

# The acceptability of HIV testing among women receiving post abortion care

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**Introduction:** In South Sudan few women have heard about the HIV. The prevalence of HIV infection in the country is 2.6%. Post abortion care (PAC) accounts for over 50% of all gynaecological admissions at the Juba Teaching Hospital (JTH). HIV testing is not routinely offered as part of PAC services.

**Objective:** To determine factors associated with acceptability of HIV testing among women receiving PAC at JTH.

**Methods:** This was a cross-sectional study, conducted at the Gynaecological Unit of JTH. Three hundred and forty patients were interviewed using a structured questionnaire.

**Results:** The mean age of the participants was 24.7 years with 50.5% aged <25years, 31.5% were employed, and 31.8% had no formal education. Acceptability of HIV testing was 70.9% and the prevalence of HIV was 2.7%. The most common reason for not accepting, was the belief, based on previous results, that they were HIV negative. Patients aged ≥25 years and those with primary and secondary education were twice as likely to accept HIV testing than those <25 years and those with no formal education, respectively. Employment status, religion and marital status were not statistically associated with acceptability of HIV testing. Patients previously tested for HIV were more likely to accept testing.

**Conclusion:** Routine HIV testing should be integrated into PAC services with efforts to increase awareness of HIV and importance of testing

**Key words:** HIV, abortion, post-abortion care, South Sudan

## INTRODUCTION

South Sudan has a relatively low prevalence of HIV/AIDS at about 2.6%, with pockets of concentration in specific geographic zones.<sup>[1]</sup> The government's effort in combating the disease has been hampered by ignorance about HIV, with 45% of women aged 15-49 years having no knowledge of the virus. Most feared taking the test and said it is a death sentence.<sup>[2,3]</sup>

Political instability has caused the displacement of people, with most living in camps where the risk of HIV infection is thought to be high.<sup>[4]</sup> Limited access to services due to poor infrastructure and inadequate human resources are challenges holding back the fight against HIV. Only about 13% of pregnant women living with HIV have access to PMTCT. AIDS related deaths have almost doubled (6,900 to 13,000) between 2001 and 2012, and it is still on the raise in association with ongoing conflicts and displacement of populations.<sup>[4]</sup>

Women are disproportionately affected by the HIV epidemic in sub-Saharan Africa as a result of social and economic inequality. In 2012, about 59% of those living with HIV were female. Women often face discrimination in terms of access to education, employment, and health care. The man is often the decision maker in a relationship, and as a result, women cannot always negotiate for safer sex practices with high risk partners. Gender based violence has also been identified as a major player when it comes to HIV transmission.<sup>[5]</sup> The post abortion care (PAC) recommended by United States Agency for International Development (USAID) has three components: emergency

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treatment, counselling on family planning (including services such as evaluating and treatment of sexually transmitted infections and HIV testing and counselling), and community empowerment through community awareness and mobilization.<sup>[6]</sup> However, routine HIV testing and counselling is not practiced as part of PAC services in South Sudan.

This study was designed to determine the factors associated with the acceptability of HIV testing among women receiving PAC services in JTH, specifically to determine the socio-demographic characteristics

## METHOD

This cross-sectional study was carried out at the Gynaecological unit (December 2015 to January 2016). Three hundred and forty patients were recruited by consecutive sampling having had abortions up to 20 weeks gestation. Severely ill patients were excluded. The sample size was determined using Fisher's formula for prevalence taking an estimate of 67.6% as expected proportion of patients accepting HIV testing.<sup>[7]</sup>

Approval to conduct the study was obtained from the Kenyatta National Hospital/University of Nairobi Ethics and Research Committee through the Department of Obstetrics and Gynaecology at the University of Nairobi. Permission was also obtained from the Research Committee at the Ministry of Health, South Sudan. Informed, written consents were obtained from all participants or their careers.

Information was collected by confidential interviews after the patients had received treatment of abortion. Patients accepting a HIV test were given pre- and post-test counselling. Results were disclosed and the interview concluded. Patients with positive results were counselled and initiated on anti-retrovirus treatment (ARVs).

The dependent variable was calculated as proportion of those who accepted testing. Comparison between categorical variables were done using Chi square test. To identify factors associated with acceptability, the dependent variable was cross tabulated with each socio-demographic characteristic, health seeking, and reproductive health attributes. Factors found significantly associated with HIV testing were included in multivariate logistic regression model to identify independent predictors of acceptability. All analyses were performed with SPSS version 21. A two-sided P-value of <0.05 was considered statistically significant.

