

Predictors of voluntary HIV counselling and testing services utilization among people with disabilities in Addis Ababa, Ethiopia

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Abstract

The study investigated HIV testing prevalence and factors associated with the utilization of voluntary HIV counselling and testing (VCT) services among individuals with disabilities in Addis Ababa. The analysis was based on a survey of 209 men and 203 women with disabilities, aged 15-49, who had ever heard about HIV and AIDS in four sub-cities in Addis Ababa. HIV testing prevalence was 53.2%, with no significant difference between males and females. Comprehensive HIV knowledge, living with spouse, and religious affiliations positively predicted utilization of VCT services among participants. Living with both parents and having physical or mental/intellectual disabilities were negative predictors of VCT services utilization. More research on the predictors of utilization of VCT services by gender and urban/rural divides are needed among people with disabilities.

Keywords

HIV testing, HIV knowledge, VCT services' utilization, disabilities, Ethiopia

Introduction

People with disabilities (PWD) experience myths of asexuality/hypersexuality, risky sexual exposures and other socio-economic factors that expose them to HIV (Fleming et al., 2010;

Venkatesh et al., 2011). Sexuality/HIV education and sexual and reproductive health (SRH)/HIV services may be inaccessible to them (Aderemi, 2013; Rohleder et al., 2012), resulting in low HIV knowledge and risk perception (Aderemi & Pillay, 2013; Eide et al., 2011). Voluntary HIV counselling and testing (VCT), essential to HIV prevention, serves as gateway to access HIV treatment, care and support (Solomon et al., 2004). With increasing evidence that PWD are at risk of HIV (UNOHCR/WHO/UNAIDS, 2009), it is critical to know the factors that influence their VCT services utilization (VSU) for effective universal HIV prevention. This report presents some findings from a study on HIV/SRH knowledge and practices of PWD in Addis Ababa.

Available literature on PWD in Africa shows low HIV testing prevalence of 10.8-24.7% (Groce et al., 2013; Hanass-Hancock, 2009; Shisana et al., 2009). Other findings reveal HIV testing prevalence of up to 53% when countries target PWD (Eide et al., 2011; Handicap International, 2008; Taegtmeier et al., 2009). Unpublished studies among Ethiopian Disabled People's Organisations indicate higher HIV testing prevalence from 54-75% (ECDD & DKT Ethiopia, 2011; EWDNA, 2009). However, HIV knowledge, risky sexual exposures and SRH problems among PWD in Ethiopia remain comparable to those elsewhere (Alemu & Fantahun, 2011; CRDA & IDPDA, 2008; ECDD & DKT Ethiopia, 2011).

Ethiopia is currently mainstreaming disability into policies, including the national HIV strategic plan (NSP). To design HIV/SRH interventions for PWD in Ethiopia, Handicap International undertook a household-based survey to explore their HIV/SRH-related knowledge, attitudes, practices and services' utilization. This article presents findings on the HIV testing prevalence and determinants of VSU among PWD in Addis Ababa.

Methods

Participants were aged 15-49, with physical, vision, hearing, intellectual, mental and speech impairments from four sub-cities (SCs) – Nefas-Silk Lafto, Gulele, Addis Ketema and Yeka – with the highest PWD population in Addis Ababa (CSA, 2008). A sample of 483 (out of 577 based on 4% error margin and 95% confidence level), was proportionally distributed across three randomly-selected Woredas¹ in each SC. Disabled field-guides (recruited from the Woredas) assisted interviewers to locate PWD in the Woredas, coupled with snowballing. Participants were recruited by asking if they have impairments.

The survey questionnaire was based on the 2011 EDHS (CSA & ICF International, 2012). Questions were selected to measure determinants of VSU (Andersen, 1995; Leta, Sandøy, & Fylkesnes, 2012). Selected questions measured VSU as the dependent variable and independent variables: socio-demographic factors, comprehensive HIV knowledge, attitudes towards people living with HIV (PLHIV), distance from and transport to health facility (Figure 1). The questionnaire was translated into Amharic language and back-translated into English for quality control.

Seventeen research assistants (disabled, non-disabled and sign language interpreters) were trained on interviewing PWD and the questionnaire. They pre-tested the questionnaire among PWD in one Woreda excluded from the study; with no major changes to the questionnaire post-testing. Four teams were each led by a supervisor. A study coordinator supported the teams from March-April 2012.

The Addis Ababa Bureau of Labour and Social Affairs approved the study. Sub-cities gave permission. Prior to recruitment, participants gave informed consent. For people with intellectual/mental impairments, informed consent with simple language and confirmation of content understanding and voluntary participation was utilised (Thomas & Kroese, 2005); combined with informed consent from parents/guardians.

