Original Research Article

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Determinants of comprehensive knowledge of HIV/AIDS among women of the reproductive age (15-49) in Uganda

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ABSTRACT

Background: Globally, HIV is the leading cause of death among women of the reproductive age and unprotected sex is the main driver of HIV transmission. Lack of accurate and complete knowledge is one of the major causes of increase in the number of new HIV infections among women in Africa. This study was aimed at finding out factors associated with comprehensive knowledge among women in the reproductive age group of 15-49 years in Uganda.

Methods: Data used was drawn from 2011 Uganda Demographic Health Survey (UDHS). Logistic regression model was used for analysis.

Results: Only (38%) of the respondents had comprehensive knowledge of HIV. Women in lower wealth quintile had less comprehensive knowledge compared to those in the highest quintile (OR=1.28). The study also found out that the older women aged 45-49 were more knowledgeable to HIV (OR=1.46) than young ones. Women who had access to radio were associated with increased odds (OR=1.11) of high knowledge on HIV than those without. High knowledge to HIV was also associated with women who had ever tested for HIV (OR=1.20) and also increased with level of education (OR=1.63 for primary and OR=3.6 for secondary).

Conclusions: Factors associated with comprehensive knowledge on HIV include: age of the woman, residence, education level, access to information and HIV response to testing. Programs designed should target young women below 19 years of age, rural women, poor women and uneducated women. Increasing campaigns to encourage more women to have HIV tests and messages using radios will increase comprehensive knowledge.

Keywords: Comprehensive, HIV, Knowledge, Uganda

INTRODUCTION

Globally, HIV is the leading cause of death among women of the reproductive age and un protected sex is the main driver of HIV transmission. Lack of accurate and complete knowledge is one of the major causes of increase in the number of new HIV infections among women in Africa. Globally, less than (30%) of young women have comprehensive knowledge of HIV. This is because they account for two-thirds of the world's illiterate adults of which there are 796 million. Uganda is still classified as a high burden country with high numbers of HIV infections. About 130,000 new HIV

infections occur annually in Uganda.³ The HIV rates that had gone down from (18%) in the 1990's have now shot up again.⁴⁻⁶ Around the year 2000, the epidemic had stabilized to (5%). As of the current year 2017, HIV prevalence rates have shot up to (7.3%) in the general population.⁷ More than 120,000 people were infected with HIV in 2010.⁴ Despite 25 years of implementing various HIV prevention interventions in Uganda such as (PMTCT) prevention of mother to child transmission, provision of safe medical circumcision, provision of treatment for sexually transmitted infections, promotion of HIV status through (VCT) and many others, the number of new HIV infections has increased. In Uganda,

there is now a return to wide spread risky sexual behavior as it was at the very beginning of the epidemic. A Recent surveys show an increase in the prevalence of the epidemic to (7.3%). As of the year 2017 now, more women (8.2%) than men (6.1%) are suffering from this epidemic in Uganda.

METHODS

This study sought to explore factors influencing comprehensive knowledge of HIV/AIDS among women of the reproductive age (15-49) in Uganda. Data from 2011 Uganda Demographic Health Survey was utilized. Representativeness of the sample was ensured by weighting the data. Comprehensive knowledge used as the outcome variable in this study refers to knowledge of reducing HIV risk by consistent use of condoms and being faithful to one uninfected sexual partner who has no other partners, and includes rejection of misconceptions of mosquito bites and sharing of food with a person who has AIDS as modes of HIV transmission.⁷ In the UDHS of 2011, various questions were posed to measure comprehensive knowledge of HIV among women in Uganda. During the analysis, the variable "comprehensive knowledge" was generated out of five questions and therefore, respondents who answered all the five questions correctly were considered to be having comprehensive knowledge while those who failed any of the questions were considered not to be having comprehensive knowledge. The questions which were asked to measure comprehensive knowledge included the following; (1) Can people get AIDS virus from mosquito bites? (2) Can people reduce the chance of getting the virus by using a condom whenever they are to have sex? (3) Can people get the virus by sharing food with a person who has AIDS? (4) Can people get the virus because of witch craft or supernatural powers? (5) Is it possible for a healthy looking person to have the AIDS virus?

Data was analyzed at three stages namely; univariate, bivariate and multivariate. Descriptive statistics to describe the back ground characteristics of the study such as age, residence, religion, wealth index, education status were generated. At bivariate level of analysis, association between dependent (comprehensive knowledge) and

independent variables such as (age, marital status, religion, region, education status and wealth index) were tested using the Pearson chi square test at 5% (p=0.05) level of significance. At bivariate level, a number variables revealed a significant association (p<0.05) with having comprehensive knowledge and therefore were used for further analysis. At multivariate level, the study used a binary logistic regression model. This is because the dependent variable (comprehensive knowledge) is dichotomous (binary outcome) that is; respondents either have comprehensive knowledge or they don't have it.

