Original article

A qualitative study of vulnerability to HIV infection: Places and persons in urban settings of Ethiopia

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Abstract

Background: HIV continues to differentially affect specific population group and geographic locations in the world. Often individual risk behaviors are associated with vulnerability to HIV infection. However, such notion often overlooks the broader context of social determinants of the infection. Such determinant is broader than personal attributes and includes diverse social factors that contribute to vulnerability to as well as prevention of HIV infection. This study explores the social determinants for HIV infection in urban settings of Ethiopia.

Methods: A qualitative study employing Focus Group Discussions (FGDs) and In-Depth Interviews (IDIs) was conducted in six purposively selected cities of Ethiopia. FGDs and IDIs were tape recorded and fully transcribed. Transcripts were coded, categorized and analyzed using thematic analysis.

Results: Findings show that it is not only people who are vulnerable, but specific places in urban settings where they reside. Vulnerability of places are linked to overcrowding, being hub of in-migrants and transistors, and with limited availability of services and infrastructure for its residents Majority of residents in such places were daily laborers, female sex workers, students who are living away from family, widows, separated and divorced women, those who work in restaurants and engaged in petty trade were found to be relatively more vulnerable group of population. They were also found to have weakened social controls and restraints that facilitate vulnerability.

Conclusion: Every city has settings that are relatively more vulnerable as compared to others and there are population groups that are particularly vulnerable to HIV infection. Mitigating the spread of HIV infection requires mapping vulnerable section of the city and targeting vulnerable group of population makes interventions effective. Moreover, HIV intervention in urban settings calls for a multi-sectoral response. [*Ethiop. J. Health Dev.* 2016;30(3):105-111]

Key words: HIV, social determinant of health, place, person, JSI

Background

Despite the fact that health is assumed to be better in urban compared to rural areas, residents in urban places are facing multitude of health problems making urban life challenging especially for the urban poor who are exposed to sub-standard living (1). Many countries are not keeping pace with ever-expanding needs for infrastructure and services in urban settlements (1).

Several literatures have justified the fact that there are specific geographic settings and groups of individuals that are more at risk because of lack of the means to cope and are subjects to the threats for HIV infection (2-4).

In the era of HIV infection, an outcome of individual behavioral manifestation such as awareness and attitude plays a major role in transmission of HIV infection. However, such risk-targeted interventions often neglect the broader framework of social determinants of health (5).

Proportion of HIV in urban areas of Africa is the highest and the rate of the disease is rapidly increasing in pace with urbanization in Sub Saharan Africa (6). Ethiopia is the second most populous country in Africa with a projected population of over 90 million based on the 2007 census (7). Ethiopia is one of the least urbanized countries in the world, with an estimated 18 million (19%) people living in urban areas in 2014 (8). Although there is a paucity of data on urban health profile in Ethiopia, it is by no means exceptional than the situations in the rest of the world and Sub-Saharan Africa in particular.

The Ethiopia Demographic and Health Survey (EDHS) 2011 documented HIV as an urban epidemic where its prevalence is five times higher than the rural part (4.2% urban vs. 0.8% rural) (9).

There are few studies on identifying social determinants of HIV infection in urban setting of Ethiopia which remain the major gap to curb ever threatening health problem of HIV infection. Moreover, we have used a qualitative approach to explore the reasons for vulnerability. Therefore, this study aims to explore the social determinants of HIV and variations in vulnerability to specific health problems within and between selected cities in Ethiopia.

Methods

Study settings: This study was conducted in six selected John Snow Inc. (JSI) program operational cities of Ethiopia. The cities included in the study were: Dire Dawa, Adama, Hawassa, Debre Berhan, Gondar and Mekelle. These sites were selected based on the already documented high prevalence of HIV infection.

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Study design and population: This study applied an explorative design with an application of qualitative tools. Data were collected from city administrators at Kebele level, opinion leaders at community level, urban health extension professionals, health care providers at health facility level, representatives of non-governmental organization, vulnerable section of the population and people living with HIV.

