# HIV/AIDS risk-reduction options as predictor of female sex workers' sexual behaviour

Women's Health Volume 18: 1–7 © The Author(s) 2022 Article reuse guidelines: sagepub.com/journals-permissions DOI: 10.1177/17455057221118167 journals.sagepub.com/home/whe



WOMEN'S HEAITH

Beneyam Lake Yimer

# Abstract

**Background:** Sex workers are highly vulnerable to HIV infection and suitable transmission groups in the scope of the HIV epidemic. The study investigated the association among HIV/AIDS risk-reduction options as predictors of female sex workers' behaviour.

**Methods:** The study used a cross-sectional research design. The quantitative survey involved 140 women, who were selected using simple random sampling techniques.

**Results:** The findings of the study show that looking for a job, disagreement in the family, death of parents, peer pressure, and attraction of town life were indicated as major pulling and pushing factors for sex worker engagement. The majority of respondents is aware of HIV/AIDS and practice HIV/AIDS risk-reduction options.

**Conclusion:** Age, alcohol use, difficult to negotiate with clients to use condoms, and disapproval of clients to use condoms were significant predictors of consistent condom-using behaviours of female sex workers. This study recommended that life skills training and existing strategies enable sex workers to develop skills that help them resist the pressures that come from their clients.

# Keywords

female sex workers, HIV/AIDS, knowledge, practice, risk-reduction options

Date received: 24 March 2022; revised: 12 July 2022; accepted: 20 July 2022

# Introduction

Sex work has been defined as the provision of sexual services in exchange for money, goods, or other benefits. Most sex work has a strong economic basis with motivations ranging from survival, debt alleviation, drug dependency, coercion, or a desire for wealth. Female commercial sex workers (FCSWs) generally are females who sell sex for money or in exchange of other transactions.<sup>1</sup> The sub-Saharan Africa comprises a relatively higher proportion of FSCWs ranged between 0.7% and 4.3% prevalence in the capitals.<sup>2</sup>

Studies revealed that sex work initiation among adolescent sex workers were more determined by peer group pressure and sexual experimenting than the economic needs.<sup>3,4</sup> In Addis Ababa, Ethiopia, the girls began commercial sex work because of peer pressure, lack of employment opportunity, influence of traffickers, poverty, frequent disagreement in the family, death of parent(s), early marriage, and exploitation in the previous jobs.<sup>4</sup> A study in Amhara region by Ethiopian public health agency (EPHA) also indicated financial problems, conflict with people with whom they live, death of parents and personal interest as reasons for sex work engagement.<sup>5</sup> It is well known and accepted that commercial sex workers (CSWs) are highly vulnerable to HIV infection and suitable transmission groups in the scope of the HIV epidemic.

College of Education and Behavioural Sciences, Department of Psychology, Bahir Dar University, Bahirdar, Ethiopia

#### **Corresponding author:**

Beneyam Lake Yimer, College of Education and Behavioural Sciences, Department of Psychology, Bahir Dar University, Bahirdar, 079, Ethiopia. Email: yokibiniam@gmail.com

Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (https://creativecommons.org/licenses/by-nc/4.0/) which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the SAGE and Open Access pages (https://us.sagepub.com/en-us/nam/open-access-at-sage). HIV/AIDS is commonly transmitted from an infected individual through semen and vaginal fluids during unprotected sex without use of condoms.<sup>6</sup> In relation to this, sex workers are the most vulnerable groups for the contraction and transmission of HIV/AIDS not only due to their nature of work but also, because of sexual relationship with rapidly changing multiple partners.<sup>6</sup>

HIV/AIDS knowledge of FSWs and the clients is associated with practice of protected sex. Lack of HIV/ AIDS comprehensive knowledge and self-protection skill is number one determinant of the epidemic. In Ethiopia, central statistics agency (CSA), studies concluded that only around 40% of the most at risk populations both correctly identify ways preventing the sexual transmission of HIV epidemic and reject major misconceptions about HIV transmission.<sup>7,8</sup>

Sex work is an extremely dangerous profession. The use of risk-reduction options can help to safeguard sex workers' lives in the same way that drug users have benefitted from drug-use harm reduction. Sex workers are exposed to serious harms: drug use, disease, violence, discrimination, debt, criminalization, and exploitation (forced sex without condom, child prostitution, trafficking for sex work, and exploitation of migrants), and so on.<sup>9</sup> Reducing the risk towards sex workers depend on a range of strategies that includes: safety advice, awareness of potentially dangerous clients, assertiveness, and negotiating skills. Successful risk-reduction strategies include peer education, training in condom-negotiating skills, safety tips for street-based sex workers, male and female condoms, empowerment, prevention, care, occupational health and safety, decriminalization of sex workers, and humanrights-based approaches.<sup>10</sup>

