

## Fertility Desire and Factors Related to the Desire to Have Children among HIV Serodiscordant Couples in Calabar, Nigeria

<sup>1,2</sup>Bisong M. Elvis, <sup>2</sup>Adat Pe and <sup>1,2</sup>U.K. Ogbonna

<sup>1</sup>Department of Family Medicine, University of Calabar, Calabar, Nigeria

<sup>2</sup>Department of Family Medicine, University of Calabar Teaching Hospital, Calabar, Nigeria

**Abstract:** Human Immunodeficiency Virus (HIV) Serodiscordant couples are faced with many dilemmas including the need to have safe sex and their desire to have children in the face of the possibility and risk of transmitting the HIV virus to their partners and children. Despite the fact that Antiretroviral Therapy (ART) has improved the quality of life of People Living with Human Immunodeficiency Virus/AIDS (PLWHA) and reduced their morbidity and mortality many other challenges remain among which are their reproductive health needs which has not been adequately evaluated. As such this study aimed to determine the fertility desires and intentions of the clients and factors associated with it. The research was a cross sectional hospital based study of 206 participants. It was carried out at the Special Treatment Clinic (STC) of University of Calabar Teaching Hospital (UCTH), Nigeria. The study made use of an interviewer administered questionnaire to collect data among a cohort of Serodiscordant patients receiving care at the STC of UCTH. The data generated was analyzed using mainly descriptive statistics and P-value was set at  $< 0.05$ . The results showed that majority of the participants were HIV positive (61.2%), married (85.9%), in the 31 – 50 years age category (69.9%) and were mainly not desirous to have more children (69.9%). Also, there was a predominance of sexual intercourse (75.7%) among the participants, with a high frequency of the use of condom (95.1%) at almost every intercourse. Among those who wanted to have children, the factors that were significantly associated with the desire to have children included having sexual intercourse more than 3 times in a month, frequent use of protection, lower mean number of children and lower mean age of participants ( $p < 0.05$ ). *Conclusion:* The study surmised that though most of the participants of the study did not want to have more children, the frequency of sexual intercourse was high. Even among those that wanted more children, the participants tended to be more cautious as the frequency of use of condom for their intercourse was quite high.

**Key words:** Fertility • Desire • Serodiscordant • Couples • Hiv

### INTRODUCTION

The HIV & AIDS epidemic continue to rank among the top ten priority conditions that contributes to the global disease burden, with sub-Saharan Africa accounting for 66% of the global HIV burden [1]. Though remarkable progress has been made in the areas of HIV management yet the issue of reproduction and sexual relationship still remains unresolved. Existing evidence suggests that a good number of People Living with HIV (PLHIV), regardless of geographical location, have expressed desire for biological children [2, 3, 4]. The desire

to have biological children may be attributed to the socio-cultural background of the people of African origin: for instance, motherhood gives prestige and some sort of high status to women among peers while for men, on the other hand, fatherhood is critical as it ensures the continuation of the family name and lineage.

In sub-Saharan Africa, studies have reported the immense pressure on women to have children regardless of their HIV status. However, another study found that the situation for men was grave as well, with not having children often resulting to stigmatization and loss of social status among peers. Alongside this natural desire

**Corresponding Author:** Bisong M. Elvis, Department of Family Medicine, University of Calabar, Calabar and  
Department of Family Medicine, University of Calabar Teaching Hospital, Calabar, Nigeria.

for childbearing, some studies have even reported that some antiretroviral drugs may increase sexual activity among women increasing their likelihood of pregnancies [2, 3, 5].

Unprotected sex has been discouraged among PLWHA due to risk of transmission or acquisition of new viral strains and vertical transmission. Though policies and stigma have discouraged reproductive intentions of PLWHA, studies suggest that PLWHA desire and continue to have children equally to those without HIV infection [6].

One anticipated outcome of increased fertility desire or intention among Serodiscordant couples includes decreased rates of condom use. While less condom use may enable women to achieve desired pregnancies, it may also increase rates of sexual HIV transmission. Pregnancy therefore in persons living with HIV/AIDS involves significant public health risk. While prophylactic Antiretroviral Therapy (ART) can prevent mother to child transmission, over half of the pregnant PLHIV/AIDS in sub-Saharan Africa do not use such treatment [7].