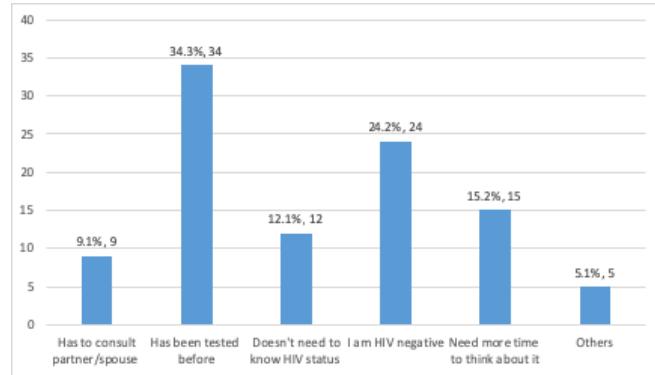
## RESULTS

The demographic characteristics of the women are shown in Table 1.

Among the 340 women, 241 (70.9%) accepted HIV testing and 2.7% were positive. The reasons for not

**Table 1. Demographic characteristics of women who received PAC**

Characteristic	n %
<b>Age year</b>	
15 – 19	60 (17.6)
20 – 24	112 (32.9)
25 – 29	107 (31.5)
30 – 34	41 (12.1)
35 – 39	17 (5.0)
40 – 45	2 (0.6)
45 and above	1 (0.3)
<b>Marital status</b>	
Single	40 (11.8)
Married	293 (86.2)
Divorced / Separated	7 (2.1)
<b>Level of formal education</b>	
None	108 (31.8)
Primary	123 (36.2)
Secondary	85 (25.0)
College / University	24 (7.1)
<b>Currently employed</b>	
Yes	107 (31.3)
No	233 (68.5)
<b>Religion</b>	
Christian	302 (88.8)
Muslim	34 (10.0)
Others	4 (1.2)



*Figure 1. Reasons for declining HIV testing among women receiving post abortion care at JTH.*

accepting testing are displayed in Figure 1. Table 2 displays the bivariate analysis of the socio-demographic factors associated with acceptance of HIV testing.

Acceptance increased with age: those over 35 years were 4.9 times more likely to accept testing than those under 20 years. Acceptability also increased with level of education. Women having university education were three times more likely to accept testing in comparison to women with no formal education.

**Table 2. Bivariate analysis of Socio-demographic characteristics associated with acceptance of HIV testing**

Characteristic	Accepted testing		OR (95% CI)	P value
	Yes n = 241 (%)	No n = 99 (%)		
<b>Age (year)</b>				
15-19	32(13.3)	28(28.3)	1.0	
20-24	79(32.8)	33(33.3)	2.09(1.09-4.01)	0.026
25-29	79(32.8)	28(28.3)	2.47(1.27-4.80)	0.008
30-34	34(14.1)	7(7.1)	4.25(1.63-11.08)	0.003
≥35	17(7.1)	3(3.0)	4.96(1.31-18.71)	0.018
<b>Age (years)</b>				
<25	111(46.1)	61(61.6)	1.0(ref)	
≥25	130(53.9)	38(38.4)	1.9 (1.2-3.0)	0.009
<b>Marital status</b>				
Single	26(10.8)	14(14.1)	1.0	
Married	212(88.0)	81(81.8)	1.41(0.70-2.83)	0.336
Divorced / Separated	3(1.2)	4(4.0)	0.40(0.08-2.07)	0.276
<b>Level of formal education</b>				
None	65(27.0)	43(43.3)	1.0	
Primary	93(38.6)	30(30.3)	2.05(1.17-3.60)	0.013
Secondary	63(26.1)	22(22.1)	1.89(1.02-3.52)	0.043
College / University	20(8.3)	4(4.0)	3.31(1.06-10.35)	0.040
<b>Currently employed</b>				
Yes	82(34.0)	25(25.3)	1.0	
No	159(66.0)	74(74.7)	0.66(0.39-1.11)	0.115
<b>Religion</b>				
Christian	216(89.6)	86(86.9)	1.0	
Muslim	21(8.7)	13(13.1)	0.64(0.31-1.34)	0.240
Others	4(1.7)	0(0.0)	NA	
<b>Previous HIV testing</b>				
Yes	193 (80.1)	69 (69.7)	1.74(0.98-3.07)	0.033
No	48 (19.9)	30 (30.3)	1.0(ref)	

**Table 3. Bivariate analysis of reproductive health history of women receiving PAC who accepted HIV testing and those who did not accept testing**

Characteristic	Accepted testing		OR (95% CI)	P value
	Yes n = 241 (%)	No n = 99 (%)		
<b>Number of abortions</b>				
1	201(83.4)	84(84.8)	1.0(ref)	
2	23(9.5)	11(11.1)	0.87(0.41-1.87)	0.729
More than 2	17(7.1)	4(4.0)	1.78(0.58-5.44)	0.314
<b>Period of amenorrhoea</b>				
Less than 8 weeks	41(17.0)	21(21.2)	1.0(ref)	
Between 8-12 weeks	104(43.2)	40(40.4)	1.33(0.70-2.53)	0.38
Between 12-16 weeks	57(23.7)	29(29.3)	1.01(0.50-2.01)	0.985
Between 16-20 weeks	25(10.4)	6(6.1)	2.13(0.76-6.01)	0.151

