Gender differences regarding barriers and motivators of HIV status disclosure among HIV-positive service users

Kebede Deribe, Kifle Woldemichael, Bernard Joseph Njau, Bereket Yakob, Sibhatu Biadgilign, Alemayehu Amberbir

Abstract

There are inconsistent findings about the relation between gender and HIV status disclosure. We conducted a facility-based cross-sectional study, using qualitative and quantitative data collection methods, to explore gender differences in HIV-positive status disclosure among service users in south-west Ethiopia. Among 705 participants, an equal number of men and women (94.6% men v. 94.3%, women) indicated that they had disclosed their result to someone, and the majority (90.9% men v. 90.7% women) to their current main partner. 'It is customary to tell my partner everything' was the most frequently cited reason for disclosing (62.5% men v. 68.5% women). Reasons for non-disclosure varied by gender: men were concerned about their partner's worry and exposure of their own unfaithfulness. Women feared physical violence, and social and economic pressure in raising their children. Factors that influenced disclosure also indicated gender variation. For men, disclosure of HIV results to a sexual partner was positively associated with knowing the partner's HIV status and discussion about HIV testing prior to seeking services, while for women it was associated with knowing the partner's HIV status, advanced disease stage, having no more than primary education, being married, and perceiving the current relationship as long-lasting.

There was no significant difference in the proportion of HIV status disclosure among men and women. However, the contextual barriers and motivators of disclosure varied by gender. Therefore it is important that clinicians, counsellors, and health educators underscore the importance of gender-specific interventions in efforts to dispel barriers to HIV status disclosure.

Keywords: *HIV, AIDS, disclosure, HIV result, serostatus disclosure, gender.*

Résumé

Il existe des conclusions contradictoires sur la relation entre le genre et la divulgation de l'état sérologique. Nous avons réalisé une étude transversale basée sur des installations de santé en utilisant des méthodes de collecte des données qualitatives et quantitatives pour explorer les différences de genre dans la divulgation de l'état sérologique parmi les usagers de services dans le Sud-ouest de l'Ethiopie. Parmi les 705 participants, un nombre égal d'hommes et de femmes (94.6% d'hommes contre 94.3% de femmes) ont indiqué qu'ils avaient divulgué leurs résultats à une autre personne, et la majorité (90.9% des hommes contre 90.7% des femmes) à leur partenaire actuel. 'Il est habituel que je dise tout à mon partenaire' était la raison fréquemment citée pour expliquer la divulgation (62.5% des hommes contre 68.5% des femmes). Les raisons de la non-divulgation variaient selon le genre: les hommes sont préoccupés par l'inquiétude de leur partenaire et l'exposition de leur propre infidélité. Les femmes craignent la violence physique et la pression sociale et économique pour élever leurs enfants. Les facteurs qui ont influencé la divulgation ont également indiqué une variation selon le genre. Pour les hommes, la divulgation des résultats du dépistage du VIH à un partenaire sexuel était positivement associée

Kebede Deribe (MPH) is a public health specialist working in Ethiopia. He holds a master's degree in public health and his research interests include health in humanitarian settings, migration and health, infectious disease and HIV/AIDS. He has published several journal articles.

Kifle Woldemichael (MD, MPH) is an Associate Professor of epidemiology in the Department of Epidemiology, Jimma University, Addis Ababa, where he has been serving as head of the Public Health Faculty. He has authored many articles in national and international journals.

Bernard Joseph Njau (MPH) is a public health specialist, and has been working for six years as assistant lecturer and research scientist, currently with KCMC-Duke University AIDS Program, Kilimanjaro Christian Medical College, Department of Community Health, Moshi, Tanzania. His research interests include HIV/AIDS voluntary counselling and testing (VCT), disclosure, and adolescent sexuality.

Bereket Yakob is a public health specialist and is currently working as regional co-ordinator for NASTAD Global Programme in Ethiopia on HIV/AIDS prevention. He graduated with a BSc. in Public Health from Alemaya University in 2002, and then with an MPH from Addis Ababa University, Ethiopia, in 2007. He has been working in leading positions in several public health programmes and also has two peer-reviewed articles published in international journals.

Sibhatu Biadgilign (MPHE) is currently TB/HIV/STI Advisor for John Hopkins University-Technical Support for the Ethiopian HIV/AIDS ART Initiative. He holds a Master of Public Health in Epidemiology from the Epidemiology and Biostatistics Unit of Jimma University. He was formerly a public health consultant for various organisations. His research interests focus on the TB/HIV, adherence to treatment, child survival and reproductive health epidemiology.

Alemayehu Amberbir (MPH) is a PhD fellow in Epidemiology and Public Health, University of Nottingham, Division of Epidemiology and Public Health, UK-Nottingham. He graduated in Public Health from Jimma University. He worked as lecturer in the same university. Currently he is working on respiratory epidemiology. His research interest is respiratory and reproductive epidemiology.

Correspondence to: Kebede Deribe (kebededeka@yahoo.com)

au fait de connaître l'état sérologique du partenaire et aux discussions sur le dépistage du VIH avant d'aller consulter, tandis que pour les femmes, elle était associée au fait de connaître l'état sérologique du partenaire au stade avancé de la maladie, au fait de ne pas avoir poursuivi d'études après l'école primaire, d'être mariée, et de percevoir la relation actuelle comme étant durable.

Dans cette étude, il n'existait pas de différence significative dans la proportion de divulgation de l'état sérologique parmi les hommes et les femmes. Cependant, les barrières contextuelles et les motivations de la divulgation variaient selon le genre. Il est par conséquent important que les cliniciens, les conseillers socio-psychologiques, les éducateurs en santé soulignent l'importance des interventions spécifiques au genre dans les efforts visant à éliminer les barrières à la divulgation de l'état sérologique.