Male condoms are one ways of reducing the risk of HIV and STI transmission in sex workers and prevent Sexually transmitted infection (STI) complications such as pelvic inflammatory disease.<sup>11</sup> A reliable and accessible supply of good-quality condoms is essential. Condom promotion, distribution, and social marketing result in increased condom use and reduced STI and HIV infection rates, especially in female sex workers.<sup>9</sup> Local cultures, language, and traditions should also be considered. Female condoms have successfully prevented pregnancy and reduced STI transmission analytical studies, and there is in vitro evidence and biological plausibility for HIV prevention.<sup>11</sup> Female condoms empower women by enabling them to negotiate safe sex, by promoting healthy behaviour, and by increasing self-effectiveness and sexual confidence.<sup>10</sup>

Experienced condom users are significantly less likely to have a condom slip or break compared with the first time users, although users who experience one slippage or breakage are more likely to suffer a second such failure.<sup>12</sup> A qualitative study conducted in Addis Ababa showed some sex workers never have sex without condom, but used two condoms with their clients—a practice that increases the chances of a condom tearing.<sup>13</sup> This study indicated that low levels of education and alcohol use also affect the like-lihood of female sex workers using condoms.

Sex work in Ethiopia is vast, diverse, and conducted openly. Sex workers operate in virtually all hotels, bars, and restaurants and there are street workers on most main roads of towns after sunset. Throughout towns and cities, sex workers and clients meet at informal bars that sell the local brew, *Araki*. Both sex and *Araki* is sold from singleroom households where women live alone or with their children. In some towns, these are clustered in slum areas where sex work is practiced explicitly by most of the resident women.

While it is certainly true that commercial sex is freely available throughout the country and that stigma against sex workers is less pronounced than it is in some other countries, sex work certainly is stigmatized in Ethiopia. Sex workers commonly face significant stigma-related barriers regardless of where they work, due to their perceived violation of gendered norms through sex with multiple partners and strangers, taking sexual initiative and control, inciting male desires, and receiving fees for sex.<sup>14</sup> Both the literature and the information provided by women suggests that a combination of stigma associated with promiscuous sexual behaviour and poverty combine to incentivise girls and women to leave towns and rural settings for other towns or cities where they immediately or eventually, join the sex industry.<sup>15</sup> Moreover, in Ethiopia, public as well as scholarly perceptions of FSWs as a group have always portraved them as social misfits and their supposed attitudes and behaviours are described always as inimical to society. More recently, under the threat posed by the HIV/AIDS epidemic, this identification of sex work with social misfits imbued with dangerous social personalities and personal traits has become even more categorical and insistent.<sup>16</sup>

Therefore, due to limited empirical studies on knowledge and practice on HIV risk-reduction options in Ethiopia, this study addressed both knowledge and practice on HIV risk reduction options, and it shows the relationship between some variables with HIV risk reduction options. Accordingly, this study tries to answer the following research questions.

- 1. What are the associated factors for sex work initiation?
- 2. What is the current level of knowledge and practice of female sex workers on HIV risk reduction options?
- 3. How predictor variables, demographic variables, and behaviour of commercial sex are relationships with consistent condom use by female sex workers?

# Methods

### Research design

This study is a cross-sectional study because, it is an appropriate approach to describe the associated factors for sex work initiation and to investigate the predictor variables, demographic variables, and behaviour of commercial sex are relationships with consistent condom use by female sex workers.

#### Participants and sampling

To be eligible for the study, women had to be over the age of 18, have a good understanding of Amharic (local language), and work on different bars, hotels, and streets in Woldia town, Ethiopia. Participants were recruited between September and November 2021 from their workplace at night, Woldia health care centre and Woldia hospital, where they attended for three monthly clinical appointments for sexually transmitted infection testing check-up and certificate to work. Eligible participants were identified and approached by nurses during the triage process.