**Table 4. Bivariate analysis of utilization of reproductive health services among women receiving PAC who accepted and those who did not accept the HIV testing.**

Characteristic	Accepted testing		OR (95% CI)	P value
	Yes n = 241 (%)	No n = 99 (%)		
<b>Ever used any family planning method</b>				
Yes	49(20.3)	25(25.3)	1.0(ref)	
No	192(79.7)	73(73.7)	1.34(0.77-2.33)	0.296
<b>Type of family planning method used</b>				
Injectable	25(10.4)	17(7.1)	1.0(ref)	
Implant	14(5.8)	10(4.1)	0.95(0.34-2.64)	0.925
IUCD	3(1.2)	0(0.0)	NA	
Others	5(2.1)	1(0.4)	3.40(0.36-31.74)	0.283

**Table 5. Multivariable analysis of the factors associated with acceptability**

Characteristic	OR	95% CI	P value
<b>Age</b>			
15-19	1.0		
20-24	1.99	1.02-3.88	0.043
25-29	2.25	1.12-4.50	0.022
30-34	4.38	1.26-11.84	0.004
≥35	5.06	1.30-19.71	0.019
<b>Level of education</b>			
None	1.0		
Primary	2.15	1.18-3.93	0.012
Secondary	1.97	1.03-3.78	0.041
College/University	2.62	0.82-8.41	0.105
<b>Previous HIV testing</b>			
Yes	1.0		
No	0.83	0.46-1.47	0.516

Of the 340 women 262 (77.1%) had had prior HIV testing. The main reasons for HIV testing were routine ante-natal profiling (159, 68.8%) and self-awareness (58, 25.1%). All said that the results of the test were disclosed to them (2 (0.9%) were HIV positive).

There were no significant associations between factors in the reproductive health history and acceptance of HIV testing (Table 3).

Also, there were no significant associations between acceptance of testing and the utilisation of reproductive health services (Table 4).

However, age and level of education were significantly associated with acceptance of testing after adjusting for the effect of previous HIV testing (Table 5).

## DISCUSSION

This study reports a 70.9% acceptability of HIV testing which is comparable to the 67.9% observed at Kenyatta National Hospital (KNH).<sup>[7]</sup> Acceptance of HIV testing is crucial in combating the spread of infection.<sup>[8]</sup> In JTH a policy of provision of testing and counselling has not been included into the PAC services.

Among the 99 women who refused HIV screening, there might have been some who were infected and thus missing out on appropriate anti-retroviral treatment (ART). Most declined because they believe they were HIV negative based on previous tests. At the KNH, the prevalence of HIV was 31.8%.<sup>[7]</sup> This high figure may be attributed to the small sample size and that KNH is a referral hospital receiving high risk patients.

The socio-demographic characteristic of the women recruited into this study was comparable to previous similar ones<sup>[7, 9]</sup> characterized by a low level of education and unemployment. More than 75% in our cohort were married but there was no association between marital status and the acceptance of testing.

Our study found a significant association between educational level and HIV test acceptability agreeing with the KNH report.<sup>[7]</sup> This suggests that education plays a key role in the understanding of HIV campaign messages. Most communications are delivered in English or Classic Arabic which are not understood by most women in Juba. Studies have shown a high acceptance rate when HIV awareness and messaging is conducted in familiar languages<sup>[10, 11]</sup> Policy makers therefore need to bear in mind this communication issue when designing campaigns.

Our findings reveal that 77.1% of the participants had had prior HIV testing and they also had a high acceptance

rate of testing than women who had not been tested before (OR=1.74). A report from Ugandan study showed that women who had not been tested for HIV previously were 2.1 times more likely not to accept testing.<sup>[12]</sup> Religion and employment status were not associated with the acceptability of HIV testing. Rasch et.al in Tanzania<sup>[9]</sup> have reported that women who earn an income were more likely to accept HIV testing.

South Sudan has the highest unmet need for family planning<sup>[13]</sup> worldwide. Religious and cultural issues may play a part in this. Our study showed no association between the use of these family planning services and acceptability of HIV testing. These services are underutilized in JTH, however where they are available the acceptability of HIV testing improves.<sup>[13]</sup>

This study was conducted in an urban health facility so the results cannot be extrapolated to a rural setting where demographics are quite different.

## CONCLUSION

HIV testing is well accepted among PAC women in JTH and it should be integrated into the PAC services in all health facilities. Campaigns on regular screening for HIV and counselling services should be tailored to the needs and circumstances of all women of reproductive age. Key groups to be targeted are those with limited education through all forms of media and particularly in local languages. Women less than 20 years old should also be equipped and empowered with life skills regarding reproductive health services, HIV education and testing. These interventions should also extend to women who do not attend ANC through community health workers and outreach visits.

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