¹ The lowest tier of government in Ethiopia

The data was analysed using STATA 11. Descriptive statistics/bivariate analysis were based on a sample of 412 who were aware of HIV, and logistic regression on 411 (one participant with missing education information was dropped). Logistic regression assessed the association between dependent and independent variables, with adjustment for cluster effect, and using a stepwise approach (without and with religion and socio-economic status). Included variables were based on the conceptual framework in Figure 1. However, some were not included in the analysis either due to small sample size or lack of corresponding questions in the 2011 EDHS.

Results

Socio-demographic, HIV-related and barrier factors

The analysis comprised 412 participants (mean age=30) with different types of impairments. Participants were asked if they had ever tested for HIV and knew their results. HIV testing prevalence was 53.2% (219), with non-significant gender difference (Table 1). Additionally, five items – knowing that consistent condom use during sexual intercourse and having only one uninfected faithful partner prevent HIV infection, knowing that a healthy-looking person can have HIV, and rejecting two common misconceptions (HIV transmission by mosquito bites and supernatural means) – assessed participants' comprehensive HIV knowledge (CHK) (CSA & ICF International, 2012). A wrong answer to one/more of the items constituted lack of CHK – reported as 'no'. Only 127 (30.8%) participants had CHK (Table 1).

Participants' HIV self-risk perception was assessed by asking if they thought they had ever done anything that could put them at risk of HIV. Respondents' HIV risk perception was low, and positively associated with HIV test (Table 1). Four 'yes/no' response items – willingness to care for a relative sick with AIDS in their own households and to buy fresh vegetables from a seller who is HIV-positive, allowing a female HIV-positive teacher who is not sick to continue teaching, and not keeping a family member's HIV-positive status secret –

measured participants' stigmatising attitudes towards PLHIV (CSA & ICF International, 2012). Wrong response to one/more of the questions meant stigmatisation of PLHIV – reported as 'yes'. Stigmatisation of PLHIV was high (Table 1). Participants answered two questions on whether distance from and transport to health facility was problematic. Participants who considered distance from health facility as problematic were less likely to report previous HIV testing.

Factors associated with VCT services utilization

In the bivariate analysis, CHK, easy transport to health facilities and age 25-39 were positively associated with VSU; while living with both parents was negatively associated with VSU (Table 2). People with mental/intellectual disabilities were significantly less likely to utilize VCT than others.

In the first model, CHK and living with a spouse were positively associated with VSU. Age <40, having physical and mental/intellectual disabilities, and living with both parents were negatively associated with VSU (Table 2).

In the final model, CHK, and religious affiliations were positively associated with VSU. Living with both parents, and having physical and mental/intellectual disabilities were negatively associated with VSU, while living with a spouse was positively associated with VSU (Table 2).

Discussion

This study analysed HIV testing and factors associated with VSU among PWD in a non-representative sample in Addis Ababa. HIV testing prevalence is lower than in the general population, with non-significant gender difference. Comprehensive HIV knowledge and religious affiliations are positively associated with VSU, whereas living with parents is negatively associated with VSU. Additionally, people with physical and intellectual/mental disabilities are less likely to utilize VCT services than those with hearing/speech

impairments.

However, there are a few study limitations. The sample is non-representative. Therefore, the findings cannot be generalized. The small sample size prevents separate analysis by gender and urban/rural divides, which could influence VCT utilization (Eide et al., 2011; Leta et al., 2012; Venkatesh et al., 2011). Furthermore, hearing-impaired people are less represented in the sample due to field-guides' inability to use sign language. However, the sample is sufficient to analyse determinants of VSU among PWD in study areas. The consistent patterns of the predictors of VSU in the logistic regression indicate good data quality.

The HIV testing prevalence among study participants is lower than that of the general population in Addis Ababa (CSA & ICF International, 2012), suggesting lower access to VCT services than non-disabled persons. However, the finding is comparable to the situation when countries target PWD. This may suggest the effect of Ethiopia's implementation of a disability-inclusive NSP. The positive association between CHK and VSU conforms to other findings from Africa (Eide et al., 2011; Leta et al., 2012). This calls for interventions to include a CHK component in accessible formats.

Findings indicate that participants living with parents are less likely to utilize VCT services than other living arrangements. This can be due to larger representations of youth and unmarried respondents in the sample. Thus, they should receive attention to increase their VSU. The finding that people with mental/intellectual disabilities are less likely to utilize VCT services than others corroborates previous findings that they are more marginalized than other PWD in accessing SRH/HIV services (Olaleye et al., 2007).

Although educated participants are slightly more likely to report previous HIV testing than illiterates, education did not predict VSU in the logistic regression. Previous studies (Eide et al., 2011; Venkatesh et al., 2011) show gender differences in the association between

education and HIV testing/VCT utilization.

Conclusion

The study findings indicate HIV testing prevalence trend when countries target PWD.