The actual number of women engaged in sex work in Woldia is anybody's guess. Statistics on this are highly impressionistic and imprecise. According to the data obtained from town administration, they estimated around 1400 FCSWs in Woldia town. I found it therefore both impossible and inaccurate to try to decide on a sample size on the basis of some hypothetical figure about the target population. The researcher decided to work with 10% of the above estimated number. Therefore, the sample size of this study was 140 FCSWs basically on the basis of resources and time available to researcher for this study.

Due to the stigma associated with commercial sex, it was possible to use the simple random sampling technique to select respondents in their working areas and hospital or health care centres that would cooperate as respondents to reach the sample size.

#### Instruments

To collect data from participants of the study, questionnaires were used. Behavioural surveillance surveys (BSS), which have been adopted by WHO and UNAIDS, were modified to suit the Ethiopian context and used to collect the behavioural information from participants.<sup>17</sup> The questionnaire primarily of close-ended questions, it consists 15 items which measure knowledge of the respondents on HIV/AIDS risk-reduction options and 11 items measures practice of respondents on risk-reduction options and risk factors to use condom as well as 5 items were designed to measure the behaviour of CSWs. All these items were translated into local Ethiopian language (Amharic) to facilitate communication. The questionnaire was pre-tested prior to the start of the survey. The coefficient alpha for the current study were .78, .71 and .69, respectively.

#### Procedure

The data were collected after giving clear explanations on the purpose of the study, and based on the consent of participants. The researcher personally collected the completed questionnaires from each participant.

#### Statistical analysis

The collected quantitative data were organized in the form of tables and analysed using frequency, percentage, and binary logistic regression.

# Ethical considerations

Participation of respondents was strictly on a voluntary basis. Participants were fully informed as to the purpose of the study and consented. A written informed consent was taken prior to answering the questionnaire. All consent forms and questionnaires were marked only with a study number and no names were recorded anywhere. Measures were taken to ensure the respect, dignity, and freedom of each individual participating and to assure confidentiality in the study. Participants were informed that the information they provide would be kept confidential and would not be disclosed to anyone else. Ethical approval and clearance were obtained from Bahir Dar University, College of Education and Behavioural Science Institutional Review Board with the unique ethical approval number of BDU/CEBS/045/20.

#### Results

# Socio-demographic characteristics of the participants

As Table 1 indicates that the majority of participants 102 (72.8%) belonged to the age group of 18–34 years. Regarding to educational status, 81 (57.9%) were attending primary schools. Among the study participants, 115 (82%) were from rural area to Woldia town. The majority of respondents 52 (37.1%) worked 4–8 years as sex workers.

As indicated in Table 2, looking for a job 37 (26.4%) was the reason to come from other areas to Woldia town. Disagreement in the family, death of parents, peer pressure, and attracted by town life were indicated as reasons by 28 (20%), 32 (22.9%), 17 (12.2%), and 15 (10.7%) of CSWs, respectively. The participants show that another associated factor for sex works initiation were early marriage, to attend education, and others.

Variables	Category	Number	Percentage	
Age	18–34	102	72.8	
-	35–44	32	22.9	
	45–55	6	4.3	
Education status	Cannot read and write	14	10	
	Can read and write	22	15.7	
	Primary school	81	57.9	
	Secondary school	16	11.4	
	College and above	7	5	
Residence place	Urban	25	17.9	
	Rural	115	82.1	
Years worked in the Sex worker	Below I years	26	18.6	
	I–3	41	29.3	
	4–8	52	37.1	
	Above 9 years	21	15	

**Table 1.** Socio-demographic characteristics of the participants (n = 140).

Table 2.	The associated factors of commercial sex workers					
for sex work initiation.						

Causal factors/variables	Frequency	Percentage		
Looking for a job	37	26.4		
Peer pressure	17	12.2		
Early marriage	6	4.3		
Disagreement in the family	28	20		
Death of parents	32	22.9		
Attracted by town life	15	10.7		
To attend education	5	3.5		

Table 3 shows that all study participants have ever heard about HIV/AIDS and STI. About 137 (97.9%), 132 (94.3%), and 138 (98.6%) of respondents agreed that HIV is transmitted by sexual intercourse, from mother to child, and by sharing sharp materials, respectively. Moreover, 126 (90%) and 120 (85.7%) of participants agreed that HIV is not transmitted by sharing a meal with someone who is a person living with HIV and mosquito bite, respectively. However, 17.2 % of respondents indicated that HIV is a curable disease. A significant amount of respondents 135 (96.4%), 134 (95.7%), and 130 (92.9%) agreed that a healthy looking person have HIV, condom prevents HIV, and they are at risk of HIV due to the nature of their work.