Methods of data collection: Prior to data collection, relatively vulnerable places for HIV/AIDS were selected in consultation with the respective city administration using specific indicators: places that are believed or perceived to have more HIV infection in the city, where relatively more residents don't visit health facilities in crowded settings broadly considered difficult in terms of service delivery. At least two places considered as vulnerable places were selected from the respective cities. In-depth interviews (IDIs) were conducted to generate evidences from representatives of the different agencies specified above while focus group discussions (FGDs) were held with vulnerable sections of the population. Participants from the agencies were recruited based on their role while FGD participants were chosen from the specific places.

A total of 40 IDIs and 11 FGDs were conducted in the selected 6 cities. Participants were purposively selected based on their particular characteristics, knowledge, and willingness to provide consent prior to the interview. In addition to scribbles, interviews were tape recorded to capture all information to avoid memory lapse of the discussion facilitators/interviewers as well as better transcribe and then translate the responses into English language.

Methods of analysis: Transcribed materials were thoroughly read and triangulated with expanded scribbles to develop themes and sub-themes in reference to the study objectives. Preliminary data analysis was carried out concurrently with data collection and checked with the interviewer's field notes. Three members of the research team coded the transcripts independently using the word process and developed a codebook based on the objectives and emerging evidences from the data. Vulnerable persons, vulnerable places and determinants of vulnerability were identified as outstanding themes. Under each of the themes, sub themes were developed as follows: vulnerable persons, vulnerable places and determinates of vulnerability. Interpretations of results follow the respective themes and dominant and shared verbatim were considered wherever appropriate to substantiate the findings.

***Data quality assurance*:** Discussion guides were developed in English and translated into Afaan Oromo, Amharic, and Tigirigna and back translated into English to ensure its consistency. Data collectors were selected based on their familiarity with the local culture, fluency of the local languages and experience on qualitative research method. Research assistants were trained on the data collection process. Every day at the end of data collection, debriefing was made to exchange notes between data collectors and complete missing data.

Ethical considerations

Ethical clearance was obtained from the research ethics committee of the School of Public Health, Addis Ababa University. Official letter was obtained from the School to the respective cities to obtain permission for data collection. The respondents were informed of the objectives of the study and they gave informed consent. Interviews were made in places where confidentiality of the respondent could be ensured. In reporting, to ensure confidentiality of the respondent's, individual identifiers were not used although characteristics of the respondents and places were shown in the quotes.

Results

Study Participants and Places

The community members who participated in the FGDs were all 18–85 years old; the majority (38.7%) had completed primary education, and 32.7% were housewives. Only 18.7% were employed (Table 1). The living places of the study participants were found to be crowded places where residents are engaged petty traders like sale of local alcohol and hot drink.

Table 1: **Characteristics of participants in focus group discussions**

Variable	Number (%)
Age group	
15-24	30 (20)
25-34	50 (33.3)
35-44	36 (24.0)
45-54	16 (10.7)
55-64	12 (8.0)
>=65	6 (4.0)
Sex	
Male	47 (31.3)
Female	103 (68.7)
Education	
No formal education	19 (12.7)
Primary education	58 (38.7)
Secondary	51 (34.0)
Tertiary	22 (14.7)
Occupation	
Housewife	49 (32.7)
Government employee	28 (18.7)
Merchant	40 (26.7)
Unemployed	16 (10.6)
Daily labourer	6 (4)
Commercial sex worker	4 (2.6)
Student	4 (2.6)
Farmer	3 (2)