One of the groups most affected by this reproductive health problem is the couple in a Serodiscordant relationship. Serodiscordance denotes that one of the couple in a relationship is HIV positive while the other is negative. Amongst PLWHA, a proportion of these patients live in a serodiscordant relationship. The percentage of couples in serodiscordant relationship ranges from 18-31% in various countries in Africa [8]. At the beginning of the HIV pandemic couples with partners living with HIV were discouraged from considering childbearing because of poor prognosis of those infected and few options to reduce the risk of HIV mother to child transmission[9]. However, with improved life expectancy and stabilized HIV infection prevalence in many countries, more and more people who are themselves HIV negative are living with partners that are HIV positive with a desire for child bearing. These Serodiscordant couples face the unique challenge of minimizing the risk of HIV infection to both the uninfected partners and any offspring they may have [9] Complex personal, social and cultural expectation motivates HIV Serodiscordant couples to conceive naturally despite substantial risk of HIV transmission to their partners [10]. For some Africans, the need to have a child may be motivated by-the need to satisfy desired family size, the desire for a male child, the desire for biological children, the need to maintain stability in marriage and forestall socio-cultural pressures.

Sero-discordant couples are special at risk group of people in HIV transmission and their desire to have children may make them abandon HIV prevention strategies including condom use in favor of having sex without protection placing their negative partner at direct risk for HIV acquisition. In these cases, condom use is perceived as unnecessary in sexual encounters involving a regular partner. Apart from HIV transmission, the non-use of condoms among PLHIV has been found to increase the risk of resistance to antiretroviral therapy [11]. Certain factors have been found to act as barriers to condom use in serodiscordant couples. Amongst them are- the need to have children, partner dislike, gender inequality, religion, reduction of sexual pleasure and non availability of female condom. It was not the intention of this research to study factors associated with non-use of condoms amongst sero-discordant couples, therefore this was not captured in the study.

On the other hand, different options exist for HIV-positive people in discordant relationships to have children including timed intercourse to reduce frequency of intercourse, self-insemination and improved access to ART so as to reduce the rate of transmission of HIV among Serodiscordant couples. These methods though are not often readily available or affordable to these HIV Serodiscordant couples [12].

This study therefore was carried out to determine the fertility desire and intentions of couples in HIV Serodiscordant relationship and factors mitigating these desires/intention. It also sought to determine the relationship between condom use and fertility desires and intention.

## **MATERIALS AND METHODS**

The study was a hospital based cross sectional research that was conducted in the Special Treatment Clinic of the University of Calabar Teaching Hospital. The hospital is located in Calabar the capital City of Cross River State. It is the largest public health facility in Cross River State and caters for people within the state and its environs. The Hospital has many clinical units including the Special Treatment Clinic (STC) which is manned by doctors from the Department of Family Medicine. The STC offers services to PLWHA including Pre-Exposure Prophylaxis (PrEP) to the negative partner of a Serodiscordant couple. Attached to the STC is a phlebotomy unit (for sample collection), a tracking team and an adherence team, amongst others.

The target population in this study included Serodiscordant couples who were receiving care at the STC. Therefore, a cohort of Serodiscordant couples was identified using clinic records and were recruited for the study as they came to the clinic on daily basis.

HIV Serodiscordant patients above the age of 18 years who gave consent for the study were included in the study. All non-consenting patients and patients who were too ill were excluded from the study. Couples/partners who were not yet married but had cohabited for at least six months were included in the study. A systematic random sampling technique was employed in sample selection and an interviewer administered questionnaire was used to extract information from the study participants. This questionnaire which was semi-structured was used to collect information on sociodemographic characteristics, fertility desires and intentions and pattern of condom use.

Ethical approval with protocol number UCTH/HREC/33/715 was obtained from the Ethical Committee of the UCTH and informed consent was duly obtained from the participants after due explanation about the study.

Data generated was analyzed using the scientific package for social sciences (SPSS) Version 20.0. P-value was set at <0.05 or 5%.

