

The contexts of housing stability and change among HIV-positive persons in the Lower Manya Krobo Municipality, Ghana

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Summary

Due to stigma, discrimination and economic insecurity, persons living with HIV/AIDS (PLWHAs) are highly vulnerable to housing instability. For instance, PLWHAs are more likely to either remain stable in inadequate homes or change residence. Yet, few studies explore the contexts of housing stability and change among PLWHAs, especially in sub-Saharan Africa, where the majority reside. This study used qualitative in-depth interviews to explore the narratives of 38 PLWHAs on the contexts of housing stability and the circumstances leading to change in residence. On diagnosis with HIV, the majority of PLWHAs (58%) changed housing locations, mostly from bad to worse conditions. Reasons for change include: eviction due to stigma and discrimination, inability to afford rent, quest to hide HIV status and death of a cohabiting partner. Our findings suggest policy makers should pay attention to the deplorable and poor housing conditions of PLWHAs in Ghana.

Key words: Ghana, housing, PLWHAs, HIV/AIDS, stigma and discrimination

INTRODUCTION

Housing is considered an important social good for various populations across the world, but most crucially, for persons living with HIV/AIDS (PLWHAs). The extant literature demonstrates the health benefits of affordable and stable housing for PLWHAs (Aidala *et al.*, 2005; Kidder *et al.*, 2008; Bacon *et al.*, 2010; Milloy *et al.*, 2012). For example, research shows that homeless PLWHAs are three to six times more likely to engage in risky sexual behaviours or use illicit drugs than their counterparts in stable homes (The odds of drug use among homeless PLWHAs are reported to be four times higher than among those in stable housing.) (Aidala *et al.*, 2005; Kidder *et al.*, 2008; Milloy

et al., 2012). Although at a reduced risk, PLWHAs in unstable housing are also two to four times more likely to engage in risky sexual behaviours than those in stable housing (Aidala *et al.*, 2005; Bacon *et al.*, 2010). Other studies find that homelessness and inadequate housing are significantly related to low health care utilization, poor adherence to treatment and frequent emergency/ambulatory services (Leaver *et al.*, 2007; Palepu *et al.*, 2011). For instance, using a sample of 445 PLWHAs from France, Spire *et al.* (Spire *et al.*, 2002) concluded that the homeless and PLWHAs in inadequate housing units reported higher non-adherence rates to treatment than those in stable homes.

Despite this evidence, PLWHAs are unlikely to find affordable and stable housing. Previous literature, mostly

from western industrialized countries shows higher levels of homelessness among PLWHAs (Song *et al.*, 2000). Even when they find affordable homes, PLWHAs are less likely to enjoy stability and more likely to relocate or change their housing arrangements. Reasons for lack of stability and relocation include discrimination on suspicion of their HIV serostatus and their inability to work and finance affordable and adequate homes due to poor health (Interagency Coalition on AIDS and Development, 2010; The North American Housing & HIV/AIDS Research Summit Series, 2011; Milloy *et al.*, 2012; Teye-Kau *et al.*, 2018). A study in Ontario by Bacon *et al.* (2010) found that in addition to the 25% PLWHAs who lost their shelter, 42% had difficulty financing their housing and were at risk of losing it. Losing housing/inability to finance housing suggests HIV-positive persons are likely to move or change housing after diagnosis. Although relocating or changing housing arrangements is not necessarily problematic, some research shows that PLWHAs are unable to find appropriate housing after losing their homes (see Bacon *et al.*, 2010; Teye-Kau *et al.*, 2018). For this reason, a substantial number of PLWHAs are likely to be homeless or reside in unstable/substandard homes (Milloy *et al.*, 2012). With the extended family systems in Africa, PLWHAs who are unable to afford rent may move into 'extended family homes', where they are mostly not required to pay rent [Extended family houses are multi-family apartments owned by previous generations and passed on to the next. Hence, all individuals tracing kinship/lineage through these ancestors jointly inherit this property and several of them may dwell there. Family houses are commonly assigned on a room by room basis, and with successive inheritance, individual rights become minute (Korboe, 1992; Fiadzo *et al.*, 2001).] (Oluwagbemiga, 2007). However, extended family homes are seldom well-maintained and mostly inadequate and substandard (Obeng-Odoom and Amedzro, 2011; Udofia *et al.* 2014; Teye-Kau *et al.*, 2018). As documented earlier, living in substandard homes do have negative implications on the health outcomes of PLWHAs (Tenkorang *et al.*, 2019; Owusu, 2020).