From Table 4, it can be learned that 68 (48.6%), 130 (92.9%), and 119 (85%) of respondents indicates that check always a expire date of condoms while you buy and use, there are not use any form of lubricant while using condom and formally trained on how to insert male condom, respectively. However, majority of respondents 84 (60%), 103 (73.6%), 131 (93.6%), and 86(61.4%) agreed on always myself to inserting male condom during sex with your client in past 12 months, had incident of condom breakage in the past 3 months, do not practices pair sex in the past 12 months with any client and tested for HIV in

the past 3 months, respectively. A total of 124 (88.6%) of participants did not use female condom on the reason of uncomfortable. Moreover, 98 (70%) of participants showed that the clients use double/triple condom together at the same time during in the past 12 months.

Binary logistic regression was performed to ascertain the effects of age, work experiences, training on condom use, alcohol use, and difficult to negotiate with clients to use condom and disapproval of clients to use condom on the consistent condom use of FCSWs are presented in Table 5. The logistic regression model was statistically significant,  $\chi^2(6)=29.4$ , p < .05. The model explained 86.0% (Nagelkerke R)<sup>2</sup> of the variance in consistent use of condom. Age, alcohol use, difficult to negotiate with clients to use condom and disapproval of clients to use condom were significantly predictors of consistent uses of condom use of FCSWs (B=.36, p < .05), (B=.09, p < .05), (B=.43, p < .05), and (B=1.95, p < .05) respectively.

#### Discussion

This study shows that there are pulling and pushing factors for sex worker engagement. Majority of participants' response for mobility from different rural areas to Woldia town was on the reason of looking for a job. Unlike to this study, the study in Addis Ababa, which revealed that 60% of CSW in Addis Ababa were women born and brought up in the city.<sup>16</sup> Moreover, this study indicates the disagreement in the family, death of parents, peer pressure, and attracted by town life were indicated as reasons that forced sex work to leave their place of origin. Similarly, peer pressure as a major factor for females to be engaged in sex work in Addis Ababa followed by lack of employment, brokers, poverty at home and dispute with family.<sup>4</sup>

The knowledge of CSWs on the ways of HIV/AIDS risk-reduction options indicated that all of the study participants have aware about of HIV/AIDS and STI.

#### Table 3. The knowledge of commercial sex workers on the ways of HIV/AIDS risk-reduction options.

Variables	Resp	onden	ts	
	Yes		No	
	Fre	%	Fre	%
Have you ever heard about HIV/AIDS?	140	100	-	-
Is HIV/AIDS a curable disease?	24	17.2	116	82.8
Could HIV/AIDS be transmitted through sexual intercourse?	137	97.9	3	2.1
Can a person get HIV by sharing a meal with some who is a person living with HIV?	14	10	126	90
Can HIV transmit from mother to child?	132	94.3	8	5.7
Can a person get HIV from mosquito bite?	20	14.3	120	85.7
Can HIV transmit from person to person by sharing sharp materials?	138	98.6	2	1.4
Can abstaining from any form of sex prevent from getting HIV?	128	91.4	12	8.6
Can having sex with only one faithful, uninfected partner reduce the risk of HIV transmission and infection?	109	77.9	31	22.I
Can a healthy looking person have HIV?	135	96.4	5	5.6
Have you ever heard about STI?	140	100	-	-
Can having an STI increase the risk of acquiring HIV/AIDS?	119	85	21	15
Do you think condom prevents HIV?	134	95.7	6	4.3
Do think that you are at risk of HIV due to the nature of your work?	130	92.9	10	7.I
Have you heard about female condoms?	99	70.7	41	29.3

Table 4. The practices of commercial sex workers on HIV/AIDS risk-reduction options.

