



# HIV treatment optimism and fertility intention among people living with HIV in South-west Nigeria



Victoria Oladoyin<sup>1</sup>, Olutoyin Sekoni<sup>1,2</sup>

<sup>1</sup>Department of Community Medicine, University College Hospital, Ibadan, Nigeria, <sup>2</sup>Department of Community Medicine, College of Medicine, University of Ibadan, Ibadan, Nigeria

## Background

Antiretroviral therapy has the potential to influence the fertility intention of PLHIV through improvement in health, quality of life, survival and HIV treatment optimism.

However, the effect of HIV treatment optimism on the reproductive decisions of people living with the human immunodeficiency virus (PLHIV) may counter the protective effect of antiretroviral therapy (ART) on reducing transmissibility of HIV.

In the context of HIV and highly active antiretroviral therapy (HAART), optimism represent some shifts in attitudes and beliefs (realistic or optimistic) about the sexual and reproductive risk related with HIV/AIDS due to the availability of HAART.

HIV treatment optimism reflect individuals' optimism about the use and efficacy of HAART and corresponding attitude and beliefs concerning sexual and reproductive behaviours.

It also represents the potential negative consequences of having an optimistic view of HIV/AIDS as a less severe and less dangerous disease.

This form of perception creates a potential for increased sexual transmission of HIV and other sexually transmitted infections.

Little discussion about the possible role of HIV treatment optimism on fertility intention of PLHIV in resource poor settings - like Nigeria where assisted reproductive technology, treatment as prevention (TasP) and pre-exposure prophylaxis (PrEP) are in short supply - exists.

This study was therefore conducted to determine the association between HIV treatment optimism and fertility intention as well as the predictors of the HIV treatment optimism among PLHIV attending a resource-constraint ART site in South-western, Nigeria.

## Methods

A cross-sectional study of 405 reproductive age group heterosexual adults living with HIV was carried out using a mixed-method approach [questionnaire survey and focus group discussion (FGD)].

HIV treatment optimism scores ranged from 5 to 20, scores  $\leq 14$  were considered as realistic and  $>14$  as optimistic.

Quantitative data was analysed using descriptive and inferential statistics.

Predictors of HIV treatment optimism were determined using logistic regression.

Level of statistical significance was set at 5%.

Qualitative data was analysed using thematic approach.

## Results

Mean age of the respondents was  $35.2 \pm 7.4$  years, 77.5% were females and 24.0% had completed senior secondary school. (Table 1)

About half (52.3%) were optimistic about HIV treatment. (Table 2)

More than half (56.3%) intended pregnancy. (Table 2)

Optimism about HIV treatment was associated with fertility intention ( $p < 0.05$ ). (Table 4)

Having less than senior secondary education [OR 1.9 (95% CI: 1.072 - 3.272)] and discussion of reproductive decision with health care provider twice [OR 12.1 (95% CI: 5.562 - 26.296)] or more than twice [OR 45.2 (95% CI: 20.991 - 97.502)] in the preceding 12 months predicted optimism about HIV treatment. (Table 5)

The FGD revealed that some respondents were optimistic about HIV treatment, do not have adequate information on methods of conception for PLHIV, were undertaking risky sexual and reproductive behaviours to ensure conception and some of these information were provided by health care workers. (Table 6)

Table 1. Socio-demographic characteristics of respondents

Variable	Frequencies N=405	Percentage (%)
Age (Years)	129	31.9
$\leq 30$	276	68.1
$> 30$		
Age: mean $\pm$ S.D <sup>a</sup>	35.2 $\pm$ 7.1	
Gender		
Male	91	22.5
Female	314	77.5
Highest level of education		
None		
Primary	103	25.4
Junior Secondary	92	22.7
Senior Secondary	71	17.5
Tertiary	97	24.0
	42	10.4
Religion		
Christianity	153	37.8
Islam	246	60.7
Traditional	6	1.5
Tribe		
Yoruba	349	86.2
Hausa	20	4.9
Igbo	23	5.7
Non-nationals <sup>b</sup>	4	1.0
Others <sup>c</sup>	9	2.2
Occupation		
Unskilled/Unemployed	11	2.7
Skilled manual	50	12.3
Skilled non-manual	300	74.1
Professional/Managerial	44	10.9
Monthly income (in naira) (n = 798)		
$< 18,000$	108	26.9
$\geq 18,000$	294	73.1

<sup>a</sup> Standard deviation <sup>b</sup> Ghana, Togo, Sierra-Leone <sup>c</sup> Baruba, Edo, Igala, Ijaw, Taraba

Table 2. HIV treatment optimism and fertility intention of respondents

Variable	Frequencies N=405	Percentage (%)
HIV treatment optimism		
Realistic	193	47.7
Optimistic	212	52.3
Fertility intention		
No intention	177	43.7
Intends pregnancy	228	56.3

Table 3. HIV health care provider interaction on respondents' fertility options

Variable	Frequencies	Percentage (%)
Has your health care provider ever asked your reproductive decision		
No	20	4.9
Yes	385	95.1
Has your health care provider ever talked about pregnancy planning (n = 228)		
No	30	13.2
Yes	198	86.8
Satisfaction with pregnancy planning information received (n = 198)		
No	7	3.5
Yes	191	96.5
Has your health care provider ever talked about contraception		
No	94	23.2
Yes	311	76.9
Satisfaction with contraceptive received (n = 311)		
No	13	4.2
Yes	298	95.8
Number of times respondent discussed reproductive decision with health care in the past 12 months		
Never	133	32.8
Once	66	16.3
Twice	58	14.3
More than two times	148	36.5