Unlike some developed countries (such as the USA, the UK and Canada), the housing conditions of PLWHAs in Ghana is not well documented. Our search of the literature shows that some few studies used survey methods and in-depth interviews to explore the effects of housing on several health outcomes for PLWHAs in Ghana (see Tenkorang *et al.*, 2017, 2019; Teye-Kau *et al.*, 2018). To the best of our knowledge, no known study has examined the contexts of housing stability and change, especially the circumstances leading to

relocation among PLWHAs in Ghana. Are PLWHAs likely to remain stable or change their housing arrangements on diagnosis with HIV or on suspicion that members of their communities are aware of their serostatus? In the event of change, do PLWHAs move to relatively better housing conditions or worse housing conditions? These questions are relevant to both researchers and policy makers given the benefits of adequate and affordable housing to the health and general well-being of PLWHAs. Following these questions, we employed qualitative in-depth interviews from 38 PLWHAs in the Lower Manya Krobo Municipality (LMKM) of the Eastern region of Ghana to explore their housing conditions and the contexts for housing stability and change.

Housing stability and change among PLWHAs

Generally, housing in Ghana has been described as unstable and inadequate (Boamah, 2011; Obeng-Odoom and Amedzro, 2011). Two major reasons support this argument. First, there is considerable gap between the demand and supply of housing in Ghana; the current housing gap or deficit has been estimated at 35% of total need (Ghana Statistical Service, 2014b). Second, there are acute sanitary problems and overcrowding rendering most Ghanaian dwellings unfit to be called a home (UN-HABITAT, 2010; Obeng-Odoom and Amedzro, 2011). Over the years, successive governments have attempted to solve the housing challenges facing the Ghanaian population, but this has been extremely limited because of the lack of a comprehensive National Housing Policy Framework (Ghana Statistical Service, 2014b). The lack of a clear policy direction for housing means government has had limited involvement in providing affordable housing to the Ghanaian population. For the vulnerable in society, including PLWHAs, this is extremely problematic as it has rendered housing almost inaccessible especially given the costs involved in financing, construction and homeownership.

Unlike countries in the developed world, most Ghanaians do not own their houses (Tippie and Korboe, 1998; Boamah, 2011). For instance, analysis of the 2010 Ghana Census indicates that a substantial proportion—about 45%—of Ghanaian households live in compound houses (Compound houses consist of several housing types including traditional/hut houses that has several families co-existing or multiple families/households in a single house.). Currently, there is paucity of research on the housing conditions of PLWHAs in Ghana, although these conditions may be worse or not too different from what exists in the general population. In a quantitative study on the housing conditions of PLWHAs in the

LMKM of Ghana, Tenkorang *et al.* (Tenkorang *et al.*, 2017) reported that about 49% of respondents lived in extended family homes which are primarily compound homes. Meanwhile, it is documented that the conditions in extended family/compound homes are different from owner-occupied homes (Tippie and Korboe, 1998). For instance, the dynamics in extended family homes may be helpful for PLWHAs given the familial, social networks and bonds in these homes. However, such homes are usually overcrowded, noisy, dirty and do not provide enough privacy for occupants. In most cases these homes lack basic amenities and if available, are mostly unhygienic, and shared by several people in the household (Ghana Statistical Service, 2013; Tenkorang *et al.*, 2017). For PLWHAs whose immune systems are weak, living in overcrowded and unhygienic homes can expose them to opportunistic infections. Although these conditions can threaten stability and encourage change to adequate housing, this may not always be the case. It is possible that PLWHAs in Ghana either remain stable or change to worse housing under these circumstances. At the moment, not enough studies have documented the contexts preceding change in the housing conditions of PLWHAs in sub-Saharan African and Ghana, although anecdotal evidence suggest discrimination and affordability as the two most important factors (Oluwagbemiga, 2007; Nussbaum, 2010; Obiri-Yeboah *et al.*, 2016). For instance, Obiri-Yeboah *et al.* (Obiri-Yeboah *et al.*, 2016) observed that discriminatory actions can cause a change in housing and residence for PLWHAs through voluntary and involuntary (forceful) eviction. They further noted that upon disclosure of their serostatus Ghanaian PLWHAs and especially widows are rejected by their deceased husbands' families and forced out of their homes. Other scholars document that job loss and termination through employment-related discrimination against PLWHAs can minimize their chances of accessing affordable and adequate housing (Owusu and Laar, 2018). We explore these contexts with qualitative data from PLWHAs in Ghana.

DATA AND METHODS

Description of study area

Data for this study were collected from the peri-urban LMKM of the eastern region of Ghana. The district covers a total land area of 304.4 square kilometres with a population of 89 246 (Ghana Statistical Service, 2013). The LMKM has a youthful population and contributes to about 8.3% of the total population of Ghana. The majority (92.8%) of the population in the

municipality are Christians and identify with the Krobo ethnic group (Ghana Statistical Service, 2014b). The municipality has the highest youth unemployment rate in the country culminating in high poverty rates. Similar to the housing situation in Ghana, housing in the LMKM has been described as precarious and inadequate. Evidence from the 2010 Ghana census shows that about 42% of households in the district occupy single rooms with an average household size of four persons per household (Ghana Statistical Service, 2014a). With a room density of 2.5 persons per room, the majority of the population in the LMKM live in overcrowded homes (Fiadzo *et al.*, 2001). Also, a substantial proportion of the population dwell in extended family homes which are mostly substandard/inadequate and not well-maintained (National Catholic Health Services, 2010; Ghana Statistical Service, 2014a).