Mots clés: *VIH, SIDA, divulgation, résultats du dépistage du VIH, divulgation de l'état sérologique, genre.*

Introduction

There is a strong relationship between gender and HIV/AIDS. Gender inequalities in sexual relationships are associated with increased risk of HIV infection. Socio-cultural norms about masculinity and femininity, and the unequal power relations between men and women that arise from those norms, interact with biological and physiological factors to compound an individual's risk of infection, resulting in epidemics of significant size and proportion in different parts of the world (Commonwealth Secretariat, 2002). HIV/AIDS in turn worsens gender inequality. Differentials in gender power dynamics affect both women's and men's behaviour, and their ability to protect themselves from HIV infection, as well as to access treatment, care and support once infected (World Health Organisation Europe, 2004; World Health Organisation, 2003).

Research shows that socially constructed differences between women and men in roles and responsibilities, status and power, interact with biological differences between the sexes. These differences contribute to differences in the nature of HIV/AIDS problems experienced, health seeking behaviour of those affected, and responses of the health sector and society (World Health Organisation, 2003). However, it is important to remember that there are major knowledge gaps. More is known about differences between males and females in some aspects of HIV, such as prevalence rather than HIV positive status disclosure; and about the situation in industrialised countries rather than in the developing world (World Health Organisation Europe, 2004).

Though many studies of HIV status disclosure have been conducted in sub-Saharan Africa (SSA), only a few have examined gender differences in HIV-positive status disclosure. In a recent South African study rate of disclosure to sexual partner was found to be higher among men compared with women (84% v. 78 %) (Skogmar *et al.,* 2006). However, in another South African study (Olley, Seedat & Stein, 2004), as well as one in Burkina Faso (Ndiaye *et al.,* 2006), it was found that men were less likely to disclose their HIV status. In studies conducted in Mali (Ndiaye *et al.*, 2006) and Central Ethiopia (Lemma & Habte, 2008) there was no gender variation in HIV status disclosure. However, most of the studies were not designed to detect gender differences. In the light of inconsistent findings about the relation between gender and HIV status disclosure, continued scientific efforts are needed to better understand the factors that might further differentiate the gender disclosure relation.

Nowhere is the HIV epidemic more feminised than in SSA, where 61% of infected people are women (UNAIDS/WHO, 2007). Similarly in Ethiopia, in recent years, the overall proportion of HIV-positive women has steadily increased (Berhane *et al.,* 2006). In 2001, women were 50% of people living with HIV (Ministry of Health, Disease Prevention and Control Department, 2002), and by 2005 this figure had risen to almost 55% (Ministry of Health Ethiopia & Federal HIV/AIDS Prevention and Control Office, 2006). Several social factors are driving this trend. Young women tend to have male partners much older than themselves – partners who are more likely than young men to be HIV infected. Gender inequalities in the region make it much more difficult for women to negotiate condom use. Furthermore, sexual violence, which damages tissues and increases the risk of HIV transmission in women, is widespread (UNAIDS, 2004).

Underlying this is the fact of women's and girls' inequality that shapes their increased vulnerability to HIV infection, and their disproportionately high responsibilities as caregivers for the sick and dying, as well as for the living. Thus, while physiology affects women's greater risk of HIV transmission, it is women's and girls' lack of power over their bodies and their sexual lives, supported and reinforced by their social and economic inequality, that make them such a vulnerable group in contracting and living with HIV/AIDS (Roah & Weiss,1996). Gender-based discrimination hinders women's ability to know about, access, and negotiate use of effective protection methods, and to respond to the consequences of HIV infection for themselves and their families. The vulnerability of women and girls to HIV and AIDS is compounded by other human rights issues, including lack of adequate access to the information, education and services necessary to ensure sexual health; by sexual violence; by harmful traditional or customary practices affecting the reproductive health of women and children (such as early and forced marriage); and by lack of legal capacity and equality in family matters (UNIFEM, 2001).

Given the rapid increase in the number of women infected with HIV in Ethiopia, it is important to understand gender differences in HIV status disclosure, in order to combat the rapid spread of HIV in the country. A study conducted in Addis Ababa among men and women at their civil marriage ceremonies, indicated that 95.9% of men and 89.4% of women had the intention to disclose their results to their partner (Habte, Deyessa & Davey, 2006). Based on the only available finding in the country, we hypothesised that men would be more likely to disclose their

HIV-positive results than women. This study attempted to answer two primary research questions: (1) Are there gender differences in HIV-positive status disclosure? (2) What are the motivators and barriers regarding HIV-positive status disclosure among men and women?

Understanding gender differences in HIV disclosure to partners is an important step in designing gender-sensitive approaches to promote disclosure among people living with HIV. To facilitate better outcomes for HIV-positive individuals and their partners, one must examine the factors that contribute to the decision to disclose, the process of disclosure, and its impact on HIV-positive individuals and their partners.

Methods

Study setting

The study was conducted in Ethiopia, where there are estimated to be 977 394 people living with the HI virus (PLHIV), resulting in 71 902 HIV-related deaths in 2007 (Ministry of Health Ethiopia & Federal HIV/AIDS Prevention and Control Office, 2007). The national prevalence of HIV in 2008 was estimated to be 2.2% (Ministry of Health Ethiopia & Federal HIV/AIDS Prevention and Control Office, 2007). The country is one of the least developed countries in the world, with a per capita gross national income of US$110 (World Bank, 2006). Jimma University Specialised Hospital (JUSH) is the biggest hospital located in south-west Ethiopia. The hospital offers different HIV-related services, including voluntary counselling and testing (VCT), prevention of mother-to-child transmission (PMTCT), antiretroviral therapy (ART), and treatment of opportunistic infection. By the end of 2006 there were 2 036 PLHIV receiving services in the hospital. This study was conducted in JUSH from January to March 2007.

