

A gendered analysis of Living with HIV/AIDS in Ghana's most HIV Endemic District

Abstract

Background: A gender gap exists regarding persons living with HIV/AIDS in Sub-Saharan Africa. Women living with HIV/AIDS (WLHIV) greatly outnumber males living with HIV/AIDS (MLHIV). We undertook a gender-focused analysis of the experiences of WLHIV and MLHIV in a municipal area in Ghana where HIV/AIDS has been most endemic.

Methods: In-depth interviews of 38 HIV-positive persons were tape recorded and analysed using thematic content analysis. Respondents were receiving routine care for co-morbidities at two hospitals in the Lower Manya Krobo Municipality (LMKM) in the Eastern Region, Ghana, with special care for HIV-positive persons.

Results: Our data yielded eight different themes. Except for feeling of sadness due to their HIV/AIDS-positive status, there were significant differences in the experiences of MLHIV, compared to WLHIV. WLHIV were more likely to be housing insecure, unemployed due mostly to stigmatization/self-stigmatization, far less sexually active, less likely to have revealed their HIV-positive status to multiple family members, and had more profound challenges regarding their healthcare. Most MLHIV expected, demanded, and had support from their wives; WLHIV were mostly single—never married, divorced or widowed (mostly due to HIV/AIDS). The vast majority of WLHIV complained of near-abject poverty, including lack of food for taking their anti-retroviral medicines.

Conclusions: The experiences of the MLHIV and WLHIV are unequivocally shaped by profound differential socio-cultural tenets and gendered nuances; WLHIV have more negative experiences. More social support and affirmative action in policy decisions in favor of WLHIV in the study district are needed to improve health outcomes and livelihoods of WLHIV particularly.

Keywords: HIV/AIDS, gender differentials, qualitative research, Lower Manya Krobo Municipality, Ghana

Background

An estimated 37.9 million [32.7–44.0 million] people were living with HIV/AIDS globally, at the end of 2018. Of these, more than two-thirds were living in sub-Saharan Africa (SSA). (Global Burden of Disease [GBD], 2017; WHO, 2019). Despite SSA's share of only 12% of the world's

population (Kharsany & Karim, 2016), 70%-71% of the world's people living with HIV/AIDS (PLWHAs) were located in sub-Saharan African (SSA) as of 2013 (WHO 2014; Kharsany & Karim, 2016). This is in spite of the estimated 33% reduction in the infection between 2005 and 2013 in the region (Kharsany & Karim, 2016), partly due to the scaling up of antiretroviral therapy (ART) (Kharsany & Karim, 2016). Despite the substantial progress in administering ART, 74% of the 1.5 million AIDS-related deaths in 2013 was contributed by sub-Saharan Africa (Kharsany & Karim, 2016). Additionally, two-thirds of the estimated 6,000 new daily HIV infections occur in SSA (Kharsany & Karim, 2016). In fact, UNAIDS (2012) reported that a young woman gets infected with HIV every minute. In Ghana, the most recent median HIV prevalence from sentinel surveillance for 2017 is 2.1%, from 2.4% in 2016 (NACP 2018). The HIV prevalence among the population 15-24 years old, which is used as a proxy for new infections, was 1.1% in 2016 and increased by 36% to 1.5% in 2017 (NACP 2018).

Sexual and gender inequality has implications for health (WHO 2018), and is a very strong socio-economic filter. The World Health Organization ([WHO] 2018: 1) defines gender as “socially constructed roles that shape the behaviours, activities, expectations and opportunities considered appropriate in a particular socio-cultural context for all people.” Yet, gender is not the same as sex (biological identities of being male or female) but interacts with sex (WHO 2018). Gender also refers to the relationships between people, and the distribution of power in those relationships.” Furthermore, gender “refers to social differences” and it “is relational” (Vlassoff 2007: 47).