Gender differences in inheritance affect the housing needs of the population as well (Kissi-Abrokwah *et al.*, 2015). Most of the populace (Krobos and Ewes) in the LMKM practice the patrilineal descent system where males are exclusively permitted to inherit landed properties. Research shows that patrilineal inheritance deprives women and their offspring of becoming potential owners of homes (Kissi-Abrokwah *et al.*, 2015). Not surprisingly, women-headed households in the LMKM were 1.3 times less likely to live in their own house than were male-headed households (Ghana Statistical Service, 2014a). With more females PLWHAs in the municipality compared to males (Antwi, 2010), as pertains in Ghana and sub-Saharan Africa generally (Ghana AIDS Commission, 2014; Rhine, 2015), the exclusive patrilineal inheritance of houses (and all other property) makes female PLWHAs in the LMKM more vulnerable.

The LMKM has three major hospitals of which two were purposively selected for this research. These include Atua Government Hospital and St. Martins de Porres Hospital. In 2002, the government of Ghana selected both hospitals for a pilot study of Voluntary Counselling and Testing and the administering of ART to PLWHAs (Dapaah, 2012) due to the prevalence of HIV/AIDS in the LMKM. As a result, both hospitals were used as nationwide learning and training centres for health practitioners on comprehensive services for PLWHAs (Tenkorang *et al.*, 2017).

Sampling

Purposive sampling was used to select the study area (LMKM) and the two hospitals (Atua Government Hospital and St. Martin's de Pores Hospital). The LMKM was chosen because it has been leading in the

urban HIV/AIDS prevalence, morbidity and mortality in Ghana since the virus was first discovered in Ghana (Ghana AIDS Commission, 2010, 2015). Similarly, both hospitals were selected based on their unique role within the district and the region since the first incidence of HIV was reported in Ghana. Thus, the two health facilities served as focal points for recruiting respondents.

Data collection and analytical procedures

Data for this study were collected between June and August 2015 from PLWHAs between the ages of 18 and 68. The data were part of a bigger project titled 'Housing and Health needs among HIV-positive persons in Agormanya, Ghana' led by the first and third authors and funded through the International Development Research Centre and the Association of Universities and Colleges of Canada. The project employed both qualitative in-depth interviews and survey data collected from 600 PLWHAs receiving treatment at the Atua government and St. Martin's de Porres hospitals to examine links between their housing and health conditions. A major objective of the larger project was to determine the availability of adequate and affordable housing among HIV-positive persons and to examine the social conditions (overcrowding, sanitation tenure insecurity, stigma and discrimination, etc.) in their homes. This paper focused on the narratives of 38 respondents interviewed for the qualitative component of the project.

Prior to data collection, an interview guide was developed and tested with five PLWHAs at the various hospitals. Pre-testing the interview guide was to ensure that: (i) the various terminologies and research questions were understood by individuals who shared similar characteristics with prospective participants; (ii) the interview questions adequately addressed the research aims and objectives. Afterwards, the interview guide was revised. Respondents were assured of confidentiality, after which they self-confirmed their clinically diagnosed HIV-positive status. Permission was also sought for recording the interviews and for using them for academic and policy reports. The interviews were conducted in three language preferences of respondents: Krobo, Twi and English. With the aid of a digital audio recorder (Sony ICD-PX370 mono digital voice recorder), the interviews were recorded and translated during transcription. It has been argued that the translation process runs the risk of misrepresenting, misunderstanding and losing the intended meaning, especially in instances where local words have no or more than one linguistic equivalence in English (Smith *et al.*, 2008). To minimize misrepresentation and misunderstandings, we

adopted several strategies. For instance, in situations where the literal meaning was different from the implied meaning, we interpreted the meaning of the words within the context they were used (Smith *et al.*, 2008). We also employed back-translation (see Temple and Young, 2004; Smith *et al.*, 2008) to check misrepresentation. All the researchers were fluent in all three languages. This helped reduce the possibility of wrongly translating the interviews.

Data analysis

We employed a general inductive approach to our data analysis. Specifically, the approach involved condensing data, establishing links between research objectives and the textual data, and generating themes and codes on the housing experiences of respondents from the data (Thomas, 2006). Open coding was used to identify themes after reading the transcripts several times. Employing open coding meant we had to be 'open' to all emerging themes and codes (Teye-Kau *et al.*, 2018). We highlighted extracts using different colours in Microsoft Word while coding. Comment boxes for the excerpts and themes were then created. We included short interpretations of each code in relation to an imaginary theme in the comment boxes. Various excerpts from the transcripts are quoted verbatim. Nevertheless, identifying markers were removed from the excerpts to enhance anonymity.

To ensure reliability, the data coding was transparent, rigorous and carefully monitored. For instance, all the three authors were involved in the coding process to ensure inter-coder agreement and subsequent interpretation.