## RESULTS

Table 1 showed that two hundred and six clients participated in the study, majority of the participants were HIV positive (61.2%), married (85.9%), in the 31 – 50 years age category (69.9%) and were mainly not desirous to have more children (69.9%). Also, there is predominance of sexual intercourse (75.7%) among the participants, with the use of condom (95.1%) at almost every sexual intercourse (84.5%). More than three quarter (92.7%) the participants had children previously while only a handful (7.3%) had no child.

Table 2 showed that the desire to have more children was significant among those that were HIV negative (56.5%), those in the group 31 – 50 years of age (85.5%) and those that were married (85.5%). Also, those that had sexual intercourse more than 3 times in a month (75.7%) and frequently use protection (84.5%) were significantly desirous for more children.

Table 3 showed that the mean age and the mean number of children are lower in participants that are

desirous of more children compared to those that are not desirous to have more children ( $p < 0.05$ ). Also, the mean rate of sexual intercourse is higher among participants that are desirous to have more children compared to those that are not desirous to have more children ( $p < 0.05$ ).

Table 1: Frequency Distribution of Participants N=206

Values	Frequency (%)
<b>HIV Status</b>	
Positive	126(61.2)
Negative	80(38.8)
<b>Gender</b>	
Male	104(50.5)
Female	102(49.5)
<b>Marital Status</b>	
Single	18(8.7)
Married	177(85.9)
Divorced	2(1.0)
Widowed	9(4.4)
<b>Age Category (years)</b>	
18 – 30	14(6.8)
31 – 50	144(69.9)
51 – 70	48(23.3)
<b>Desire To Have Children</b>	
Yes	62(30.1)
No	144(69.9)
<b>Occupation</b>	
Student	3(1.5)
Civil Servant	65(31.6)
Business	128(62.1)
Farmer	3(1.5)
Retired	7(3.4)
<b>Use of Condom</b>	
Yes	196(95.1)
No	10(4.9)
<b>Frequency of Condom Use</b>	
Always	174(84.5)
Rarely	22(10.7)
Never	10(4.9)
<b>Frequency of Sexual Intercourse</b>	
Once/Month	2(1.0)
Twice/Month	11(5.3)
Thrice/Month	27(13.00)
>3 times/Month	156(75.7)
None	10(4.9)
<b>Number of living children</b>	
1	9(4.4)
2	30(14.6)
3	77(37.4)
4	53(25.7)
Above 4	22(10.7)
0	15(7.3)

Table 2: Factors Associated with Fertility Desire

Value	Total (N = 206), n (%)	Desire to have children (N= 62), n (%)	No desire to have children (N=144), n (%)	Statistics value	p-value
<b>Gender</b>					
Male	104(50.5)	31(50.0)	73(50.7)	0.008 ( $\chi^2$ )	0.927
Female	102(49.5)	31(50.0)	71(49.3)		
<b>HIV Status</b>					
Positive	126(61.2)	27(43.5)	99(68.8)	11.588 ( $\chi^2$ )	0.001*
Negative	80(38.8)	35(56.5)	45(31.2)		
<b>Age Category</b>					
18 – 30	14(6.8)	7(11.3)	7(4.9)	26.499 (LR)	0.0001*
31 – 50	144(69.9)	53(85.5)	91(63.2)		
51 – 70	48(23.3)	2(3.2)	48(31.9)		
<b>Marital Status</b>					
Single	18(8.7)	9(14.5)	9(6.3)	10.985 (LR)	0.012*
Married	177(85.9)	53(85.5)	124(86.1)		
Divorced	2(1.0)	0(0.0)	2(1.4)		
Widowed	9(4.4)	0(0.0)	9(6.3)		
<b>Frequency of Sexual Intercourse</b>					
Once/Month	2(1.0)	2(3.2)	0(0.0)	26.240 (LR)	0.0001*
Twice/Month	11(5.3)	1(1.6)	10(6.9)		
Thrice/Month	27(13.1)	2(3.2)	25(17.4)		
>3 times/Month	158(75.7)	57(91.9)	99(68.8)		
None	10(4.9)	0(0.0)	10(6.9)		
<b>Frequency of Condom Use</b>					
Always	174(84.5)	47(75.8)	127(88.2)	21.479 (LR)	0.0001*
Rarely	22(10.7)	15(24.2)	7(4.9)		
Never	10(4.9)	0(0.0)	10(6.9)		