The WHO (2018) has observed that a primary domain through which gender impacts health and wellbeing is the gendered determinants of health, in which gender has an intersection with other social and structural determinants of health and well-being. Globally, women have

been the most affected by HIV/AIDS (Ramjee and Daniels 2013; Kharsany & Karim, 2016), but the situation has been most devastating in SSA (Center on Housing Rights and Evictions [COHRE] 2009; Ramjee and Daniels 2013; Kharsany & Karim, 2016). About 57-59 percent of PLWHAs in SSA are females (COHRE 2009; UN 2011; Sia et al. 2016).

Studies (Ramjee and Daniels 2013; Sia et al. 2016) emphasize that this gender disparity in HIV/AIDS prevalence in SSA starts at rather early ages. Adolescent girls and young women 15-24 years of age in SSA are the most affected (Kharsany & Karim, 2016; UNAIDS 2017a), with up to eight times higher rates of HIV infection compared to males of similar ages in the region (Kharsany & Karim, 2016). Women aged 15-24 years account for 15% of the global HIV/AIDS burden (Kharsany & Karim, 2016); 80% of these live in SSA (Kharsany & Karim, 2016). Equally importantly, young women aged 15-24 years in SSA get infected with HIV five to seven years earlier than their males within the same age bracket (Kharsany & Karim, 2016). Furthermore, there is consistently higher HIV infection rates among women of this age bracket throughout southern and eastern African sub-regions, compared to male peers (UNAIDS 2014; Kharsany & Karim, 2016). The range is from 1.3 to 1.8 fold difference between males and females for Rwanda and Uganda (Kharsany & Karim, 2016).

Sia et al.'s (2016) study using 21 SSA countries with data using representative samples from 2003 to 2011 found significantly higher male-female differentials in HIV/AIDS prevalence in all countries studied and over all the years studied, ranging from 0.68 % to 11.5 % in Liberia ($P = 0.008$) in 2005 and Swaziland ($P < 0.001$) in 2006/2007, respectively. Only Burkina Faso in 2003 for which the ratio was -0.13 ($p = 0.713$) and Sao Tome and Principe: -0.5 ($p = 0.215$) had higher male HIV/AIDS prevalence than women (Sia et al. (2016).

Regarding PLWHAs, a lot of gender nuances, both subtle and overt, have been captured by previous literature. Women's relative vulnerability compared to men's, is clear regarding living and coping with HIV/AIDS (Higgins, Hoffman, Dworkin, 2010; Igulot and Magadi 2018). In Sub-Saharan Africa particularly, WLHIV's are known to have worse housing vulnerabilities, compared to MLHIV (International Coalition on AIDS and Development (ICAD) 2012; Tenkorang, Owusu and Laar, 2017; Teye-Kau, Tenkorang, & Adjei, 2018). Furthermore, WLHIV are more likely to be unemployed and have financial stressors (Sia et al. 2016; Owusu and Laar, 2018). The same applies to expectations of and actual social support and care from loved ones (Sia et al. 2016). Additionally, WLHIV have more intimate partner related difficulties (Jewkes et al. 2010; Ramjee & Daniels 2013). Others include stigma, abuse and discrimination (Ramjee and Daniels 2013; Obiri-Yeboah et al. 2016), and livelihood experiences (Asiedu & Bowman, 2014; Rivera-Rivera et al. 2014).

Women's disproportionate infection and impact by HIV/AIDS is attributed to women's unequal cultural and socio-economic status which make them more vulnerable, compared to men (Higgins et al., 2010; Igulot et al, 2018). In Sub-Saharan Africa particularly, living with HIV/AIDS is highly challenging (Cloete et al 2010:4; COHRE, 2009; Milloy et al., 2012; Obiri-Yeboah et al. 2016). Gender norms in the sub-region propound the already known extreme vulnerability of PLWHAs and translates being WLHIV into hyper vulnerability; WLHIV have a double vulnerability of being female and living with HIV-positive status in the sub-region (Dlamini et al., 2007; Obiri-Yeboah et al. 2016).