Sample and sample size determination

The sample size was calculated using Epi-Info version 6.0 statistical software. The results of a previous study (Deribe, Lingerh & Dejene, 2005) conducted in south-west Ethiopia, that showed disclosure among women to be 69%, was used to calculate the sample size for the present study. To detect a 10% difference in the rate of disclosure with 95% confidence interval (CI) and 80% power, a sample size of 321 in each group, male and female, was calculated. With the addition of a 10% non-response rate, the final sample size became 706.

Of the 2 036 people living with HIV (PLHIV) utilising various ongoing services in the hospital, 915 were taking ART, while the others were using pre-ART services. The overall male:female ratio was 1:0.9. The 144 PLHIV younger than 18 years of age were excluded from the preliminary survey, which was conducted to produce a sampling frame. A total of 1 576 (83.3%) PLHIV came to the hospital to receive services during the period, and were asked whether they currently had a sexual partner and were sexually active. A total of 856 (54.3%) (483 women and 373 men) PLHIV reported having a sexual partner and being sexually active. Two separate sampling frames for men and women were produced. Out of 856 PLHIV eligible for the study, we randomly selected 706 (353 men and 353 women).

To complement the quantitative results, 11 in-depth interviews and 11 key informant interviews were conducted with purposively selected individuals. Eleven in-depth interviewees (four male and seven female) were purposively selected individuals who did not disclose their result to their main partner, individuals who disclosed their result to a main partner, and people who disclosed publicly. Key informants included eight counsellors and three representatives of PLHIV associations and organisations involved in care and support activities.

Measurements

Quantitative

The dependent variable for this study was HIV-positive status disclosure to a main partner. A multiple response question was asked to determine patterns of disclosure to others: 'Have you told any one of the following that you are HIV positive?' Then the outcomes of disclosure specific to sexual partner were assessed. If an individual did not disclose to their sexual partner, the reasons for non-disclosure were probed.

Data were collected by a pre-tested questionnaire, which was adopted, from different studies (Kassaye, Lingerh & Dejene, 2005; Sauka & Lie, 2000). A wide range of independent variables were utilised. Socio-demographic characteristics included: age categorised into four groups (18 - 20, 21 - 25, 26 - 35 and >35), sex, monthly family income, education divided into two categories (primary or less school, secondary and above), religion, marital status divided into two categories (married and unmarried), occupation, place of residence (urban and rural). Relationship factors included: number of partners, duration of relationship divided into two categories (≤4 years and >4 years), expectation about relationship (long-lasting and short-lasting), discussion about HIV (yes, no) and partner HIV status as reported by participants (HIV positive, HIV negative or unknown). Health status variables included: disease stage based on WHO classification (World Health Organisation, 1990), duration of test result divided into two categories (<1 year and ≥1 year), service related factors (type of counselling [individual, couple], availability of follow up and ART), psycho-social factors (stigma, social support, support group membership, depression, current substance and alcohol use). Self-efficacy to disclosure was also measured using four questions with different scenarios, which assessed the ability of the individual to disclose. Each of the questions required a response on a four-point scale (strongly agree to strongly disagree). Similarly, perceived severity, benefit and susceptibility were each measured with four Likert scale questions. The composite index was calculated as the mean of the four Likert scale questions combined, dichotomised into a bivariate variable.

Perceived stigma was measured using 23 variables, and depression was measured by the Beck Depression Inventory (BDI)-13 (Kalichman, Rompa & Cage, 2000). Stigma was measured using measures drawn from a scale on stigma previously used among people living with HIV/AIDS (Berger, Ferrans & Lashley, 2001). The set of 23 Likert scale questions addressing the perception of stigma and HIV were grouped into a composite index. The

composite index was calculated as the mean of the four Likert scale questions combined, dichotomised into a bivariate variable.

Qualitative

A semi-structured open-ended interview guide was used for the in-depth interviews. The guide included questions which assessed the role, knowledge, beliefs and experiences regarding HIV status disclosure. On average each interview took one hour. In our analysis, individual-level variables refer to the cognitive factors, while the relational-level variables refer to the characteristics of the partner or the dynamics between partners that influenced disclosure or non-disclosure.

Data analysis

Quantitative data analysis

Quantitative data were edited, cleaned, coded, entered and analysed using SPSS version-12.0.1 for Windows. Descriptive statistics were calculated to determine rate of disclosure and other outcomes. Bivariate analyses were done to determine the presence of a statistically significant association between explanatory variables and the outcome variable. To identify independently associated factors, multiple logistic regression was used, and *t*-tests were used to compare means. Two logistic regression models (women and men) were performed, with disclosure as the outcome variable. All explanatory variables that were associated with the outcome variable in bivariate analyses, variables with a *p*-value of ≤0.05, were included in the logistic models. *p*-value ≤0.05 was used to enter a variable in the model and >0.05 to remove a variable from the model.

Qualitative data analysis

All tape-recorded interviews were transcribed verbatim. The transcribed text from each informant was translated from Amharic to English. Observation notes were taken during each interview. The data were transcribed and analysed manually by the first author, in line with the objectives of the study. The translated text document of the note and the transcribed information were coded. Reading and coding were initiated while the data was being collected. The texts were read repeatedly to identify major themes. Each of these themes was broken down into discrete concepts. Notes were made during the analysis, and served to capture the analytic thought processes as they occurred. Using the story line as a guideline, subsidiary categories were related both to the core category and to each other at their dimensional level. In the end, those relationships were validated against data. Finally an overall interpretation was done, about how thematic areas related to one another, explaining how the various concepts related to the study question, and gender differences were scrutinised. These data were compared with the quantitative data, and some quotes from the qualitative data were integrated and presented in parallel with the quantitative information to elaborate the insights of the participants.