$\chi^2$ - Chi-Square, LR- Likelihood Ratio

\*Significant p-value

Table 3: The Relationship Between Fertility Desire, Frequency Of Intercourse And Number Of Children

Value	Desire to have children (N= 62)	No desire to have children (N=144)	p-value
Age	38.82±6.86	45.33±9.40	0.0001*
Number of Children	2.19±1.10	3.51±1.45	0.0001*
Frequency of Sexual Intercourse	5.47±1.82	4.02±1.80	0.0001*

\*Significant p-value

## DISCUSSION

This study participants were made up of a cohort of HIV Serodiscordant couples receiving care at the STC, UCTH Calabar. Similar proportions of males and females participants were recruited into the study. There were no major sex discrepancies. The HIV positive patients were more than their negative partners likely because the positive partners frequently attended the facility for drug collection, testing and other clinical activities and hence were more available to be recruited into the study than their partners on PrEP medications who are given drugs three monthly.

More than two thirds of the study respondents did not intend to have children as surmised from the study, probably because of fear of transmitting the virus to their spouse and children as well as stigmatization of the children. This is dissimilar to the result of a study carried

out in Uganda where more than half the study participants desired to have more children[2]. The difference in this may be mitigated by factors affecting the desire to have children, which is also at play in the general population and may vary in different geo-cultural regions.

The desire to have children was fueled by a sero-negative status of the partners in a sero-discordant relationship. Perceiving themselves to be normal, the sero-negatives partner of a couple would naturally desire to have children of their own. Also the use of the PrEP medication by the negative partners of a couple may also be responsible for the confidence that they would not be infected.

The intention or desire to have another child is strongly correlated with fertility behavior [13]hence most of the participants who wanted more children had more sexual intercourse than those who did not want to have more children. Though it is a fact that the desire to have

more children may lead Serodiscordant couples to disregard the use of condom and engage in high risk sexual behavior, the HIV Serodiscordant couples in this study mostly admitted to the use of condom during intercourse despite the high frequency of sex. This shows a high level of awareness on HIV prevention amongst these clients. This may be influenced by the fact that during couple counseling and testing condom use is often emphasized and condoms are freely given to couples as part of the services provided for clients in the study centre. Recently, a family planning services has been added as part of the services provided by the STC possibly increasing the awareness of reproductive health services for couples and also helping them to plan for future pregnancies. Another possible scenario may be associated with what was discovered in a study carried out in Uganda where most respondent who were in a serodiscordant relationship admitted during a focus group discussion that there is a tendency to exaggerate the use of condoms to health personnel and that the actual frequency of safer sex was much less than reported [14]. This indicates that clients know what the health care givers recommend and would admit to adherence to condom use despite not actually using them leading to a misunderstanding that adherence to safer sex method was actually high. This report would not allow safer sex intervention be effectively executed by health care providers.

Some other factors associated with the desire of serodiscordant couples to have children in this study include- the number of children a client has. It was found that the lesser the number of children the client had the more the desire to procreate. This factor may be associated with the need to complete the family size or the search for a particular sex of a child.

It was also found that age between 31-50years and the marital status were significantly associated with the desire for children probably because this is the peak of the reproductive age and the fact that societal, cultural and personal expectation play a huge role in driving the fertility desire. Generally too, most African marriages occur as a result of the need to procreate.

### CONCLUSION

The study surmised that though most of the participants of the study did not want to have more children, the frequency of sexual intercourse was high.

Even among those that wanted more children, the participants tended to be more cautious as the frequency of use of condom for their intercourse was quite high probably for fear of HIV. Factors found to be associated with the desire for more children included participants age of 31-50 years, marital status and lesser number of children.