RESULTS

In this study, majority of the respondents (24%) were in the age group of (15-19) and a high proportion of women (80%) resided in rural areas. Catholic religion had majority of the respondents (40%) compared to other religions. Majority of the respondents (59%) had attained primary level of education followed by those of secondary+ (28%). More than half of the respondents (62%) were married and 46% of women were from rich families followed by the poor (36%) and the middle class had the least (19%). The Central region (31%) had the highest proportion of respondents followed by the Western region (27%). Majority (83%) of the respondents had no access to television while about 66% of the respondents had access to radio. Findings of the study show that only 38% of the respondents had comprehensive knowledge of HIV in Uganda.

Bivariate results show that comprehensive knowledge was highly and positively associated (p<0.05) with unmarried women, higher levels of education level, in higher wealth quintile, in urban areas, exposure to media and ever tested for HIV. Further analysis shows that significantly high odds in comprehensive knowledge of HIV were associated with; women in the highest wealth quintile (OR=1.28), those aged between 45-49 and 35-39 (OR=1.46), with access to radio (OR=1.11), ever tested for HIV (OR=1.20) and those who had primary and secondary level of education (OR=1.63 and OR=3.6 respectively) compared to other women studied. Women from the East (OR=0.70) had significantly (p=0.000) low odds of having comprehensive knowledge of HIV.

Table 1: Percentage distribution of women by background and intermediate characteristics.

Variable		Frequency (n)	Percentage (%)
	15-19	2,048	24
	20-24	1,629	19
	25-29	1,569	18
Age (in years)	30-34	1,086	13
	35-39	1,026	12
	40-44	729	8
	45-49	587	7
	Total	8,674	100
Marital status	Single	2,118	24

	Married	5,417	62
	No longer in union	1,334	13.1
	Total	8674	100
	Catholic	3,524	41
	Protestant	2,601	30
	Muslim	1,125	13
Religion	Pentecostal	1,154	13
	SDA	168	2
	Other	104	1.2
	Total	8,674	100
	Urban	1,717	20
Residence	Rural	6,957	80
	Total	8,674	100
	Central	2,696	31
	Eastern	2,135	25
Region	North	1,524	18
	Western	2,319	27
	Total	8674	100
Education	No education	1,119	13
Education	Primary	5,152	59
	Secondary+	2,402	28
	Total	8674	100
	Poor	3,098	36
Wealth index	Middle	1,607	19
weath muex	Rich	3,968	46
	Total	8,674	100
Even tested HIV	No	2,138	25
Ever tested HIV	Yes	6,532	75
Modio ovnoguno	No	2,694	31.1
Media exposure	YES	5,754	66.3
radio	None dejure residents	226	2.6
	No	7,174	82.7
Television	Yes	1,263	14.6
	None dejure residents	226	2.6

Table 2: Percentage distribution of comprehensive knowledge among women age 15-49 years.

Variable		Frequency (N)	Percentage (%)
Comprehensive knowledge	No	5,423	62.5
	Yes	3,251	37.5
	Total	8,674	100.0

Table 3: Factors associated with comprehensive knowledge among women age 15-49 years.

Variables		Bivariate			Multivariate			
		Comprehensive knowledge			OR	m> 17	95% (CI)	
		No (%)	Yes (%)	P value	OK	p>z	95 76 (C1)	
Age (in years)	15-19**	63.4	34.6		1.00			
	20-24	59.6	40.0		1.09	0.39	0.89	1.32
	25-29	60.4	39.6		1.08	0.49	0.86	1.33
	30-34	60.5	39.5	0.001	1.22	0.09	0.97	1.54
	35-39	62.5	37.5		1.28	0.04	1.01	1.63
	40-44	67.0	33.0		1.04	0.79	0.79	1.35
	45-49	64.4	35.6		1.46	0.009	1.10	1.92
Marital status	Single**	59.8	40.2	0.000	1.00			