Ethical considerations

Ethical clearance was sought from three ethical boards: the Interdisciplinary Committee on Ethics in Human Research (ICEHR) at Memorial University of Newfoundland, the Ethics Committee for Humanities (ECH) at the University of Ghana, the Ghana Health Service Ethical Review Committee. In addition, permission was sought from the Regional Directorate of Health Services in Koforidua, the District Directorate of Health Service in the LMKM, and the various hospital administrators and patrons. At the beginning of each interview, respondents were briefly introduced to the objectives of the research, after which both verbal (when they could not write) and written consent was sought. Respondents were also informed that they could discontinue the study anytime without penalty.

RESULTS

Demographic background of respondents

The demographic and socio-economic background of respondents are shown below (Table 1). Participants in this study were between the ages of 25 and 68 at their last birthday. For marital status, they reported the following: never married, married/cohabiting, separated/widowed/divorced. Over 80% of the respondents had acquired some form of formal education (grade 1 to senior high school). Although about 65% of the respondents were employed, they mostly were in the informal sector and had occupations like petty trading, farming, dress-making, etc.

Current housing situation of PLWHAs

Respondents identified serious problems with their current housing conditions. These problems ranged from the lack of basic amenities to poor housing structures. Respondent 21 who lived in an uncompleted building

Table 1: Demographic and socio-economic characteristics of respondents

Demographic features	N = 38 Frequencies (%)
Age	
18–29	1 (2.63)
30–39	8 (21.05)
40–49	8 (21.05)
50–59	16 (24.11)
60 and above	5 (13.16)
Gender	
Male	6 (15.79)
Female	32 (84.21)
Marital status	
Never married	4 (10.53)
Married/cohabiting	11 (28.95)
Separated/divorced/widowed	23 (60.52)
Socio-economic factors	
Education	
No formal education	6 (15.79)
Some form of education (grade 1—high school)	30 (78.95)
Tertiary education	2 (5.26)
Employment status	
Unemployed/economically inactive	13 (34.21)
Employed—informal	22 (57.89)
Employed—formal	3 (7.89)
Housing arrangement	
Owner occupier	11 (28.95)
Extended family housing	13 (34.21)
Rented	10 (26.31)
Virtually homeless	4 (10.53)

said, ‘It is an uncompleted building ... I don’t have a kitchen and toilet, I only have a bathroom ... I don’t even have light at my current dwelling’. Another respondent narrated,

I have a kiosk and I live in it with my children. It is made of wood. Whenever it rains I face a lot of problem [the place becomes muddy] but because I have no option, I am living in it. We do not have our own bathroom, so we go and bath in a public bathroom, and pay for it.

(R 22, female)

Other respondents lived in homes they described as unsafe, frightening and scary. For instance, Respondent 31 stated:

I am now in the family house which is not spacious, so we usually sleep outside ... the family house is old, and it leaks whenever it rains. I had light, but it was disconnected because I couldn’t pay the bill. I don’t have a kitchen or running water. The house I live in is a mud house and it is in a bad state, it is scary. Recently people from the Town Council came to warn us that if the building collapse and result in any death, we will be held accountable. Whenever there is a strong wind the roof shakes fiercely and it is always frightening.

(R 31, female)

Also, PLWHAs complained about stigma and discrimination by housemates and community. A respondent who lived in a house with her father and two siblings lamented;

Since I was diagnosed with HIV my father and siblings do not relate well with me so I am always depressed. We now cook our separate meals, they don’t share anything [cooking utensils, spoons, bucket] with me. As for the insults it’s like the pomade (lotion) I smear on my body every day. Some people will not even want to sit by me. They stigmatize me because I am sick.

(R 23, female)

Changing housing after HIV diagnosis

The second theme considered whether PLWHAs changed housing units after HIV diagnosis. Two categories of respondents were identified under this theme: PLWHAs who relocated after HIV diagnosis and those who stayed in the same place. Twenty-two out of the 38 respondents (about 58%) relocated after HIV diagnosis (see Figure 1 and Table 2). Considering the previous theme/finding that most PLWHAs lived in substandard homes, an obvious question was whether those who moved ended up in better or worse housing units.