Table 4. Association between HIV treatment optimism and fertility intention

Variable	Fertility intention		P-value
	No intention n (%)	Intends pregnancy n (%)	
HIV treatment optimism			
Realistic	98 (50.8)	95 (49.2)	0.006
Optimistic	79 (37.3)	133 (62.7)	

Table 5. Bivariate and multivariate analysis of factors associated with HIV treatment optimism

Variable	HIV treatment optimism		P-value <sup>a</sup>	Adjusted OR (CI) <sup>b</sup>	Adjusted P-value
	Realistic n (%)	Optimistic n (%)			
Age (Years)					
$\leq 30$	71 (55.0)	58 (45.0)	0.042	0.968 (0.552 - 1.697)	0.910
$> 30$	122 (44.2)	154 (55.8)			
Gender					
Male	44 (48.4)	47 (51.6)	0.880	1 (reference)	
Female	149 (47.5)	165 (52.5)			
Highest level of education					
$<$ Senior secondary	107 (40.2)	159 (59.8)	$< 0.001$	1.873 (1.072 - 3.273)	0.028
$\geq$ Senior secondary	86 (61.9)	53 (38.1)			
Religion					
Islam	123 (50.0)	123 (50.0)	0.240	1 (reference)	
Others	70 (44.0)	89 (56.0)			
Tribe					
Yoruba	169 (48.4)	180 (51.6)	0.439	1 (reference)	
Others	24 (42.9)	32 (57.1)			
Occupation					
Unskilled/Unemployed	6 (54.5)	5 (45.5)	0.834	1 (reference)	
Skilled manual	22 (44.0)	28 (56.0)			
Skilled non-manual	142 (47.3)	158 (52.7)			
Professional/Managerial	23 (52.3)	21 (47.7)			
Monthly income (in naira)					
$< 18,000$	58 (53.7)	50 (46.3)	0.117	1 (reference)	
$\geq 18,000$	132 (44.9)	162 (55.1)			
Has your health care provider ever asked about your reproductive					
No	16 (80.0)	4 (20.0)	0.003	1 (reference)	0.982
Yes	177 (46.0)	208 (54.0)			
Has your health care provider ever talked about pregnancy planning					
No	22 (73.3)	8 (26.7)	$< 0.001$	1 (reference)	0.958
Yes	73 (36.9)	125 (63.1)			
Satisfaction with pregnancy planning information					
No	7 (100.0)	0 (0.0)	$< 0.001$	1.035 (0.296 - 3.620)	0.957
Yes	66 (34.6)	125 (65.4)			
Has your health care provider ever talked about contraception					
No	61 (64.9)	33 (35.1)	$< 0.001$	1 (reference)	0.998
Yes	132 (42.4)	179 (57.6)			
Satisfaction with contraceptive information					
No	8 (61.5)	5 (38.5)	0.155	1 (reference)	
Yes	124 (41.6)	174 (58.4)			
Number of times respondent reproductive with health care provider in the past months					
Never			$< 0.001$	1 (reference)	
Once	112 (84.2)	21 (15.8)			
Twice	48 (72.7)	18 (27.3)			
More than two times	18 (31.0)	40 (69.0)			
More than two times	15 (10.1)	133 (89.9)			

<sup>a</sup> P-value in chi-square test <sup>b</sup> Adjusted odds ratio in logistic regression analysis; CI: Confidence interval <sup>c</sup> P-value in fisher's exact test

Table 6. Exact words of some FGD participants

"If you take your drug as normal as you are supposed to, it will help you seriously. It will help you live as normal as other people outside without HIV HIV are living. You can reproduce and live as other normal people without HIV are living" (Participant with a HIV negative partner)

"On care, we get care of a truth. But by my own reasoning, there is not enough information for me on having children or not. This is because when when my menstruation first ceased, I explained to the doctors. For a whole whole year, they were contemplating whether it was pregnancy or not. Till Till now, there has not been any definite treatment or encouragement on conception. They are trying, we are healthy, but not much encouragement on on conception" "If you take your drug as normal as you are supposed to, it will help you seriously. It will help you live as normal as other people outside outside without HIV are living. You can reproduce and live as other normal normal people without HIV are living" (Participant with a HIV negative partner)

".....I had delay in conception. When it was getting to a year, I went see the doctor, I told him I needed to conceive that I hope it is not the disease disease that is affecting me. They now told me it was not the disease that after after all I can see pregnant women around. So when I wanted to conceive, doctor said we should inform him when we are ready. I now called the doctor doctor aside that you asked us to use condom but I need to conceive. They then said I can create a hole in it before use" (Participant with a HIV negative partner)

## Conclusion

People living with HIV are optimistic about HIV treatment and intend to get pregnant

To sustain the current gains in the fight against HIV during this era of ART roll out, adequate information, education, communication and training that will bring about safer and healthier reproductive decisions and behaviours are of value and advocated.

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## Contact

Victoria Oladoyin  
dayooladoyin@gmail.com