Ethical clearance

The study protocol was granted approval from the Research Ethics Committee at Jimma University, and permission was also obtained from the Hospital administration. All the research participants gave their consent to be interviewed anonymously.

Results

Sociodemographic characteristics of participants

The study was based on a sample of 706 randomly selected individuals. A total of 353 women and 352 men respondents were interviewed, yielding a response rate of 99.9%. The mean age for men was 34.36±8.16 (mean±SD) years, while it was 28.99± 6.52 (mean± SD) for women. The median monthly family income was 250 (first and third quartiles; 150, 470) Ethiopian Birr (ETB). The socio-demographic characteristics of participants are summarised in Table 1. In addition a total of 22 in-depth interviews were conducted with 11 key informants and 11 PLHIV who did not participate in the quantitative study. Seven of the PLHIV were female; their years of education ranged from 0 to 14. Five of them did not disclose to their partner and two publicly disclosed. The key informants were eight counsellors (two males and six females) and three representatives of care and support givers and associations of PLHIV (one male and two female).

Quantitative findings

Psychosocial and clinical characteristics of participants

Most individuals (86.9% of men and 86.1% of women) underwent HIV testing alone, while the rest did so with their partner. Testing was raised by the provider in 15.1% of men and 17.0% of women, while it was self-initiated in the rest. The main reason for testing was illness (48.8%), followed by just wanting to know one's status (21.6%), own past sexual behaviour (9.8%), and prevention of mother-to-child transmission (7.5%). Overall 78.7% of men and 64.4% of women were taking ART. Most of the participants (81.2% of men and 70.2% of women) had stage III and stage IV of WHO clinical stages. In 33.2% of men and 24.1% of women there was moderate depression based on BDI-13 scale. Men were more depressed than women (p=0.009). Most of the participants (80.7% of men and 78.2% of women) reported that they knew their partner's HIV status. Most had HIV-positive partners; however, 13.1% of men and 10.8% of women reported having HIV-negative partners, and 19.3% of men and 21.8% of women had sex partners whose HIV status they did not know.

Gender disaggregated HIV status disclosure

Among the 705 participants, 94.6% of men (N=333) and 94.3% of women (N=333) indicated that they had disclosed their result to at least one individual, while 90.9% of men and 90.7% of women had disclosed their result to their current main partner. However, of those disclosed, 14.1% of men and 14.4% of women had sex with their partner before telling their result to their partner. There was no significant difference in disclosure and engaging in sexual practices before disclosure between men and women participants (Table 2).

Reasons for disclosure and non-disclosure

A main reason for disclosing to a sexual partner was that it was 'usual to tell him/her every secret thing' (62.7% of men v. 68.5% of women) to the sexual partner. The second common reason reported by the participants was seeking support from the partner (50.8% of men v. 50.9% of women). Other reasons mentioned were protecting the loved one, spiritual responsibility, being a prerequisite for getting married, and fear of legal accusation. The study revealed that more men than women reportedly cited 'I do

Table 1. Basic socio-demographic characteristics of respondents, Jimma University Specialised Hospital, March 2007

Variable	Men (*N*=352) *N* (%)	Women (*N*=353) *N* (%)	*p*-value**
Age (years)			<0.001
18 - 20	4 (1.1)	28 (7.9)	
21 - 25	36 (10.2)	98 (27.8)	
26 - 35	185 (52.6)	173 (49.0)	
> 35	127 (36.1)	54 (15.3)	
Education			<0.001
Illiterate	31 (8.8)	70 (19.8)	
Primary	90 (25.6)	118 (33.4)	
Secondary	130 (36.9)	107 (30.3)	
Post secondary	101 (28.7)	58 (16.4)	
Religion			0.371
Christian	258 (73.3)	247 (70.0)	
Muslim	106 (26.7)	106 (30.0)	
Place of residence			0.424
Urban	257 (73.0)	268 (75.9)	
Rural	95 (27.0)	85 (24.1)	
Employment			<0.001
Employed	275 (78.3)	116 (33.0)	
Not employed	76 (21.7)	236 (67.0)	
Marital status			0.264
Married	299 (84.9)	311 (88.1)	
Unmarried	53 (15.1)	42 (11.9)	
Monthly family income(ETB) *			0.020
<500	247 (70.2)	277 (78.5)	
501 - 999	48 (13.6)	38 (10.8)	
>1 000	31 (8.8)	18 (5.1)	
Unstated	26 (7.4)	20 (5.7)	

* Exchange rate 1 USD = 8.6 Ethiopian Birr (ETB)

** Chi square test.

Table 2. Rate of HIV status disclosure among HIV-positive service users, Jimma University Specialised Hospital, March 2007

Variables	Men *N* (%)	Women *N* (%)	*p*-value*
Disclosure to anyone (*N*=705)			0.876
Yes	333 (94.6)	333 (94.3)	
No	19 (5.4)	20 (5.7)	
Disclosure to main sexual partner (*N*=705)			0.906
Yes	320 (90.9)	320 (90.7)	
No	32 (9.1)	33 (9.3)	
Sex before disclosure (delayed disclosure) (*N*=639)			0.987
Yes	45 (14.1)	46 (14.4)	
No	275 (85.9)	273 (85.6)	

*Chi square test.

not want to risk her' as a motivator of disclosure (43.7% of men v. 23.1% of women, $p<0.001$). There were no significant differences between men and women in the other motivators (Table 3).

Reasons for non-disclosure among those respondents who did not disclose their test results to their partner (*N*=65) varied by gender. As depicted in Table 4, it is evident that men were more concerned about the partner's anger and did not want to worry her; while women were more concerned about separation/divorce, physical attacks and acts of murder. In general there were three categories of response: anger – repercussions directly affecting the notifying partner; worry – disturbing effect limited to the notified partner only (worry, too many problems to deal with, too young to handle it); and fear – fear of catching HIV. Concern about causing their partner to fear for their own health was the area with the biggest difference between the sexes (Table 4).