Variables	Options	Fre	%
Did you check for expiring date of condoms while you buy and use?	Always	68	48.6
	Mostly	29	20.7
	Sometimes	21	15
	Never	22	15.7
Did you use any form of lubricant while using condom?	Yes	10	7.1
	No	130	92.9
Have you been formally trained on how to insert male condom?	Yes	119	85
	No	21	15
Who was/is inserting male condom during sex with your client in past 12 months?	Always myself	84	60
	Sometimes me	30	21.4
	Sometimes the client	17	12.1
	Always the client	9	6.4
Have you had any incident of condom breakage in the past 3 months?	Yes	103	73.6
	No	37	26.4
Have you had any incident of complete condom slippage in the past 3 months?	Yes	22	15.7
	No	118	84.3
Have you practices pair sex in the past 12 months with any client?	Yes	9	6.4
	No	131	93.6
Have you been tested for HIV in the past 3 months?	Yes	86	61.4
	No	54	38.6
Have you ever used female condom in the past 12 months?	Yes	16	11.4
	No	124	88.6
If "no" what is the reason not to use female condom?	Unavailable	31	22.1
	Too expensive	25	17.9
	Uncomfortable	84	60
Did you clients use double/triple condom together at the same time during sexual	Yes	98	70
intercourse with you in the past 12 months?	No	42	30

Furthermore, the majority of respondents agreed that HIV is transmitted by sexual intercourse, from mother to child, and by sharing sharp materials. A significant amount of

respondents knew about the method of its prevention like, condom prevents HIV. This finding is supported by the study, which concluded that majority of the most-at-risk

		В	S.E.	Wald	Df	Sig.	Exp(B)	95% C.I.fo	r EXP(B)	
								Lower	Upper	
Step 1ª	Age	.36	.20	3.26	I	.03	1.44	.97	2.14	
	Work experiences	.39	.45	.77	Ι	.38	1.48	.62	3.55	
	Training on condom use(1)	.06	.22	.65	Ι	.79	1.06	.96	1.05	
	Alcohol use	09	.04	4.2	Ι	.03	.91	.82	.99	
	Difficulty to negotiate with clients to use condom	.43	1.25	.12	I	.04	1.55	.133	8.13	
	Disapproval of clients to use condom	1.95	.84	5.35	I	.02	7.02	1.34	12.62	
	Constant	-3.41	5.62	.25	I	.64	1.88			

 Table 5. The association between selected demographic variables and behavioural factors with consistent condom use of female commercial sex workers in Woldia town.

<sup>a</sup>Variable(s) entered on step 1: age, work experiences, training on condom use, alcohol use, difficulty to negotiate with clients to use condom, disapproval of clients to use condom.

populations were aware of HIV/AIDS and correctly identify ways of preventing the sexual transmission of HIV and reject major misconception about HIV transmission.<sup>7,8</sup>

This study further revealed that practices of CSWS on HIV/AIDS risk-reduction options, included check always expire date of condoms while you buy and use, formally trained on how to insert male condom, inserting male condom by themselves, and the incident of condom breakage were agreed by majority of respondents. Moreover, 70% of participants showed that the clients use double/triple condom together at the same time during in the past 12 months. In favour of this, the quantitative study in Addis Ababa, above half of respondents agreed with using double/triple condom and condom break during sex in the past 3 months.<sup>9</sup>

The other interesting findings of this study was from different variables; only age, alcohol use, difficult to negotiate with clients to use condom, and disapproval of clients to use condom were significantly predictors of consistent uses of condom use of FCSWs. Consistent with this study, the study in Addis Ababa also strengthened the above idea by high levels of alcohol use by CSWs significantly affects condom use.<sup>13</sup>

This study has also limitation: questionnaire contains self-reporting of knowledge, perception and risk-reduction methods. Also the study design was cross-sectional, which does not show cause and effect. Furthermore, the calculation of the selected sample size was not carried out as a part of the study.

# Conclusion

The results obtained from this current study indicated that looking for a job, disagreement in the family, death of parents, peer pressure, and attracted by town life were indicated as a major pulling and pushing factors to mobility from different rural areas to Woldia town for sex worker engagement. This study on the knowledge of CSWs on the ways of HIV/AIDS risk-reduction options indicated that majority of respondents have aware about of HIV/AIDS and STI; and they know about HIV is transmitted by sexual intercourse, from mother to child, and by sharing sharp materials. A significant amounts of respondents knew about the methods of HIV/AIDS prevention like, condom prevents HIV. The study also found the practices of CSWS on HIV/AIDS risk-reduction options. The practices included check always expire date of condoms while you buy and use, for-mally trained on how to insert the male condom, inserting male condom by themselves, and the incident of condom breakage was agreed by majority of respondents.

Regarding to the factors that affect consistent condom uses of CSWs were age, alcohol use, difficult to negotiate with clients to use condom and disapproval of clients to use condom.