***Vulnerability to HIV Infection*:** Vulnerability to HIV in the study setting is not equally distributed. Some sections of the cities that were included in the study were found to be host spots where residents were relatively more vulnerable than those who live in other sections of the town. It was found that places that are crowded, places where people go to entertain, and places where street living is apparent make the

residents more susceptible to HIV infection. One of the participants explained that "*The way we live makes it clear that girls learn sex-money transaction from their mothers as good practice and continue the same practice of setting sex for money. This used to be shameful in our culture although this is broken now"* (Adama, Commercial Sex Workers (CSW)). It was recognized that living in crowded place compel people share rooms, toilets and household utensils. As a result, women often find it a relief to go out with a man to stay somewhere else. One of the participants argued, *"We are living in a crowded house where 10-12 women sleep in a room. This is our routine life and going out and staying out with a man is a relief aside from getting women"* (CSW, Adama). Living in a rented house was also found to make it difficult to keep once pride and strong social network. As a result, engagement in risky sexual activity, which would otherwise be shameful, becomes normal. One of the participants elaborated, *"Since we live in a rented house you can't be sure when you will be thrown out and for what reason. Consequently, you may not have close friends and do not care much about what others may say about what you are up to and your actions"* (Female daily laborer, Gondar).

Sections of the cities where people make frequent visit for entertainment are more vulnerable to HIV infection. New comers to cities, rich people irrespective of their marital status visit such places to entertain. Such places are believed to be melting point for widespread sexual transactions. One of the participants explained, *"This Kebele is hosting a number of commercial sex worker. It is a center of trade where people come from different places. At least 3000-4000 people come in and out of this Kebele every day for different purposes. In this section of the town, sexual practices are considered as normal way of life and problems including HIV are not an exception in such places."* (Health Professional, Adama). It was gathered that there are places that are at full swing with live events during the evening. One of the participants pointed out, *"There are people who stay at home and chew chat during the day but go out in the night to make business"* (Housewife, Dire Dawa).

Places where migrant workers stay on transit to other areas for employment opportunity are crowded with cheaper houses. At such places, social relations among residents and level of support among residents who often don't know each other are weak. Such places are reported to facilitate vulnerability to HIV infection.

Vulnerable People to HIV Infection: It was gathered that research participants identified specific groups of people who are relatively more vulnerable to HIV. In all cities included in the study, women and men were vulnerable to HIV infection. Nonetheless, it was found that all young people, women and men were not equally vulnerable. Of the young people, the finding shows that unemployed youth; university students particularly in Debre Berhane, Hawassa and Adama and street girls were reported to be relatively more vulnerable to HIV infection for reasons described in the subsection below. Of the women, it was found that those divorced; separated and widowed; housemaids; CSWs; sellers of local drink and daily laborers at construction sites were identified as relatively more vulnerable to HIV infection. Of the men on the other hand, long track drivers; migrant workers particularly in Gondar and Mekelle; daily laborers; rich men and brokers (*Delalas*) were found to be more vulnerable to HIV infection. Factors that facilitate vulnerability of these sections of the population were categorized under the following key themes: Economic, social and environmental factors as detailed below.

Economic Factors of vulnerability: The economic status of residents in vulnerable places of all study sites were found to positively contribute to vulnerability to HIV infection. It was found that jobless individuals with no regular income and those who are engaged in transient job and small-scale petty trade were identified as vulnerable to HIV infection. Such people particularly females tend to consider sell of sex as source of income. It was gathered that lack of reliable means of livelihood is a critical factor that makes people to engage in risky venture that makes encounter of HIV infection evident. Separated, widowed, and divorced women were identified as more exposed to HIV infection. Arguments anonymously revealed that when the usual support from men is not there due to husband's death, divorce, and separation, women do not have other options than generating their livelihood in all possible ways. One of the participants pointed out, *"When you do not have much to relay on for living and when you have no support around anymore, it becomes normal to look for alternative means of survival. I am sure we all understand the implication of this and those engaged in sexual transaction are better informed about its consequences but they seem to take risks to survive for today than dying starved"* (Housewife, Hawassa). Such challenges in life are contained by available opportunities. Similarly, a participant argued ". *As I mentioned earlier, majority of the residents in this Kebele are very poor. Majority of the girls from such families generate income for the family by selling tomato and onions on the street as well as boiled eggs and potato by moving around drinking places. There are men who consider this to engage in transactional sex with these girls. This is becoming a normal phenomenon in this Kebele"* (Housewife, Adama). Similarly, another participant argued, *"Those who are engaged in petty trade and those who work in cafeterias could easily get to know customers who may give them money in exchange for sex. This may put them at the risk of acquiring HIV infection"* (Health Developmental Army (HDA) leader, Dire Dawa).