Table 3. Reasons which motivate respondent to disclose to their main partner, Jimma University Specialised Hospital, March 2007

Reasons for disclosure	Male *N* (%)	Female *N* (%)	*p*-value*
It is usual to tell him/her every secret things			0.147
Yes	198 (62.7)	217 (68.5)	
No	118 (37.3)	100 (31.5)	
I want to get his/her support			1.000
Yes	161 (50.9)	161 (50.8)	
No	155 (49.1)	156 (49.2)	
I do not want to risk him/her			<0.001
Yes	138 (43.7)	73 (23.1)	
No	178 (56.3)	243 (76.9)	
I feared God to hide such things			0.054
Yes	37 (11.7)	22 (6.9)	
No	279 (88.3)	295 (93.1)	
To get married			0.400
Yes	9 (3.4)	11 (5.4)	
No	256 (96.6)	192 (94.6)	
I do not want to be legally accused			1.000
Yes	3 (0.9)	3 (0.9)	
No	313 (99.1)	314 (99.1)	

*Chi square test.

Table 4. Reasons for not disclosing HIV status to main sexual partner among HIV-positive service users, Jimma University Specialised Hospital, March 2007

Reasons for non-disclosure	Male Freq. (%)	Female Freq. (%)	Total Freq. (%)
She/he might get angry with me	13 (28.9)	7 (13.2)	20 (20.4)
She/he might leave me	6 (13.3)	11 (20.8)	17 (17.3)
She/he might be afraid of catching HIV from me	11 (24.4)	5 (9.4)	16 (16.3)
I do not want to worry him/her	4 (8.9)	5 (9.4)	9 (9.2)
She/he might think I am unfaithful	3 (6.7)	4 (7.5)	7 (7.1)
She/he might think I am a bad person	5 (11.1)	1 (7.5)	6 (6.1)
No enough time to discuss (he works away)	0 (0.0)	6 (11.3)	6 (6.1)
She/he might hurt me physically	0 (0.0)	5 (9.4)	5 (5.1)
She/he might kill me	0 (0.0)	4 (7.5)	4 (4.1)
The person may tell others	0 (0.0)	3 (5.7)	3 (3.1)
There is no need to tell until I am sick	1 (2.2)	2 (3.8)	3 (3.1)
She/he had too many other problems to deal with right now	1 (2.2)	0 (0.0)	1 (1.0)
She/he is too young to handle it	1 (2.2)	0 (0.0)	1 (1.0)

Gender disaggregated factors associated with disclosure

In the multivariate logistic regression analyses for men, two variables (prior discussion about HIV tests and knowing partner's HIV status) were found to be associated with disclosure to a partner (Table 5). Men who did not report prior discussion about the HIV test with their partners were 86% less likely to disclose their result, in comparison with those who reported having prior discussions (AOR,0.14; 95% CI 0.05-0.40). Knowledge of partner's HIV status was also significantly associated with partner disclosure among male participants. Men reporting not knowing their partner's HIV status were 99% less likely to disclose to a partner, in comparison with those who did know their partner's status (AOR, 0.01; 95% CI 0.00-0.07).

For women, five variables (clinical stage of disease, perception about relationship, marital status, educational status of the respondent, and knowing partner's HIV status) were found to be associated with disclosure to a partner. Clinical stage of the disease was found to be associated with disclosure. Women in the early stages (WHO stages I & II) of disease were 86% less likely to disclose to a partner compared with those in advanced stages (stages III & IV) of disease (AOR, 0.14; 95% CI 0.04-0.47). Women's perceptions about their relationship were also significantly associated with disclosure. Women who perceived that their relationship would end shortly were 92% less likely to disclose than those who perceived that their relationship was long lasting (AOR, 0.08; 95%CI 0.01-0.77). Similarly, women who were not married were 92% less likely to disclose their result compared with married women (AOR, 0.08; 95%CI 0.02-0.33). In comparison with women who had primary level education or less, women who had secondary level education and above were 77% less likely to disclose (AOR, 0.23; 95%CI 0.08-0.69). Finally, similar to men, women who reported not knowing their partner's HIV status were 99% less likely to disclose to a partner

Table 5. Gender disaggregated factors independently associated with disclosure of HIV-positive test result to a partner among HIV-positive service users, Jimma University Specialised Hospital, March 2007

Variables	Disclosed *N* (%)	Not disclosed *N* (%)	Unadjusted Odds Ratio (95% CI)	Adjusted Odds Ratio* (95% CI)
Men				
Talked about testing with partner before test				
Yes	307 (96.5)	11 (3.5)	1.0	1.0
No	13 (38.2)	21 (61.8)	0.03 (0.01-0.07)	0.14 (0.05-0.40)
Know partner's HIV status				
Yes	283 (99.6)	1 (0.6)	1.0	1.0
No	37 (54.4)	31 (45.6)	0.004 (0.00-0.03)	0.01 (0.00-0.07)
Women				
WHO stage of disease				
Stage I - II	86 (81.9)	19 (18.1)	0.27 (0.13-0.57)	0.14 (0.04-0.47)
Stage III - IV	23 (94.3)	14 (5.7)	1.0	1.0
Expectation about relation				
Long-lasting	310 (92.0)	27 (8.0)	1.0	1.0
Short-lasting	7 (58.3)	5 (41.7)	0.12 (0.04-0.41)	0.08 (0.01-0.77)
Educational status of respondent				
Primary or less	178 (94.7)	10 (5.3)	1.0	1.0
Secondary and above	142 (86.1)	23 (13.9)	0.35 (0.16-0.75)	0.23 (0.08-0.69)
Marital status				
Married	289 (92.9)	22 (7.1)	1.0	1.0
Unmarried	31 (73.8)	11 (26.2)	0.22 (0.09-0.48)	0.08 (0.02-0.33)
Know partner's HIV status				
Yes	273 (98.9)	3 (1.1)	1.0	1.0
No	47 (61.0)	30 (39.0)	0.02 (0.01-0.06)	0.01 (0.00-0.05)

*Adjusted for socio-demographic variables, psychosocial, partnership, illness and service-related factors.

in comparison with those who did know their partner's status (AOR, 0.01; 95% CI 0.00-0.05).