Our study compares WLHIV's and MLHIV's experiences with living with the infection in the Lower Manya Krobo Municipality (LMKM). LMKM is Ghana's most affected HIV/AIDS district (National AIDS/Sexually Transmitted Infections [STI] Control Programme [NACP]

2003, 2013; Owusu & Laar 2018). We undertake a multi-layered analysis of the gendered nuances of living with HIV/AIDS. We add to the literature. There is paucity of literature that focuses on the well-being of MLHIV vis-a-vis WLHIV in Ghana particularly. This is in spite of the generalized HIV infection in Ghana (Owusu & Laar 2018; NACP 2018), the comparatively high HIV infection rates in the sub-continent, and the disproportionate numbers of WLHIV. Furthermore, few studies have primarily focused on the intersectionality between gender and the known challenging life of being HIV-positive in sub-Saharan Africa, particularly, Ghana (Asiedu & Myers-Bowman, 2014). We particularly concentrate on examining the case of the most HIV/AIDS endemic district in Ghana, the LMKM. Thereby, we highlight the male-female nuances of living with HIV/AIDS. We also propose policy advice.

In this paper, we undertake a gendered analysis of our respondents' daily experiences: challenges and moderating factors or otherwise as they live with HIV/AIDS. We examine both the similarities and differences in the experiences of PLWHAs in the study district. We discuss the plausible socio-cultural factors that underpin these differences. Pre-empted by a prior review of the data (see Owusu & Laar 2018; and Owusu et al., unpublished), we focus on the gender differences in eight thematic areas in the data: 1) housing experiences, including relational issues within their homes, 2) stigma, discrimination and abuse, 3) disclosure or otherwise of their HIV-positive status, and 4) HIV status of their romantic partners. Other areas of concentration are 5) (un)employment status and financial well-being, 6) sexuality and sexual life, 7) family relationships and responsibilities, and 8) health status, healthcare seeking, and healthcare. This is preceded by a literature review of disaggregated differences in male/female experiences of living with HIV/AIDS in Sub-Saharan African and Ghana (Table 1). We then present the methods of the paper, followed by findings, discussion, conclusions and recommendations.

Some Gender differences in the experiences of living with HIV/AIDS in SSA and Ghana

Table 1 itemizes some gender-based differences in the experiences of PLWHAs and their related sources.

Table 1 Some gender differences in living with HIV/AIDS in SSA and their literature sources

Issues	Sources
<p><i>There is gendered stigmatisation of PLWHAs; WLHIV are more stigmatized.</i> There are significant gender differences in the level of stigma suffered by WLHIV compared to MLHIV. WLHIV are more stigmatized.</p>	<p>Skinner, & Mfecane, 2004; Van Hollen, 2010; Asiedu & Myers-Bowman, 2014; National Association of Persons with HIV/AIDS (NAP+), the Ghana AIDS Commission [GAC] and UNAIDS, 2014; Amuyunzu-Nyamongo et.al. (2007); Mbonu, van den Borne, & De Vries (2009); Ramjee and Daniels 2013; Obiri-Yeboah et al. 2016; COHRE 2009; Ramjee & Daniels 2013; Saki et al. 2015; Kushwaha et al. 2017.</p>
<p><i>Living with HIV/AIDS is synonymous with being female.</i> In African countries like Malawi, sexually transmitted diseases, irrespective of its origin are known as “women’s diseases.” In Ghana, at the onset of the HIV pandemic, it was perceived as “women’s disease” based on 80% of PLWHAs being women during the 1980s</p>	<p>Rankin, Brennan, Schell, Laviwa, & Rankin, 2005; Asiedu & Myers-Bowman, 2014</p>
<p><i>WLHIV are blamed more.</i> Society is more intolerant of women PLWHAs and they are more likely to be blamed for infecting their partners, family or larger communities although, the literature proves otherwise.</p>	<p>Mbonu, van den Borne, & De Vries, 2009; Rankin, Brennan, Schell, Laviwa, & Rankin, 2005; Skinner, & Mfecane, 2004; Ramjee & Daniels 2013; Saki et al. 2015; Sia et al. 2016; Kharsany & Karim, 2016.</p>
<p><i>HIV-negative women stick with and support their MLHV husbands; the reverse is true.</i> HIV-negative married women whose spouse are HIV-positive are more likely to be compassionate, forgiving and supportive. Husbands of WLHIV are less forgiving, less compassionate and unsupportive. WLHIV are neglected by their husbands. Most of the time the men even leave the children with the women, knowing very well that they [WLHIV] would not have money to take care of them. Female partners/wives</p>	<p>Asiedu & Myers-Bowman, 2014, p 715; Jewkes et al. 2010; Ramjee & Daniels 2013</p>