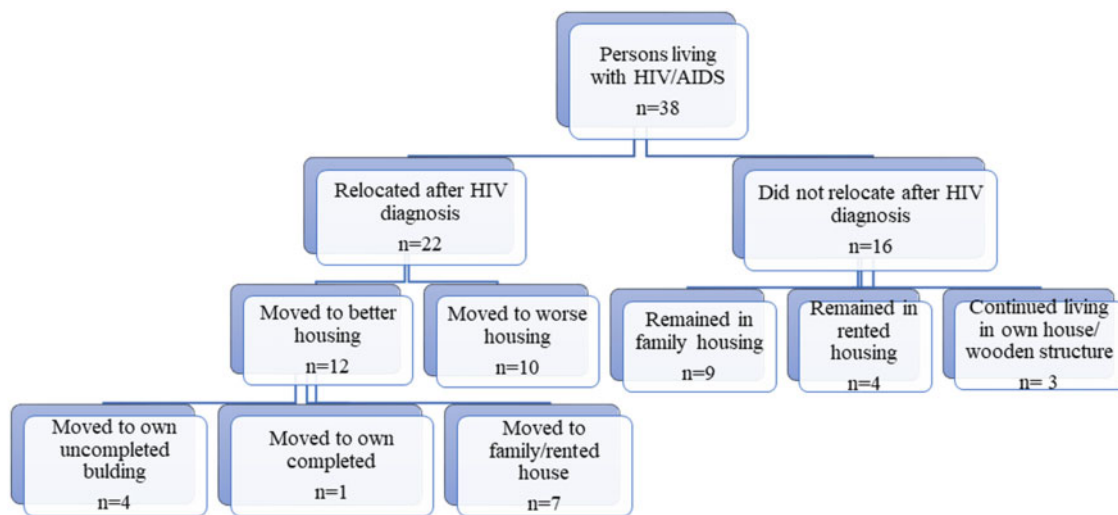


Fig. 1: A flowchart depicting stability and change of respondents' housing status.

Respondents who relocated were asked to compare their previous and current dwelling units using several indicators; privacy, space, ventilation, lighting system, the absence of mold/damp and the level of peace they enjoyed (see Table 2). Although these indicators were inadequate to measure the quality of housing, they were preliminarily useful in categorizing PLWHAs' housing conditions. Participants whose current house had three or more of the above qualities were considered to have moved into better housing units and *vice versa*. Using the above-stated criterion on housing quality, 10 out of the 22 respondents (about 46%) moved into worse housing units (see Figure 1 and Table 2). Those who moved to worse housing noted things like the following:

I had more privacy in my former house than my current house My former house had better lighting system and ventilation The former one was bigger and better than this current house.

(R3, female)

Another woman said:

It [current house] is a mud house ... I had more privacy in my brother's (former) house. In my current house, I cook in my [single] room ... I don't have enough privacy in the house My brother's [former] house has better ventilation ... my former house had better lighting ... the former one was bigger.

(R4, female)

In other words, although changing housing units could be advantageous, a substantial number of

PLWHAs relocated to worse housing conditions after HIV diagnosis.

The remaining, 12 respondents (about 54%) indicated they relocated into 'better' housing units (based on the above indicators). Among these, five moved into owner-occupier housing. Although these participants indicated their current housing as better than the previous housing, a closer look revealed that such dwelling units may be worse off. For example, four of the five moved into uncompleted buildings, while the only PLWHA who moved into a completed building lived in an overcrowded room with blocked gutters breeding mosquitoes. One participant who moved into an uncompleted dwelling unit stated:

Oh, I like my new place [uncompleted building] ... I don't even have light at my current dwelling There is no light, there is no kitchen and toilet but I am happy. I am happy with myself, knowing I have no lights I do my chores early. I am happy with the way I am living. I don't have any problem. And there is nobody to disturb me.

(R21, female)

Another was more negative:

We were not having any problem staying there [previous home], we were not disturbed whenever it rained. The room was cemented but since this place is our own house we decided to move ... Our current house is an uncompleted building ... and I sleep on an uncemented floor in the hall ... Yes. And electricity is also a problem in that [current] house, yes, we use those small improvised torches—the one made out of wood, battery

Table 2: Summary of respondents' previous and current housing conditions

Respondent's number	Sex	Changed residence	Former housing	Current housing	Status of current home compared with previous home
1	Female	Moved after HIV diagnosis	Senior brother's house	Renting	Aside ventilation and space the current house is better than the former house Overcrowded room, no kitchen and no toilet facility
2	Female	Moved after HIV diagnosis	Joint house with husband	Family house	Noise/no peace, room is too small, poor ventilation, poor lighting, no privacy, no toilet, no bathroom, no running water. Current housing worse than formal housing
3	Female	Moved after HIV diagnosis	Partner's family house	Own family house	No toilet. Quarrels/no peace, poor ventilation, no privacy, poor lighting, no space
4	Female	Moved after HIV diagnosis	Brother's house	Family house	No toilet, bathroom and kitchen. No space, no privacy, poor ventilation, poor lighting. Choked gutters which breeds mosquitoes. Door does not lock
5	Female	Moved after HIV diagnosis	Partner's house	Mother's house	Peaceful, have my privacy, better lighting, bigger space and better ventilation. Choked gutters, dusty
6	Female	Moved after HIV diagnosis	Partners family house	Renting	Poor ventilation, poor lighting, smaller space, choked gutters, dusty
7	Female	Not moved	—	Family house	Noise and quarrels, peaceful, privacy, good lighting, no toilet
8	Female	Not moved	—	Family house	No toilet, peaceful, privacy, good ventilation, bigger space and better lighting
9	Female	Not moved	—	Renting a room	Good ventilation, bigger space, peaceful and good lighting
10	Female	Moved after HIV diagnosis	Living with mother	Renting a room	Dampness waterlogged and the house gets flooded when it rains. No space, less privacy, poor ventilation. Dusty area
11	Female	Moved after HIV diagnosis	Family house	Perching (friend's house)	Better privacy, good ventilation and better lighting
12	Male	Not moved	—	Family house	No toilet, no space and no kitchen
13	Female	Moved after HIV diagnosis	Mother's house	Father's house	Bigger space, good ventilation, better lighting and better privacy
14	Female	Not moved	—	Renting a room	Privacy, good ventilation and good lighting
15	Female	Moved after HIV diagnosis	Rented	Own house	More spacious, better ventilation, better lighting and better privacy. Waterlogged home/area
16	Female	Not moved	—	Rented plot (own constructed wooden structure)	No toilet, noisy, dusty, cockroaches and flies Damp and mold in current place, no space
17	Female	Not moved	—	Family house	Good ventilation, good lighting, good space, no peace in her own family house