# Recommendation

Based on the conclusion made from the finding, the following recommendations are given: Life skills, education/ training (i.e. psychosocial skills, social skills, assertiveness, and so on) and existing strategies that enable sex workers to develop skills that help them resist the pressures that come from their clients and to help to support themselves needs to be part of the intervention programmes by town HIV/AIDS Prevention and Control office HAPCO, Woldia University and other partners implementing HIV/ADS prevention activities on CSWs. As it is seen in the result part, most of the respondents were engaged in sex work due to economic reasons. Thus, the town (HAPCO) and micro- and small-industry office need to organize FCSWs in association and assist them to be engaged in other income generating activities so that they can exit from sex work. Offering FSWs an additional choice may result in better protection. Female condoms, which are under the control of women that allow them to

protect themselves or reduce risks, are needed to be accessible for female sex workers in the town by HAPCO.

#### Declarations

Ethics approval and consent to participate

Not applicable.

#### Consent for publication

Not applicable.

#### Author contribution

**Beneyam Lake Yimer:** Conceptualization; Methodology; Resources; Writing – original draft; Writing – review & editing.

#### Acknowledgements

The undersigned, declare that this manuscript is my original work and all sources of material used in this manuscript have been duly acknowledged.

#### Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

#### Competing interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

#### Availability of data and materials

The data that support this study will be shared upon reasonable request, to the corresponding author.

#### ORCID iD

Beneyam Lake Yimer D https://orcid.org/0000-0003-2646-720X

#### References

- 1. Vandepitte J, Lyerla R, Dollabetta G, et al. Estimates of the numbers of female sex workers in different regions of the world. *Sex Trans Infec* 2006; 82: 8–25.
- 2. Spice W. Management of sex workers and other high risk groups. *Occup Med (Lond)* 2007; 57(5): 322–328.

- Zin NM, Ishak I and Manoharan K. Knowledge, attitude and practice towards sexually transmitted diseases amongst the inmates of women shelters homes at Klang Valley. *BMC Public Health* 2019; 19: 639.
- FSCE. The situation of sexual abuse and commercial sexual exploitation of girl children in Addis Ababa. A Base Line Survey. Addis Ababa, Ethiopia: FSCE, 2008.
- EPHA. Magnitude of and risk factors for HIV infection among most at risk population (MARPS) in Amehara Region, Ethiopia. Addis Ababa, Ethiopia: EPHA, 2009.
- WHO. Epidemiological fact sheets on HIV/AIDS and sexually transmitted infections in Ethiopia. Addis Ababa, Ethiopia: WHO, 2004.
- 7. Central Statistical Agency (CSA). *Ethiopia demographic and health survey*. Addis Ababa, Ethiopia: CSA, 2006.
- Mitikie G, Tesfaye M, Ayele R, et al. *HIV/AID Behavioral* Surveillance Survey (BSS) Ethiopia 2006. Round Two, 2005.
- Merson MH, Dayton JMO' and Reilly K. Effectiveness of HIV prevention interventions in developing countries. *AIDS* 2000; 14(Suppl. 2): S68–S84.
- French PP, Latka M, Gollub EL, et al. Use-effectiveness of the female versus male condom in preventing sexually transmitted disease in women. *Sex Transm Dis* 2003; 30(5): 433–439.
- Ness RB, Randall H, Richter HE, et al. Condom use and the risk of recurrent pelvic inflammatory disease, chronic pelvic pain, or infertility following an episode of pelvic inflammatory disease. *Am J Public Health* 2004; 94: 1327–1329.
- Weller S and Davis K. Condom effectiveness in reducing heterosexual HIV transmission. *Cochrane Database Syst Rev* 2002; 2002(1): CD003255.
- Wise up International. Empowering sex workers in Ethiopia- DKT Ethiopia. Addis Ababa, Ethiopia: Wise up International, 2009.
- Cornish F. Challenging the stigma of sex work in India: material context and symbolic change. *J Commun Appl Soc Psychol* 2006; 16(6): 462–471.
- Van Blerk L. AIDS, mobility and commercial sex in Ethiopia: implications for policy. *AIDS Care* 2007; 19(1): 79–86.
- Betelihem Tokola. Poverty and social context of sex work in Addis Ababa, Ethiopia. Addis Ababa, Ethiopia: Forum for Social Studies, 2008.
- FHI/Impact Behavioural Surveillance Surveys (BSS). Guidelines for repeated behavioural surveys in population at risk of HIV. Addis Ababa, Ethiopia: BSS, 2000.