stay with MLHIV “no matter what...” and take care of them (Asiedu & Myers-Bowman, 2014, P. 715).	
<i>WLHIV are less likely to disclose, due to the social consequences.</i> Women in particular fear to disclose their HIV/AIDS status to their partners or family members. After disclosure, married women are more likely to be divorced, excluded, beaten and verbally abused than their male counterparts.	Dlamini et al (2007); (Asiedu & Myers-Bowman, 2014; Obiri-Yeboah, Amoako-Sakyi, Baidoo, Adu-Oppong, & Rheinländer, 2016, p. 131; Rankin, Brennan, Schell, Laviwa, & Rankin, 2005; Skinner, & Mfecane, 2004; NAP+ et al. (2014).
<i>Society is more lenient with MLHIV.</i> Due to culturally accepted norms about sexuality and gender roles, MLHIV are likely to be referred to as “being the men they are” when infected with the virus while WLHIV are more likely to be called prostitute or morally corrupt.	Asiedu & Myers-Bowman, 2014, p. 716; Van Hollen, 2010; Ramjee & Daniels 2013; Saki et al. 2015; Kushwaha et al. 2017.
<i>Unable to perform their care-giving roles, WLHIV are deemed irresponsible.</i> The caregiving role played by women instigates gendered stigmatisation. The Ghanaian culture identifies women as caregivers and not care-receivers; women are to take care of others, and not to be taken care of. Therefore, an HIV-positive man is more likely to be taken care of by his wife, family and friends, unlike the HIV-positive woman. WLHIV who can no longer support their partners and family are seen as burdens and irresponsible. Being HIV positive as a woman is seen as having failed in your social responsibilities. WLHIV commonly feel that their roles as carers of children and other family members is a key motivation for self-care.	Asiedu & Myers-Bowman, 2014, p. 719; Kutnick 2017
<i>Although usually unable to perform their social roles, MLHIV are still accorded respect for their ‘leadership roles’ in households/families.</i> MLHIV continue to occupy their positions as breadwinners and head of the family even if they are unable to provide the needs of the family. Their wives are, however, expected to double up their responsibilities in order to provide the family’s needs. MLHIV are respected by their wives, in spite of their HIV-positive status. “...even if the person is sick, it doesn’t make him less of a husband.”	Asiedu & Bowman, 2014, p. 720.
<i>With the support of their families, husbands of WLHIV usually evict and divorce them.</i> When WLHIV disclose to their husbands, husbands evict the WLHIV and remarry, with the support of their (husbands’) families. The family members of MLHIV “.... will say all sorts of nasty things about you and sometimes evict you from your marital home” (Asiedu & Myers-Bowman, 2014 p. 715).	Asiedu & Myers-Bowman, 2014 p. 715; NAP+ et al. (2014).
<i>WLHIV may be abused upon disclosure.</i> Some WLHIV	NAP+ et al. (2014); Obiri Yeboah