(continued)

Table 2: (Continued)

Respondent's number	Sex	Changed residence	Former housing	Current housing	Status of current home compared with previous home
18	Male	Moved after HIV diagnosis	Rented	Own house (uncompleted flooring)	Current house is damp. Bigger space, better privacy and good ventilation
19	Female	Not moved	—	Family house	No peace, smaller space, less privacy, no toilet
20	Female	Moved after HIV diagnosis	Family house	Renting a room	Better privacy, more ventilation and good lighting. Quarrels and misunderstandings among tenants
21	Female	Moved after HIV diagnosis	Friend's place	Own house (uncompleted)	Bigger space, good ventilation, peaceful. No electricity, toilet and kitchen
22	Female	Moved after HIV diagnosis	Family house in village	Lives in her own wooden shop (rented plot)	No toilet and bathroom, dampness in current place. Better space, privacy and peaceful
23	Female	Moved after HIV diagnosis	Rented	Own house (uncompleted building which belongs to the father)	No toilet, no lighting and no running water. Bigger space, better ventilation and better privacy
24	Female	Not moved	—	Own home (husband's house)	Better space, better privacy and better ventilation. No lighting/electricity
25	Female	Not moved	—	Renting a room	No toilet/bath/kitchen. Bushy area with mosquitoes, no peace. Privacy, good ventilation, good lighting and bigger space
26	Female	Moved after HIV diagnosis	Rented	Renting a room	No space, dampness in current housing and poor ventilation
27	Male	Not moved	—	Renting a room	Bigger space, privacy, good lighting and good ventilation
28	Female	Not moved	—	Own house	Better space, privacy, good lighting and good ventilation
29	Male	Moved after HIV diagnosis	Own house	Family house	No toilet, smaller space, poorer ventilation and equal lighting
30	Male	Moved after HIV diagnosis	Rented	Renting a room	Poorer ventilation, dampness in current house, dusty and no toilet
31	Female	Moved after HIV diagnosis	Rented	Family house	No space, no privacy, poor ventilation and no lighting system, leaking roof, no toilet and no running water
32	Female	Not moved	—	Father's house	No privacy, poor ventilation, poor lighting and no toilet
33	Female	Not moved	—	Mother's house	Bigger space, good ventilation and privacy
34	Male	Moved after HIV diagnosis	Friend's place	Own house (moved in when uncompleted)	Bigger space, privacy and good ventilation
35	Female	Moved after HIV diagnosis	Family house	Sleeps on the veranda in the family house	No space, no privacy and no peace
36	Female	Moved after HIV diagnosis	Rented	Mother's house in the family house	Bigger space, better privacy and better lighting
37	Female	Not moved	—	Husbands family house	No toilet, privacy and good ventilation
38	Female	Not moved	—	Stepfathers house	No toilet and kitchen

and wires, that's what I use And we don't have running water What I like is the fact that we don't pay for rent.

(R23, female)

Out of the remaining seven who moved into better housing, five participants relocated to rented and family housing units, while two were virtually homeless—sleeping in kiosks or ‘perching’ at the time of the interview. One of the latter said:

I made a kiosk and I live in it with my children. It is made of wood; I erected the kiosk with woods . . . Oh, there is nothing I like about it [housing] because when it rains I face a lot of problem. I am living in it because I don't have any option.

(R22, female)

Respondents who did not change housing

The other category of respondents was PLWHAs who did not change their dwelling units. Sixteen did not relocate after their HIV diagnosis. Of these, nine lived in family houses prior to HIV diagnosis, four lived in rented housing, two were in owner-occupier dwelling units and one lived in her own wooden structure on a rented plot (see [Figure 1](#) and [Table 2](#)). An inquiry into the state of these dwellings revealed that most were substandard and inadequate. Further investigations to identify the motives for staying showed that most of these PLWHAs were constrained by finances. For instance, respondents, especially those in family homes, indicated a desire to relocate, but their inability to afford rent or build a house compelled them to stay put. This was clearly stated in comments like the following:

It is not easy living in a family house; it is more comfortable staying in your own house. There is so much noise and quarrel Sometimes what to even eat is a problem for me so how can I get money to build or rent a chamber and hall to live in. Even for my transportation to the hospital my children always have to send me money. No one is also sacking me from my family house so I have no option than to manage the single room . . . I have not moved because I don't have money. That is the only reason why I am still in that house.