Qualitative findings

Disclosure experience among respondents

In the interviews with PLHIV, men and women described a combination of individual and relational level factors that influenced their disclosure or non-disclosure experiences with their partners. What follows is a presentation of these factors described by the 22 informants we interviewed.

HIV disclosure experiences varied by gender. Respondents mentioned relational-level variables rather than individual-level variables to describe their disclosure experiences with their partners. For men, non-disclosure was influenced by fear of a partner's reaction and exposures of past sexual behaviour. Men were concerned about their partner's worry and exposure of their unfaithfulness. They anticipated that their partner would panic, while others felt that their past misbehaviours would be exposed:

> *If I tell her this thing [HIV-positive status] she may be frightened. She can even die at the hearing of such information.* (HIV-positive male, 46 years, married).

At the individual level, perceived fear of exposure of past sexual behaviour was a prominent factor that influenced decisions around disclosure among men respondents:

> *She was nagging me about a relation with a woman in the nearby town. I denied her the issue [extramarital affair]. You know telling her I am HIV-positive is accepting those shameful acts.* (52-year-old married man).

However, the contextual meaning of fear of partner reaction was different among women. For women, fear of physical violence, and social and economic pressure in raising their children once they are abandoned were the two most salient variables that influenced non-disclosure experiences. For many women, perceived fear of physical violence following disclosure decreased their willingness to disclose:

> *I did not tell him my HIV-positive status [Why didn't you tell him?] I know he is aggressive. Let alone big issues like this [HIV] may make him hit me for simple things. If I tell him he will kill me. [So you do not tell him?]Let me ask you a question; do you want to die today or tomorrow? Tell me... if I tell him today he will kill me today, but with the disease [HIV/AIDS] I can stay for awhile.* (HIV-positive female, 35 years, married).

Furthermore, perceived fear of abandonment and the social and economic consequences of HIV-positive serostatus disclosure were mentioned as barriers to disclosure among most women:

> *I am afraid to tell him, he will leave me. It will be difficult to raise this child alone. Sometimes I decide to go to my family, but*

it is shame to go with this child 'dikalla' [bastard]. (38-year-old married woman).

In addition, fear of being blamed as the cause of the infection was mentioned by most respondents as a barrier to disclosure. The partner who tested positive first would be considered to have introduced the infection into the relationship. So both men and women said they did not want to be the first to disclose. Fear of being blamed as the source of HIV infection among couples is well illustrated by the following quote:

It took me one month to tell him that I am HIV positive. I was afraid to tell him because we met while I was working in a bar. I feared that I might be the source of infection. (24-year-old married woman).

Past sexual behaviour was also central to respondents' decisions around whether or not to disclose to their partner. Individuals who were faithful to their relationships and those who did not have past high-risk sexual behaviour were comfortable to disclose:

Just immediately when I returned home he was there. I told him that I tested my blood and I got HIV. He did not say anything. I know myself I do not know anyone except him and I know he is going out. (HIV-positive female, 40 year, married).

Relational-level variables with family members

Fear of family members' reactions, and responsibility to support the family were two of the most prominent relational-level factors that influenced the decision to share HIV-positive results with family members. The reaction that most respondents seemed to fear most was disappointment among parents:

I would have told my mother and father, but I think they would be heartbroken. I'm the only for them; I've always been helping them. And for them to know that I have HIV would be very hard. I do not want to disturb them. (HIV-infected, 32-year-old, married man).

Perceived stigma and discrimination

It was not surprising for respondents to voice fear of stigma and discrimination, as a prominent relational-level variable that influenced the decision to disclose HIV-positive status, particularly to neighbours and house owners. The quotation below poignantly describes the perceived stigma and discrimination experienced by HIV-positive infected individuals:

How do I tell others? People are much discriminated, I am looking on others, don't go near, don't eat what she give you, things like that. I don't want to bring shame for my children. It will be difficult to my children, with whom do they play? (HIV-positive female, 35 years, married).

Counsellors also stated that fear of displacement from rented houses was the other barrier to disclosure. They said that HIV-positive individuals who lived in rented houses were usually chased away once they were suspected of being HIV positive.

Discussion

The current study focuses on determining gender differences in HIV status disclosure, and motivators and factors associated with HIV status disclosure to sexual partners among service users in south-west Ethiopia. No significant difference was found in the proportions of men and women who had disclosed their HIV status. However, the contextual barriers and motivators of disclosure varied by gender.

Many of these findings are similar to studies conducted elsewhere and will be discussed in relation to these studies. In this study there was no gender difference in HIV status disclosure in general (94.6% of men v. 94.3% of women), and to current main partner in particular (90.9% of men v. 90.7% of women). Similarly, another study among African Americans found no gender differences in HIV status disclosure to partner (Kalichman & Nachimson, 1999). One study conducted in Mali found no gender differences, while part of the same study from Burkina Faso found that men were less likely to disclose than women (Ndiaye *et al.*, 2006). Similarly, in South African studies (Olley *et al.*, 2004; Simbayi *et al.,* 2007) it was found that being male was associated with non-disclosure of HIV status. In contrast, Skogmar & colleagues (2006) found slight gender differences in HIV status disclosure to partners (84% of men v. 78% of women), with men more likely to disclose than women. These discrepancies might be attributed to the fact that all the studies detected gender difference as a secondary outcome.