Interventions should pay attention to specific sub-groups of PWD – youth, those living with parents, unmarried and those with physical and mental/intellectual disabilities. Further studies on comprehensive HIV knowledge and determinants of VSU by gender and urban/rural divides among PWD are necessary.

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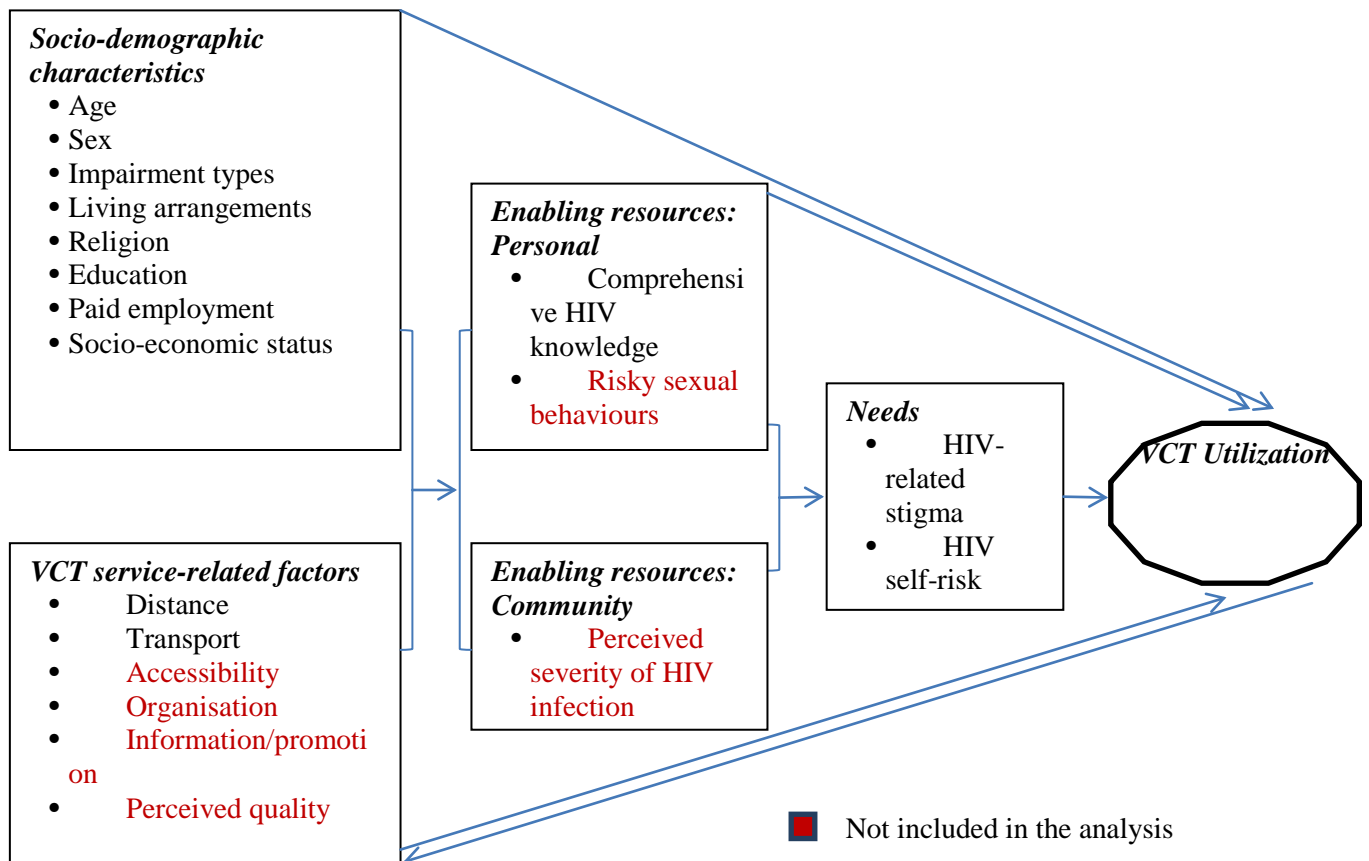


Figure 1: Suggested conceptual framework for VCT utilization (Andersen, 1995; Leta, Sandøy, & Fylkesnes, 2012)