	Married		64.2	35.8		0.98	0.85	0.81	1.18	
	No longer in	union	59.8	40.2		1.07	0.53	0.85	1.35	
D. V.	Catholics**		65.2	34.8		1.00				
	Protestants		59.8	40.2		1.12	0.1	0.97	1.28	
	Muslims	ıslims		36.5	0.000	0.91	0.29	0.75	1.08	
Religion	Pentecostal		58.9	41.2		1.08	0.38	0.91	1.28	
	SDA		56.4	43.6	_	1.00	0.99	0.66	1.5	
	Others		67.1	32.9		1.13	0.65	0.66	1.94	
D	Urban**		49.3	50.7	0.000	1.00				
Residence	Rural		68.1	31.9	0.000	0.91	0.08	0.77	1.09	
	Central**		52.1	47.9		1.00				
ъ .	Eastern North		67.7	32.2	0.000	0.70	0.000	0.59	0.82	
Region			70.2	29.9		1.01	0.847	0.85	1.21	
	Western		62.5	37.5		0.95	0.525	0.80	1.11	
	No education**		80.6	19.4	0.000	1.00				
Education	Primary		67.9	32.1		1.63	0.000	1.34	1.99	
	Secondary+		42.7	57.3		3.6	0.000	2.86	4.58	
	Poor** Middle		74.3	25.7	0.000	1.00				
Wealth index			64.9	35.1		1.14	0.122	0.96	1.35	
	Rich		52.5	47.5		1.28	0.002	1.09	1.51	
Ever tested	No** Yes		72	28	0.000	1.00				
HIV			59	41		1.20	0.000	1.05	1.37	
	Radio	No**	70.2	29.8	0.000	1.00				
Media		Yes	58.8	41.2		1.11	0.005	0.90	1.36	
exposure	Television	No**	66.4	33.6	0.000	1.00				
_		Yes	45.1	54.9		1.35	0.321	0.14	0.26	

Reference category**

DISCUSSION

Older women with older ages had higher odds of having comprehensive knowledge compared to teenagers. This shows that comprehensive knowledge increases with age of a woman. This result is in consonance with other studies elsewhere.⁸⁻¹³ In Raigad district of India, respondents below 20 years of age were also less likely to have comprehensive knowledge of HIV compared to those with older ages.¹⁴ Married women had less odds (OR=0.98) of having comprehensive knowledge compared to those who were single. The findings are in conformity with the study conducted among Vietnamese women which reported that married women had less odds of having comprehensive knowledge of HIV compared to singles because they believe that marriage is a protection to risky sexual behaviors. 15 Women in rural areas (OR=0.91) 95% CI (0.77-1.09) had lower odds of having comprehensive knowledge compared to urban women in this study. This result correlates with several findings.⁸⁻¹³ A study conducted in Kenya, Swaziland, Zimbabwe, Tanzania, Lesotho, Malawi and Uganda also reported that urban women had greater knowledge of HIV prevention compared to rural women.¹² Respondents with primary and secondary+ (OR=1.63) 95% CI=1.34-1.99) (OR=3.6) 95% 2.86-4.58) respectively had significant (p=0.000) higher odds of having comprehensive knowledge compared to those with no education. Findings show that the higher the level of education, the higher the chances

of having comprehensive knowledge of HIV. This study is in agreement with other studies. 8,10-12,16,17 As education and wealth increase, the proportion of women reporting early sexual initiation decreases. ¹⁸ Opportunities to obtain knowledge about HIV are extremely limited for young people not in school. Rich women (OR=1.3) had higher odds of having significant (p=0.000)comprehensive knowledge compared to the poor. Results in this study are in conformity with a study conducted among young married women in Tamil Nadu state in India which reported that women from households with better standards of living were more likely to have comprehensive knowledge of STIs compared to those from poor households. 19 Better standards of living among the rich women have an influence on comprehensive knowledge since the rich can easily afford and access information from media and other socio services. It was interesting to learn that women from the North had higher odds (OR=1.01) of having comprehensive knowledge compared to women from the central region while women from the East (OR=0.70) had significant (p=0.000) lower odds of having comprehensive knowledge compared to women from the central region. However, there is need for further research to prove or disapprove why women from the north have higher chances of having comprehensive knowledge of HIV compared to those from central. Respondents who had ever had an HIV test had significant higher odds (OR=1.4) of having comprehensive knowledge of HIV compared to those who had never tested. This is in agreement with a study among urban women in Kenya which revealed that those who had ever tested for HIV were 1.6 times more likely to have comprehensive knowledge compared to their counter parts.11 Respondents who had access to radio had significant higher odds (OR=1.20) of having comprehensive knowledge of HIV compared to those with no radio. Women who had televisions had higher odds (OR=1.11) of having comprehensive knowledge compared to those with no television. A study in South Africa shows that majority of the respondents (96%) reported that TV and radio had a positive impact on their understanding of HIV/AIDS prevention and transmission and more than four in ten decided to change their sexual behavior as a result of what they learned about HIV/AIDS from media.20

CONCLUSION

Programs designed should target young women below 19 years of age, rural women, poor women and uneducated women. More efforts to promote girl child education to avoid them from stopping at only primary level are needed since results show that the higher the level of education, the higher the chances of having comprehensive knowledge of HIV. There is need to promote accessibility to information and quality education.

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