Although there did not appear to be gender differences in the overall rate of HIV status disclosure to partners, there were significant differences in barriers and motivators of disclosure. For example, based on the qualitative interviews there were gender differences in the contextual meaning of fear of partner reaction. The reaction that women feared most was the concern that their male partner would leave the relationship, and that their children would have to grow up without a father if they were to disclose to him. Other women raised fears of physical harm. On the other hand, men's fear about disclosure related to their concern of gossiping about their past sexual behaviour, and fear that their partner might not cope well with the news. Specifically, those women who feared break-up of the relationship relied on their partners financially for assistance with livelihood and child care, and thus were fearful of disclosing their HIV status to their partners, due to concerns that disclosure might result in a loss of the resources provided by the partner. This was consistent with other studies (Armistead, Morse, Forehand, Morse & Clark, 1999; Maman *et al.*, 2003). This highlights the importance of gender specific approaches in HIV counselling, in order to address the different concerns of men and women.

Reasons for non-disclosure varied by gender: men were more concerned about their partners' reactions, while women were more concerned about material support. The study revealed that more men more reportedly cited 'I do not want to risk her' as a motivator of non-disclosure than women. This might be due to the widespread notion that HIV-positive women have acquired the infection from their current partner. Similarly, women who are HIV-positive may assume that they acquired the infection

from their current partner – thus thinking of no need to protect him. Concern about causing their partner to fear for their own health was the area with the biggest difference between the sexes. Men were more concerned about causing their partner to fear catching HIV. This difference might be the way men and women express their concerns; women may express their concerns through pragmatic ways such as pulling away emotionally and resisting sex.

In the logistic regression models looking at the factors that influenced disclosure, the factors that remained significant had to do with characteristics of the relationship (knowing serostatus of partner, type and longevity of relationship, and discussing testing with partner before test) and not of the individual. This reflects the importance of partnership characteristics and dynamics in influencing disclosure. These results highlight the importance for clinicians of assessing partnership characteristics when counselling their HIV positive patients about disclosure.

The type and perception of the relationship between the woman and her partner were major determinants of disclosure. Women who were unmarried and those who perceived that their relationship would end soon, were less likely to disclose to their partners, in comparison with women who were married and who perceived the relationship would lead to a long-term partnership. Similar findings were reported in other studies (Antelman *et al.*, 2001; Peterson, DiClemente, Wingood & Lang, 2006). Women in newer or non-marital partnerships may feel more vulnerable to accusations of infidelity or having being infected before the beginning of their current partnership. Moreover, women's confidence in the stability and longevity of the relationship seemed to give them the courage to disclose.

Women in late stages of the disease were found to be more likely to disclose their results as compared with those in the early stages. Perhaps a woman will wait until the later stages of illness before she feels compelled to reveal her diagnosis. At the late stage of disease, concerns regarding health and mortality may supersede fears of rejection and discrimination due to AIDS-related stigma, so that the perceived potential benefits outweighed the perceived risks (Almeleh, 2006). Or it may simply reflect the fact that it becomes difficult to conceal their illness from their partners at a late disease stage.

The results here should be interpreted with caution. First, the study was conducted among service users in a hospital set-up, which may overestimate disclosure and cannot necessarily be generalised to other groups living with HIV/AIDS. In the study the number of individuals who did not disclose their result was quite low. The study was also limited in that it relied on self-report. It is known that self-reported behaviour is always subject to reporting bias. Nevertheless, these data emphasise the extent to which lack of disclosure of HIV serostatus remains an important issue, and the need to focus additional attention on this issue.

Conclusion and recommendations

In conclusion, in this study there was no significant difference in the rate of HIV status disclosure among men and women. However, the contextual barriers and motivators of disclosure varied by gender. Therefore it is important that clinicians, counsellors and health educators underscore the importance of gender-specific interventions in the efforts to dispel barriers to HIV status disclosure. Efforts in promoting disclosure should be gender sensitive and should focus on individual and partnership characteristics.

Acknowledgement

This study was carried out with financial support obtained from the Netherlands Government Multi-Country Support Programme on Social Science Research in the field of HIV/AIDS, awarded to Kebede Deribe, PI. The authors thank the staff of Children Aid-Ethiopia and the SSR Ethiopian National Steering Committee for facilitation of financial matters. Lastly our thanks go to data collectors, and all research participants who took part in the study.

References

Almeleh, C. (2006). A qualitative study into the impact of HIV disease progression on initial HIV-serostatus disclosure to significant others. *XVI International AIDS Conference:* Abstract no. MOAD0101.

Antelman, G., Fawzi, S., Mary, C., Sylvia, K., Jessie, M., Msamanga, G.I., Hunter, D.J., & Fawzi, W.W. (2001). Predictors of HIV-1 status disclosure: A prospective study among HIV-infected pregnant women in Dar es Salaam, Tanzania. *AIDS,* 15, 1865-1874.

Armistead, L., Morse, E., Forehand, R., Morse, P., & Clark, L. (1999). African-American women and self-disclosure of HIV infection: Rates, predictors, and relationship to depressive symptomatology. *AIDS and Behavior,* 3 (3), 195-204.

Berger, B.E., Ferrans, C.E., & Lashley, F.R. (2001). Measuring stigma in people with HIV: psychometric assessment of the HIV stigma scale. *Research in Nursing & Health,* 24, 518-529.