**Limitation of Study:** The sample population included patients seen at STC-UCTH, Calabar. Clients seeking care at other health facilities were not represented in the research. Hence, generalization of findings of this research should be done with care by other researchers.

### REFERENCES

1. Agbo, S. and L.C. Rispel, 2007. Factors influencing reproductive choices of HIV positive individuals attending primary health care facilities in a South African health district. *BMC Public Health*, 17: 540.
2. Beye-Kashesya, J., A.M. Ekstrom, F. Kaharuzza, F. Mirembe, N. Kulane, A. Kulane, 2010. My partner wants a child: A cross sectional study of determinants among mutually disclosed serodiscordant couples receiving care in Uganda. *BMC Public Health*, 10: 247.
3. Kaida, A., F. Laher, S.A. Strathdee, P.A. Janssen, D Money, R.S. Hogg and G. Gray, 2009. Childbearing Intentions of HIV-Positive Women of Reproductive Age in Soweto, South Africa: The Influence of Expanding Access to HAART in an HIV Hyper-endemic Setting. *Am J Public Health* 101(2):350-358.
4. Rispel, L.C., C..A. Metcalf, K. Moody, A. Cloete and G. Caswell, 2011. Sexual relations and childbearing decisions of HIV-discordant couples: an exploratory study in South Africa and Tanzania. *Reprod Health Matters*, 19(37): 184-93.
5. Cooper, D., J. Moodley, V. Zweigenthal, L.G. Bekker, I. Shah and L. Myer, 2009. Fertility intentions and reproductive health care needs of People Living with HIV in Cape Town, South Africa: Implications for integrating reproductive health and HIV care services. *AIDS Behav.*, 13(Suppl 1): 38-46.
6. Wilson, T.E., M.E. Gore, R. Greenblatt, M. Cohen, E. Robison, A. Levine and S.J. Gange, 2004. Changes in sexual behaviours among HIV-infected women after initiation of HAART. *Am. J. Public. Health*, 94: 1141-1146.

7. Wagner, G.J. and R. Wanyenze, 2013. Fertility Desires and Intentions and the Relationship to Consistent Condom Use and Provider Communication Regarding Childbearing Among HIV Clients in Uganda. *ISRN Infect Dis.*; article ID 478192.
8. Nnebue, C., A. Anaekwe and C. Anaekwe, 2017. Socio demographic correlates of HIV discordant and concordant couples in Anambra State, Nigeria. *Ethiopian. J. Health Sci.*, 27(4): 363-372.
9. UNAIDS, 2011. AIDS Epidemic update. United Nation Joint Programme on HIV/AIDS, Geneva, Switzerland: WHO/UNAIDS.
10. Mmeje, K., R.R. Cohen and D. Cohen, 2012. Evaluating safer conception option for HIV Serodiscordant female/HIV uninfected male: a closer look at vaginal insemination. *Infectious Diseases in Obstetrics and Gynaecology*, article ID 587651, pp: 7.
11. Salaudeen, A.G., A. Ojotule, K.A. Durowade, O.I. Musa, A.S. Yusuf and M.J. Saka, 2013. Condom use among Serodiscordant couples attending a Secondary Health Facility in North Central Nigeria *Niger Journal Basic Clinical Science*, 10(2): 51-56.
12. Ngure, K., J.M. Baeten, N. Mugo, K. Curran, S. Vusha, R. Heffron C. Celum and B. Shell-Duncan, 2014. My intention was a child but i was afraid: fertility intention and hiv risk perceptions among HIV Serodiscordant couples experiencing pregnancy in Kenya. *Aids Care*, 26(10): 1283-1287.
13. Jjiang, Q., Li Y. and J.J. Sanchez-Barricarte, 2016. Fertility intention, son preference and second childbirth: survey findings from Shaanxi province of China *Soc. Indic. Res.*, 125(3): 935-953.
14. Beye-Kashesya, J., F. Kaharuzza, F. Mirembe, S. Neema, A.M. Ekstrom and A. Kulane, 2009. The dilemma of safe sex and having children: challenges facing HIV Serodiscordant couples in Uganda. *Afr. Health Sci.*, 9(1): 2-12.