Table 1: Frequency distribution of VCT uptake among participants

Variables	N (%)	Ever HIV tested n (%)	p-value
Total	412 (100)	219 (53.2)	
Comprehensive HIV knowledge			
No (< 5 correct responses)	285 (69.2)	132 (46.3)	<0.001
Yes (5 correct responses)	127 (30.8)	87 (68.5)	
HIV self-risk perception			
No	358 (86.9)	183 (51.1)	0.033
Yes	54 (13.1)	36 (66.7)	
HIV-related stigma			
Yes (< 4 correct responses)	324 (78.6)	170 (52.5)	0.592
No (4 correct responses)	88 (21.4)	49 (55.7)	
Distance from health facility			
A problem	176 (42.7)	82 (46.6)	0.021
Not a problem	236 (57.3)	137 (58.0)	
Transport to health facility			
A problem	178 (43.2)	85 (47.8)	0.055
Not a problem	234 (56.8)	134 (57.3)	
Age			
15-19	50 (12.1)	14 (28.0)	0.002
20-24	80 (19.4)	45 (56.3)	
25-29	83 (20.1)	52 (62.7)	
30-39	123 (29.9)	69 (56.1)	
40-49	76 (18.5)	39 (51.3)	
Sex			
Female	203 (49.3)	109 (53.7)	0.829
Male	209 (50.7)	110 (52.6)	
Education^{\$}			
No education	123 (29.9)	62 (50.4)	0.050
Primary education	161 (39.2)	78 (48.5)	
Secondary education/Higher	127 (30.9)	79 (62.2)	
Impairment types			
Hearing/Speech	29 (7.0)	18 (62.1)	<0.001
Vision	104 (25.2)	70 (67.3)	
Physical	198 (48.1)	108 (54.5)	
Mental/Intellectual	81 (19.7)	23 (28.4)	
Living arrangements			
Alone/ with others	190 (46.1)	106 (55.8)	<0.001
Live with spouse	114 (27.7)	80 (70.2)	
Live with both parents	108 (26.2)	33 (30.6)	
Paid employment			
No	284 (68.9)	134 (47.2)	<0.001
Yes	128 (31.1)	85 (66.4)	
Religion			
Others	23 (5.6)	11 (47.8)	0.689
Islam	51 (12.4)	25 (49.0)	
Orthodox	338 (82.0)	183 (54.1)	
Socio-economic status			
Poor	264 (64.1)	145 (54.9)	0.304
Medium	136 (33.0)	70 (51.5)	
Rich	12 (2.9)	4 (33.3)	

p-value = Pearson's Chi Square \$ N=411

Table 2: Logistic regression analysis of predictors of VCT utilization among participants

Variables	Ever HIV tested		
	Bivariate OR (SE)	First Model OR (SE)	Final Model OR (SE)
Comprehensive HIV knowledge			
No (< 5 correct responses)	1	1	1
Yes (5 correct responses)	2.50 (0.564)***	2.09 (0.291)***	2.11 (0.283)***
HIV self-risk perception			
No	1	1	1
Yes	1.90 (0.618)*	1.53 (0.762)	1.54 (0.709)
HIV-related stigma			
Yes (< 4 correct responses)	1	1	1
No (4 correct responses)	0.88 (0.375)	0.99 (0.431)	1.00 (0.452)
Distance from health facility			
A problem	1	1	1
Not a problem	1.61 (0.276)**	1.29 (0.317)	1.28 (0.386)
Transport to health facility			
A problem	1	1	1
Not a problem	1.63 (0.239)***	1.38 (0.416)	1.42 (0.453)
Age			
15-19	1	1	1
20-24	1.41 (0.472)	1.54 (0.530)	1.57 (0.498)
25-29	1.90 (0.611)*	1.48 (0.406)	1.49 (0.441)
30-39	1.80 (0.516)*	1.15 (0.576)	1.20 (0.644)
40-49	1.35 (0.424)	0.73 (0.114)*	0.74 (0.142)
Sex			
Female	1	1	1
Male	0.97 (0.050)	0.93 (0.082)	0.89 (0.091)
Education			
No education	1	1	1
Primary education	0.92 (0.222)	1.10 (0.503)	1.14 (0.521)
Secondary education/Higher	1.62 (0.416)	1.42 (0.629)	1.53 (0.611)
Impairment types			
Hearing/Speech	1	1	1
Vision	1.26 (0.549)	0.67 (0.367)	0.63 (0.357)
Physical	0.73 (0.300)	0.54 (0.156)*	0.50 (0.136)*
Mental/Intellectual	0.25 (0.112)**	0.33 (0.149)*	0.31 (0.145)*
Living arrangements			
Alone/with others	1	1	1
Live with spouse	1.86 (0.425)**	1.71 (0.446)*	1.69 (0.408)*
Live with both parents	0.35 (0.092)***	0.34 (0.081)***	0.33 (0.073)***
Paid employment			
No	1	1	1
Yes	2.20 (0.536)**	1.40 (0.445)	1.43 (0.486)
Religion			
Others	1		1
Islam	1.05 (0.325)		2.23 (0.261)***
Orthodox	1.30 (0.347)		2.10 (0.431)***
Socio-economic status			
Poor	1		1
Medium	0.86 (0.183)		0.95 (0.195)
Rich	0.41 (0.254)		0.61 (0.439)
Pseudo R square		0.139	0.144

N = 411, *p*-values *<0.05; **<0.01; ***<0.001, OR = odds ratio, SE = standard error adjusted for 4 clusters