Berhane, Y., Wuhib, T., Sanders, E., Lulseged, S., Ismail, S., Melaku, Z., & Kloos, H. (2006). HIV/AIDS. In: Y. Berhane, D. Hailemariam & H. Kloos (eds): *The epidemiology and ecology of health and disease in Ethiopia* (pp 446-474). Addis Ababa: Shama Books.

Commonwealth Secretariat (2002). *Gender mainstreaming in HIV/AIDS: Tracking a multisectoral approach.* London: Commonwealth Secretariat.

Deribe, K.K., Lingerh, W., & Dejene, Y. (2005). Determinants and outcomes of disclosing HIV-sero positive status to sexual partners among women in Mettu and Gore towns, Illubabor Zone southwest Ethiopia. *The Ethiopian Journal of Health Development,* 19(2), 126-131.

Habte D., Deyessa N., & Davey G. (2006). Assessment of the utilisation of pre-marital HIV testing services and determinants of VCT in Addis Ababa, 2003. *The Ethiopian Journal of Health Development,* 20, 18-23.

Kalichman, S.C., & Nachimson, D. (1999). Self-efficacy and disclosure of HIV positive serostatus to sex partners. *Health & Psychology,* 18, 281-287.

Kalichman, S.C., Rompa, D., & Cage, M. (2000). Distinguishing between overlapping somatic symptoms of depression and HIV disease in people living with HIV-AIDS. *The Journal of Nervous and Mental Disease,* 188, 662-670.

Kassaye K.D., Lingerh W., & Dejene Y.(2005). Associated factors and outcomes of disclosing HIV-sero positive status to sexual partners among women in Mettu and Gore towns, Illubabor Zone southwest Ethiopia. *The Ethiopian Journal of Health Development,* 19, 126-131.

Lemma, F., & Habte, D. (2008). The status of HIV positive sero-status disclosure to regular partners in Central Ethiopia, 2007. *XVII International AIDS Conference:* Abstract no. THPE0437.

Maman, S., Mbwambo, J.K. Hogan, N.M., Weiss, E.,Kilonzo, G.P., & Sweat, M.D. (2003). High rates and positive outcomes of HIV-serostatus disclosure to sexual partners: Reasons for cautious optimism from a voluntary counselling and testing clinic in Dar es Salaam, Tanzania. *AIDS and Behavior,* 7(4), 373-382.

Ministry of Health Ethiopia & Federal HIV/AIDS Prevention and Control Office (2006). *AIDS in Ethiopia. 6th Report.* Addis Ababa: Ministry Of Health Ethiopia & Federal HIV/AIDS Prevention and Control Office.

Ministry of Health Ethiopia & Federal HIV/AIDS Prevention and Control Office (2007). *Single point HIV prevalence estimate.* Addis Ababa: Ministry of Health Ethiopia & Federal HIV/AIDS Prevention and Control Office.

Ministry of Health, Disease Prevention and Control Department (2002). *AIDS in Ethiopia.* 4th edition. Addis Ababa: Ministry of Health, Disease Prevention and Control Department.

Ndiaye, C., Boileau, C., Koala, S., Zunzunegui, M.V., Ag Aboubacrine, S., Niamba, P., Sylla, M., Rashed, S., Nguyen, V.K., Pro-ARV Group (2006). Gender and partner notification in community and hospital based cohorts receiving ART in Burkina Faso and Mali: *XVI International AIDS Conference:* Abstract no. THPE0625.

Olley, B.O., Seedat, S., & Stein, D.J. (2004) .Self-disclosure of HIV serostatus in recently diagnosed patients with HIV in South Africa. *African Journal of Reproductive Health, 8(2), 71-76.*

Peterson, S.H., DiClemente, R.J., Wingood, G.M., & Lang, D. (2006). The relational context of non-disclosure of HIV+ serostatus to main sexual partner among women living with HIV. *XVI International AIDS Conference:* Abstract no. MOAD0105.

Roah, G.G., & Weiss, E. (1996). *Women and Aids: Developing a new health strategy.* Washington: International Centre for Research on Women.

Sauka, M., & Lie, G.T. (2000). Confidentiality and disclosure of HIV infection: HIV positive persons' experience with HIV testing and coping with HIV infection in Latvia. *AIDS Care,* 12, 737-743.

Simbayi, L.C., Kalichman, S.C., Strebel, A., Cloete, A., Henda, N. & Mqeketo, A. (2007). Disclosure of HIV status to sex partners and sexual risk behaviours among HIV positive men and women, Cape Town, South Africa. *Sexually Transmitted Infections,* 83, 29-34.

Skogmar, S., Shakely, D., lans, M., Danell, J., Andersson, R.,Tshandu, N., Ode´n, A., Roberts, S., & Francois Venter, W.D. (2006). Effect of antiretroviral treatment and counselling on disclosure of HIV-serostatus in Johannesburg, South Africa. *AIDS Care,* 18(7), 725-730.

UNAIDS (2004). *2004 Report on the Global AIDS Epidemic.* UNAIDS/04.16E Geneva: UNAIDS.

UNAIDS/WHO (2007). *AIDS epidemic update 2007.* UNAIDS/07.27E/ JC1322E, Geneva: UNAIDS/WHO.

UNIFEM (2001). *Turning the tide: CEDAW and the gender dimensions of the HIV/ AIDS pandemic.* New York: UNIFEM.

World Bank (2006). *World development indicators 2006.* Washington DC: World Bank.

World Health Organisation (1990). AIDS interim proposal for a WHO staging system for HIV infection and disease. *Weekly Epidemiological Records,* 65, 221-228.

World Health Organisation (2003). *Integrating gender into HIV/AIDS programmes:* A review paper. Geneva: World Health Organisation.

World Health Organisation Europe (2004). *Gender and HIV/AIDS in Eastern Europe and Central Asia.* Copenhagen: World Health Organisation Europe.