(R7, female)

Another respondent indicated:

I have a place to sleep but I would have preferred my own place [rented house] like I did before moving here [moved before HIV diagnosis]. That is the only thing that worries me Concerning my living conditions? I

was not supposed to be where I live currently. When I look at myself it's clear my current house is not my place. Yes, I am not happy living there [step father's family house] There is no money. My business has collapsed. I can't even think of building a house. It's the money . . . I can't rent a place either.

(R38, female)

Some respondents identified marital relations and responsibilities as restricting their movement. For instance, a widow living in her deceased husband's family house stated:

It is a mud house. It is not bricks. It's a mud house Although the house is not the best I have no other option. A house built with bricks is durable unlike a mud house which will leak when it rains heavily. Yes. Some time ago it rained heavily and some parts of the building collapsed. My deceased husband's room and mine. So, those parts are currently broken. I don't have light. We don't have toilet facility. We use the public toilet. We do not have running water.

(R37, female)

When asked why she did not move, she lamented:

There is a reason, that is, my husband's family house, where I lived with my deceased husband.

(R37, female)

Part of the marital obligation of a wife in a patrilineal descent system (especially among Krobos) is that women are required to dwell in their matrimonial homes even after the demise of their husbands. This proves their loyalty and faithfulness. Another widow who lived in her deceased husband's house said that even though there was nothing she liked about the house and she wanted to move, she was unable to do so because of their belongings and fixed property (land). In addition, this respondent said she was unable to move out of the house because relocating somewhere else with the children could lead to the maltreatment and stigmatization of the children—because of her HIV-positive status:

There is nothing I like about the house but since the kids are young they [husband's relatives] said I should stay there to take care of the kids. There is nobody too in my husband's house so I am just there so that I can take care of the kids. We have our properties there so that is the main reason why I have not been able to move/leave. I can't leave, who will I leave my children with, who will take care of them? My husband's relatives said I should be in the house and not send the children to anybody to maltreat. Since we are not renting the place I should just be in that house and take good care of my kids . . . It's

because of the kids; if I take them somewhere they might be stigmatized. So, those are the main reason why I am staying there.

(R24, female)

Marriage among the Krobos is not just a union between a man and a woman but rather between a man's family and a woman. A woman belongs to and remains under the authority of her husband's family—even after the death of her husband. Based on this tradition, this widow remained under the authority of her husband's relatives and could not relocate against their wish. As the above narratives show, some PLWHAs who did not relocate after diagnosis wished to do so but were inhibited by financial constraints and/or marital obligations.

Quest to hide HIV status

The attempt to hide an HIV-positive status led to the residential relocation of some PLWHAs. For instance, one respondent moved from a family house to a worse (rented) housing unit to hide her HIV status. This respondent clearly stated:

I was staying with my husband in his family house, but because of this disease [HIV] we decided to move out of the family house to have more privacy.

(R6 female)

There is no privacy in a typical Ghanaian family house as:

Any family member can enter your room anytime he or she likes.

(R3, female)

A person cannot be completely assured of hiding his/her HIV status in a family house. Thus, PLWHAs vacated the extended family dwelling units—where they were not required to pay rent—and relocated to rented units—where they had to pay rent. This situation could produce more financial stress for the PLWHAs.

A respondent who was living with a friend prior to his HIV diagnosis added that the attempt to hide his status compelled him to move into his own apartment before it was completed:

We hadn't finished when I made us move in We were staying with a friend, so it was after HIV diagnosis that I rush to build my house so that no one gets to know my status.

(R34, male)

DISCUSSION

Although emerging in western industrialized countries, very few studies explore the housing conditions of PLWHAs in sub-Saharan Africa and Ghana. Specifically, we do not know if after diagnosis PLWHAs remain stable or change their housing arrangements and the contexts surrounding stability and change. It is also unclear if PLWHAs move to better or worse housing conditions in case of change and what motivates those who decide to remain stable.

Although no known study in Africa explicitly examines these specific objectives, studies in western industrialized countries speculate that the housing conditions of PLWHAs are likely to change over the progression of the virus (Ticknor and Belle-Isle, 2010). There are arguments that after HIV diagnosis, a substantial number of PLWHAs are unable to finance housing costs and as a result face eviction (Bacon *et al.*, 2010; Nussbaum, 2010). This directly or indirectly results in PLWHAs losing their homes (Bacon *et al.*, 2010; Nussbaum, 2010; Ticknor and Belle-Isle, 2010).