Migrant workers on transit from their place of residence to other places were identified as relatively more vulnerable to HIV infection. It was found that those who are in transition from one place to the other in search of job often stay in a particular place for short period of time. During this stay in a city, it was argued that they are engaged in petty activities to generate income. While males engage in casual sex activities

with the locals, females also engage in causal transactional sex which makes them vulnerable to HIV infection. One of the participants argues, *"There are quite a number of men and women who are on transit to Humera in search of job. Such people often stay together in one house to minimize their cost of stay. In as much as some are engaged in causal sexual activities with local residents, they also mingle sexually with their fellow migrant of opposite sex. This increases their risk of getting HIV infection"* (Health Staff, Gondar).

Sexual engagement with someone older for money is becoming the case than an exception in all the study settings. *"Usually it is not acceptable for an older man to have sexual affairs with young women. This is not the case anymore. I know a woman who dates young boys. She came back from Arab country and has money. No one knows whether she is infected with HIV or not, imagine what this would mean to ourselves, our own sons and loved ones" (1-5 network leader, Dire Dawa). Similarly, it was argued that rich men are dating young girls because they have money and getting such girls is easy for them. One of the participants stated, "There are old rich men who come to our town just for sexual purpose. They pick young girls often from the university and stay with them over the weekend for good pays. This is almost getting common in this town. There are pimps who are living on this and facilitate the process"* (housewife, Hawassa).

Social Factors: Findings show that lack of local social support mechanism at community level, living away from family's routine guidance and control, low awareness especially among non-educated and continued interest of men to have sexual outlet other than regular spouse are important social factors facilitating vulnerability to HIV infection. Arguments show that especially girls who live away from family appear to be engaged in sexual activities that facilitate their vulnerability. One of the participants argued, *"In our place with the opening of new university, young girls who join the university from other places are openly competing with regular sex workers and are actively engaged in sexual activity to earn money. I think this is due to the fact that there is sense of inhibition given they feel unnoticed"* (HDA leader, Gondar and Urban Health Extension Professional (UHE-p), Hawassa). This is not only for girls from the university but also those in-schools, who go out with men encouraged by their peers. This was further argued as: *"Girls are getting difficult to manage. They cheat their family in the pretext of going for study but go out withy. This is now usual in our area and they learn from other and often tend to compete amongst themselves by the men they go with."* (HDA, Hawassa).

Among other social characteristics, religion was found to facilitate vulnerability to HIV infection in almost all study cities. It was found that followers of Christian religion are relatively more vulnerable to HIV infection as compared to Muslims. *"To me, more Christians are affected by the disease, I saw more Christians than Muslims suffering from the problem which may have to do with the sheer number of Christians in the study locality as compared to the Muslims"* (Business women, Mekelle). Nonetheless, those participants in Dire Dawa argued that there are differences regarding vulnerability to HIV infection among Muslims and Christians. "*Because Muslim community in our area does not consider VCT as an important practice, we do not know the proportion of infected ones for certain; I think they are equally affected by HIV*" (Housewife, Dire Dawa).

Participants unanimously argued to be aware of HIV as a disease that does not have any cure although there appears to be a tendency to neglect it as a threat. As a result, it was found that condom use is not consistent especially among CSWs who tend to instead negotiate condom use for more pay. One of the participants argued, *"CSWs more or less use condom with their customers but whenever the customer agrees to pay more, engagement in sex without condom is possible. I do not think HIV is considered as serious a problem as getting money. As you can see there is nobody talking about it these days. Had it been a problem, there should have been continuous warning as it used to be the case (CSW, Adama).* This was further substantiated by one of the UHE-p stating "*To date people seem to have forgotten about HIV. For example, young people are not using condom. I put condom in schools, at health post and there is also condom in health center which is not collected. I was curious if young people buy condom and checked with one of the shop owner in my neighborhood who told me that young people are not buying condoms"* (UHE-p, Dire Dawa).

