positive result reported that her husband was indifferent to the outcome of the test result.

Table 4: Distribution of Disclosure of HIV Positive Result by Age, Educational Status and Duration of Marriage

VARIABLE	DISCLOSURE OF HIV POSITIVE RESULT		
Age group (yrs)	YES	NO	
20 – 24	0 (0.0)	1 (16.7)	
25 – 29	4 (66.6)	1 (16.7)	P = 0.40
30 – 34	1 (16.7)	0 (0.0)	Fisher exact
35 – 39	0 (0.0)	1 (16.7)	X^2=*4.895*
40 - 44	1 (16.7)	0 (0.0)	
Educational status			
Quranic	1 916.70	0 (0.0)	p = 0.33
Primary	0 (0,0)	0 (0.0)	F/E= 12.457
Secondary	1 (16.7)	3 (100)	
Tertiary	4 (66.7)	0 (0.0)	
Duration of marriage (yrs)			P = 0.33
2 – 6	0 (0.0)	2 (66.7)	F/E= 5.565
7 – 11	1 (16.7)	1 (33.3)	
12 – 16	2 (33.3)	0 (0.0)	
17 – 21	3 (50.0)	0 (0.0)	

Two (33.3%) reported that their husbands encouraged and supported them, 1(16.7%) reported domestic violence, while 2 (33.3%) of the respondents were blamed by their husbands after disclosing their positive result.

Four (66.6%) out of the 6 respondents that disclosed their HIV positive test result were still in relationship with their husbands, 1 (16.6%) was separated and 1 (16.7%) was divorced. Out of the 4 respondents that are still in relationship with their husbands, two of the husbands tested positive for HIV

Table 5: Outcome of HIV positive result disclosure/state of relationship

OUTCOME	FREQUENCY (%)
Husband indifferent to test result	1 (16.7)
Encouraging and supportive	2 (33.3)
Domestic violence	1 (16.7)
Blame by the husband	2 (33.3)
Current state of relationship	n = 6
Still in relationship with husband	4 (66.6)
Separated	1 (16.7)
Divorced	1 (16.7)

The study showed that out of the 6 respondents that disclosed their HIV positive result, 3(50.0%) reported being supported in terms of choosing infant feeding option, being reminded to take antiretroviral drugs (ARV) and antenatal follow up.

Four (66.7%) of the 6 respondents that disclosed their positive result reported willingness by husband to allow hospital delivery. Only 1(25.0%) of the respondent reported the willingness of her husband to use condom.

IV. DISCUSSION

Disclosure of HIV positive result is a complex, difficult and very personal matter. Disclosing one's HIV positive status entails communication about a potentially life threatening, stigmatized and transmissible illness. Choices people make about this are not only personal but vary across different age groups, in different situations and context, and with different partners and may change with time, depending on one's experiences.

In this study, mean age of the participants was 27.5 ± 4.9 years which is similar to that obtained by Sagayet al[17]. The mean parity of the participants was 2.4 this is similar to what was reported in a previous study from Nnewi.[18] The rates of HIV serostatus disclosure varies among countries and also within countries.[19,20,21] The HIV disclosure rate of 66.7% among HIV positive women found in this study was comparable to the 67.8% reported by Daniel et al,[22] but lower than the rates reported in other parts of Nigeria,[17, 23] and higher than 59% reported among the South African women.[24] This is a good development as disclosure of HIV status to sexual partners is an important prevention goal emphasized by WHO and CDC.[4, 5] Disclosure offers a number of important benefits to the infected individuals and to the general public.

Disclosure of HIV positive was made with the help of the healthcare provider in the majority of the participants in this

study, however in a study by Sagay et al[17] the disclosure of HIV positive result was made in about half of the women by themselves. The pattern of disclosure from this study shows that majority of the participants had disclosed to their husbands. This is common trend and is in agreement with other studies done elsewhere. [17,22, 20] Disclosure was equally made to the mother. In Nigeria the mothers were more likely to be confided in than fathers with respect to HIV status disclosure.[16, 23] This shows the close bondage between mothers and their children that is sustained and maintained even in adulthood and can be relied upon in times of serious challenges in life. In this study, disclosure was more among women in the age group of 25 – 29 years, this compares well with findings by Farquhar[25] et al and Galliard[26] et al that young women were more likely to disclose their test result to sexual partners than older women. The study also showed that women with tertiary level of education were more likely to disclose their HIV positive test result; this is in agreement with the findings of Issiaka[27] et al that women with higher level of education were more likely to share their results with their partner than women who are illiterate. This is not surprising as the educated couples will faithfully discuss the problem with great understanding and try to look for the solution supporting each others in order to sustain the marriage.

This finding is in concordance with the findings in another study that the type and duration of relationship (defined as more than 2 years) between the woman and her partner were major determinants of disclosure. Majority of the HIV positive participants in this study were aware of their husbands HIV serostatus, and most of the husbands were reported to be HIV positive. This is similar to the report of an earlier study in Northern Nigeria.[17]

The most important barrier to disclosure reported by the participants in this study was fear of divorce. This is not surprising as the woman will be accused of infidelity, fear of violence and loss of support. In Africa where resources are scarce and women's access to economic resources are independent of their husband/partner is limited, it is not surprising that fear of losing this lifeline support is a key consideration when deciding whether to share the HIV test result or not.

Several studies have reported positive outcome following the disclosure of HIV positive result.[27,28,29] certainly, disclosure of HIV serostatus has helped partner participation in the treatment and has had positive implications in the prevention of MTCT. This study showed that the outcome of disclosure was equally positive as 66.6% were still in relationship with their husbands who have being encouraging and supportive of their spouses.

In relation to PMTCT the participants reported positive response from their husbands. It is encouraging to note that most of them were supportive in infant feeding option, reminder to take ARVs, attend ANC and permission for hospital delivery. On the issue of the use of condom it was only one respondent that reported her husband has agreed to use condom.

V. CONCLUSION

The study revealed that the rate of disclosure was high among the participants. Disclosure was made to the husband in the majority of the respondents. The study showed no statistically significant relationship between age, level of education and duration of marriage. The most feared barrier to disclosure was divorce; in general a positive outcome followed the disclosure. It is recommended that involvement of male partner through public health awareness campaign should be early in HIV counseling and testing process to reduce and or eliminate the most feared barriers to disclosure in order to provide the needed support to the spouse.

Conflict of interest: Authors declare no conflict of interest

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