Consistent with these arguments, we found that most PLWHAs changed housing locations after HIV diagnosis and disclosure. As discussed in the Results section, various reasons influenced these residential relocations: eviction due to stigmatization, inability to afford rent, quest to hide HIV status and death of a cohabiting partner. Although changing housing conditions could be beneficial, this was not generally the case for our respondents. More than half of respondents who relocated after HIV diagnosis moved to homes that were uncompleted, lacked a basic facility, easily got flooded or had unfavourable housing environment. Importantly, some respondents moved into kiosks and cargo containers after HIV diagnosis. Our findings showed that respondents dwelled in substandard homes because they were unable to find and afford adequate shelters after losing their homes. This forced them to accept worse housing conditions which were comparatively affordable or easier to find. These conditions ranged from overcrowding, to a lack of amenities—toilets, bathrooms, kitchens and running water—to physically deteriorating structures and uncompleted buildings. Findings support the argument of Bacon *et al.* (Bacon *et al.*, 2010) and Milloy *et al.* (Milloy *et al.*, 2012) that after losing housing units, PLWHAs resort to substandard homes.

Some PLWHAs did not relocate after HIV diagnosis. Importantly, these PLWHAs said their housing were inadequate and no longer conducive. For these reasons they wanted to relocate. Yet, fatigue and financial constraints prevented them from doing so (Fatigue made

these respondents dependent on others for personal care.). This was because for some PLWHAs, especially those in family homes who do not pay rent, relocating meant moving to a house that required paying rent upfront, as is usually the case with renting residential units in Ghana. The cost of rent may be expensive considering that PLWHAs in this study were either unemployed or under-employed, and may be in the informal sector where the minimum wage is low. This prevented them from moving out of substandard homes. For others, relocating meant shouldering the responsibilities of sweeping, fetching water or performing other domestic chores previously performed by younger relatives dwelling within the family house. PLWHAs stated that they were unable to engage in these tasks because living with HIV—especially being diagnosed at the symptomatic stage—made them weak and fragile. This compelled them to remain in substandard homes.

Results from this study showed that marital obligations also prevented some PLWHAs (widows) from relocating. Among the Ghanaian patrilineal descent group, marital relation continues even after the demise of the husband: this is because a woman through marriage belongs to her husband's family and literally loses ties with her own family (Takyi and Dodoo, 2005; Sedziafa and Tenkorang, 2016). In some cases, widows were allocated a room in their husband's family house after the death of their spouse. Irrespective of the conditions of the room, these widows were expected to remain in their matrimonial homes with their in-laws as proof of their loyalty to the deceased husband(s). It is important to note that in the Ghanaian cultural setting moving out of such homes without the approval of the husband's family means moving out of the marital union (Takyi, 2001). This also requires the widow to leave behind all the children and all properties acquired during the union. This cultural practice makes it difficult for the widowed PLWHAs we studied to move out of such substandard homes.

Generally, our findings demonstrate that many participants lived in deplorable, overcrowded housing units with no toilet/bathroom facilities, no kitchen and no running water. The social environment within the home was equally unfavourable because of (perceived) stigma and fear (fear of the implications of disclosure). PLWHAs were more likely to change residence due to stigmatizing behaviours and their ability to afford decent and adequate homes. Meanwhile, it has been documented that living in such housing conditions could have dire consequences on the physical and emotional health outcomes of PLWHAs (see Tenkorang *et al.*, 2017, 2019; Teye-Kau *et al.*, 2018).

Our findings have implications for policy. In Ghana, the Ministry of Works and Housing launched an ambitious plan of making housing accessible and affordable to vulnerable and marginalized populations (The Africa Report, 2013). Although important, there is no reference to PLWHAs (Tenkorang *et al.*, 2017). Meanwhile, our findings suggest the relevance of prioritizing housing for PLWHAs. To date, Ghana has no housing policies/interventions for HIV-positive persons, even though the country is recording higher rates of new infections and HIV-related mortality (Ghana AIDS Commission, 2016). In 2010, the National AIDS commission, under the national strategic plan, sought to reduce new infections by half through non-clinical preventive means; yet, the plan failed to include housing. A new national strategic plan has recently been launched (2016–20) with the aim to fast-track efforts to prevent new infections and AIDS-related deaths by 2020. However, like the previous plan, the new plan does not acknowledge housing as key for PLWHAs' well-being and the general management and possible reduction of HIV/AIDS in Ghana. The key component of this plan was to prevent new infections by promoting safer sexual intercourse among the general population and HIV-positive persons; yet, the plan failed to include housing. We recommend that the housing conditions of PLWHAs in Ghana be given immediate priority and considered an important HIV-preventive strategy.

There are several limitations of this study. The study recruited participants through facility-based sampling. Selecting respondents from the hospital setting excluded PLWHAs who did not utilize health services, and during the study period. We acknowledge that our interpretation of the data might have been affected by our unique socio-cultural and philosophical positions (Luseno *et al.*, 2010). The study used retrospective data to examine stability and change where respondents were asked to describe previous and current housing conditions. While useful, retrospective data may be limited by respondents' inability to clearly recollect past events. Future research should consider employing prospective qualitative data to explore similar questions. Also, the method used does not allow our findings to be generalized to all PLWHAs in Ghana. Despite these limitations, this study is the first to examine changes in the housing conditions of PLWHAs and makes an important contribution to the HIV/AIDS literature in sub-Saharan Africa.

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