Discussion

According to the latest Global Report on Human Settlements, about 32% of the world's total urban population lives in slums; 43% of the urban population of all developing regions combined lives in slums; and 78.2% of the urban population in the least developed countries lives in slums (19). In African cities, an average of 50% of the population lives in slums or vulnerable areas where morbidity and mortality due to HIV/AIDs is considerable (2). WHO has further reported that the urban setting itself is a social determinant of health (20). The deteriorating living and working conditions due to unsafe water, poor sanitary conditions, poor housing, overcrowding, hazardous locations and exposure to substance use contribute to vulnerability to HIV.

Among the six cities focused in this study, one or more vulnerable segments of the cities were identified. Vulnerable segments of cities to HIV/AIDs showed similar characteristics but differ in the type of vulnerable population and level of services. For example, about 20 vulnerable villages were identified by MULU MARPS HIV prevention in Hawassa city, but *Tarkegn* and *Bermuda* villages were identified as the most vulnerable segments to HIV mainly due to the fact that most of their residences are engaged in sell of local alcohol drinks such as 'Tella' and 'Areke' which is a way to enter in to commercial sex life. On the other

hand, in Mekelle a segment in the city that is most vulnerable to HIV could not be identified; it was argued that the rich/ the poor, educated/uneducated, the young and the old are all prone to HIV infections without physical border in the city. Although Mekelle, like the other cities, is suffering from unemployment, commercial sex, and limited awareness about HIV testing and counseling services, locating specific vulnerable section in the city was difficult. Siddharth Agarwal and team argued that the urban poor in India are not a homogeneous group and that there is a discernible level of disparity in terms of vital development parameters such as access to basic infrastructural facilities, healthcare, education, livelihoods and social capital (9,20). Nevertheless, they manage to identify vulnerable segments called 'slums' based on location of vulnerable residents and housing.

In Gondar, Abajale, Azezo, Kekros, and Ayer Marefia were identified as most vulnerable areas to HIV infection. These locations are the center for commercial sex, crowded residence, lacks proper sanitation, and poor housing conditions. Abajale residents live by sell of local drinks and sell of sex is not an exception, while Azezo is near military camp and draw much of its income from service men mainly through commercial sex. Although *Addis Ketema*, *Dechatu*, *Gendekore*, *Genda Miskin*, *Khat Tera*, *Megala* and K*onel* were listed as vulnerable segments of Dire Dawa, Addis Ketema, deprived from most services and crowded by sex workers, petty sell on the street and beggars were identified as the most vulnerable section of the city. In Adama and Debre Berhan, although there could be a number of vulnerable sections of the city, Ketena 04 (of Kebele 06) of Adama and Kebele 02 of Debre Berhan were reported to be more vulnerable compared to the other sections of the cities. The method used to identify such vulnerable sections of the cities was similar one employed by Siddharth Agarwal on similar study (20).

Majority of study participants mentioned that residents in vulnerable sections of the cities generate income from commercial sex, sells of local drinks (Areke, Tela, *Koreffe*, etc..), engaged in petty trade, street squandering and daily labour. Due to the nature of their work, these residents exposed to factors that facilitate HIV infection. Often residents in these areas are street children and commercial sex workers who tend to raise money for living and do not have much time to spare for interventions including service provision. Similar finding was reported from Kenya where residents in such vulnerable section of a town are more affected by HIV (21).

Study made on global burden of disease suggested the importance of health service utilization for efforts in preventing and controlling various health problems including HIV/AIDS (22). Low utilization of services such as HIV testing and ART was reported by all cities, due to lack of awareness and fear of stigmatization or lack of access to the services. Although a decrease in spread of HIV in general population is reported in all cities, the problem is pronounced in specific section of cities.

The following describe characteristics of vulnerable residents: Petty trade and local alcohol sell on the street (Adama, Hawassa); widowed, separated or divorced women (all cities) are believed to be prone to HIV infection Women who use Ganja (local stimulant plant) (Hawassa), street and under aged girls, out of school youth (Adama, Debre Berhan, Hawassa), university students (Hawassa, Mekelle) all exposed to HIV infections. Children are at risk for HIV due to poor disposal mechanism for condom and other waste (Abajale - Gondar). Migrants from other area who come as maids often join sex business (all cities) mainly due to influence of brokers who recruit them and keep them in crowded room on their arrival (Adama, Debre Berhan). Existing housemaid converted to commercial sex workers (Hawassa); increased number of young people having sex at road side or open spaces without condom in the evenings (Hawassa). All are exposed to HIV or already living with it and passing on to their customers.

Several reasons were identified to facilitate vulnerability of residents. The main reasons are related to unemployment and consequent engagement in commercial sex work, street vending and migration are responsible for HIV transmission. Presence of factories, distribution of bars, shisha houses, chat and other substances in most cities have contributed to vulnerability of segments of population. In their study on social determinants of the health of urban populations for several cities, Danielle and team argued that marked disparities were observed by education and income level (23).

In Dire Dawa, although we do not have biological interpretation, hot weather is reported as initiating female for sexual engagement, which obviously contributed to HIV infections and rapid transmission. Marital status of residences, particularly women, such as divorced, separated and widowed are cited as possible case for vulnerability to HIV by all cities. With rising cost of life, single mothers who have responsibilities of raising tend to engage in sex which may not be directly considered commercial but indirectly help them generate income from their clients, exposing them to the blight of HIV.

Due to use of Chat, Shisha and other drugs combined with alcohol, commercial sex and hopelessness, there are lots of conflicts in Ketenea 4 of Kebele 06 (Adama) where people live in constant fear for their safety. This is not unique to Adama since violence and crime was reported to be major features among slum residents in most African countries (24). While conflict among vulnerable segment was reported in Adama, in Debre Berhan considerable number of orphans and bedridden helpless elders above the age of 70 years was reported. Such cases clearly depict the fact that there are unique features even between vulnerable sections of the cities.

Although stigmatization of HIV positive people is reported to be decreasing in all cities, but stigmatization in renting a house remain major problem. This left several HIV positive people in the cities hopeless, increasing vulnerability of these individuals. In places like Gondar-Kekrose where Muslims account for majority, HIV positive people are highly discriminated by the society and reported to be serious challenge to the community. This led many HIV positive people to conceal their status and develop tendency to use the disease for retaliation. While support to society is deteriorating in this regard, the only reported current activity is that of local NGO in Dire Dawa providing support to children from families who are classified as poor of the poor. It is important to note that in urban areas, large groups of "street children" orphaned by AIDS can be a threat to the whole community in addition to the health concerns for the children themselves.

Limitation

This study did not measure the level of vulnerability of HIV across the cities and did not cover all specific settings of the cities studied. It is also important to recognize that the finding applies to sections of cities that are crowded and are slum and those who reside in such setting. However, this may not be necessarily the case for all such settings.

Conclusion:

Our findings demonstrated that in every town there are settings that are found to be more vulnerable as compared to others and there are population groups that are particularly vulnerable to HIV infection. This study has also mapped who are not using available HIV/AIDS services and service utilization is not uniform in every town. The interventions should firstly target vulnerable section of the town and vulnerable group of population and secondly pay attention to the unique features of such places and people. This finding has also provided an insight that, addressing vulnerability of sections of a town and/or specific target group residing in the town is beyond the mandate of one sector since it has to do with housing, water supply, municipality etc. in addition to the health sector. Thus, all development actors should be coordinated in order to deal with vulnerability for HIV in urban setup.

Acknowledgement

The study team wishes to extend its gratitude to the data collectors and those who have shared information with us. Financial resource from JSI SEUHP is also duly acknowledged.

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