were physically abused (beaten) when they disclosed.	et al., 2016 p. 132
<i>Considerations for disclosure pose different challenges for WLHIV and MLHIV.</i> MLHIV fear losing their sexuality and sexual relationships upon disclosure; WLHIV have no such fear. Being carers of children and family, WLHIV experienced challenges with disclosing their HIV positive status to their children: to disclose or not to disclose it, when and how? MLHIV have no such considerations.	Kutnick 2017
<i>MLHIV are less likely to disclose to their wives/sexual partners, and more likely to conceal their healthcare seeking.</i> Both WLHIV and MLHIV hide their healthcare seeking and anti-retroviral (ARVs) medicines. Yet MLHIV are more likely to hide their HIV-positive status and ARVs from their wives.	NAP+ et al. (2014); Obiri Yeboah et al., 2016 p. 133; Author et al. 2019, unpublished.
<i>WLHIV in African settings are culturally constrained from protected sexual intercourse.</i> Although healthcare workers are always talking to PLWHAs about condoms and even give it to them free of charge, "...it is very hard to use it if the man does not agree. You, the woman, cannot force it...." (Married WLHIV). Hence women cannot say no to unprotected sex. "Many women (HIV positive) are also getting pregnant because they don't know how to make their men use condoms all the time..." (Obiri Yeboah et al., 2016 p. 132).	NAP+ et al. (2014); Obiri Yeboah et al., 2016 p. 132
<i>WLHIV face more housing challenges.</i> In Ghana, some parents and extended family members evict their HIV-positive children from their homes; some landlords do the same. WLHIV are more likely to face housing difficulties, compared to MLHIV	Mill 2003 p. 11; Teye-Kau et al. 2018; COHRE, 2009
<i>WLHIV experience higher economic difficulties.</i> WLHIV face higher unemployment and more financial pressure	Asiedu & Bowman, 2014; Rivera-Rivera et al. 2014; Sia et al. 2016; Author et al., 2019
<i>MLHIV have greater considerations for losing sexuality/sexual relationships upon disclosure.</i> MLHIV fear losing their sexuality and sexual relationships; women have no such fears.	Kutnick 2017
<i>WLHIV feel more betrayed when someone has infected them with HIV.</i> Both MLHIV and WLHIV feel betrayed when someone has infected them with the HIV/ they suspect someone infected them with HIV, yet WLHIV feel more betrayed in this respect than MLHIV do.	Kutnick 2017

Some reasons for gendered differences in HIV/AIDS in Ghana

Using Ghana's sample for Demographic and Health Survey 2003, Sia et al. (2016) found disproportionate HIV/AIDS gender prevalence of 1.08 for women, which was highly statistically significant ($p < 0.001$). Based on this data, Sia et al. (2016) highlighted the importance of the differential distributions of HIV/AIDS risk factors between men and women in the gendered inequality in HIV/AIDS prevalence in Ghana. They concluded that chiefly, age at first sex is to be blamed; it explained 92% ($p < 0.001$) of Ghanaian women's higher HIV/AIDS prevalence. Additionally, Sia et al. (2016) showed that sexual behaviors among men and women explained 47.1% of the excess HIV prevalence among women in Ghana in 2003. For example, it explained 24% if their male sample reported being virgins, compared to 15.5% if females reported their virginity was intact. There would be a 57.4% decrease in the gender inequality in HIV seropositivity in Ghana if both male and female samples had the same level of virginity. Sia and colleagues (2016) also found that the differential distribution of marital status, especially being widowed, divorced or separated accounted for 38.6% of excess HIV/AIDS infection in women in Ghana. Additionally, the differential distribution of premarital sex between males and females (54.3 % and 43.1 %, respectively) accounted for a lower gender gap in HIV/AIDS prevalence.

Methods

Study setting

The Lower Manya Krobo Municipality (LMKM) is situated within the Eastern Region of Ghana, and formed part of the 26 administrative districts in the Eastern Region by the time of data collection. With a land mass of 19,323 square miles, the region is the sixth largest in Ghana

(Kwapong, 2010; Sedziafa et al., 2017). Yet it has the third highest population (Kwapong, 2010; Sedziafa et al., 2017), with 2,633,154 inhabitants as of the latest census of 2010 (Ghana Statistical Service [GSS], 2013). Both the Eastern Region and LMKM are semi-urban. By the time of data collection, the LMKM had a total land mass of 304.4 km squared, and covered 12.4% of the Eastern Region (Owusu et al., unpublished; GSS, 2014). The predominant religion in the LMKM is Christianity with 92.8% adherents. Other major religions are Islam and traditional African religion. The residents of LMKM are mostly farmers and fisher folks. They are indigenous Dangmes, and speak Krobo. They are patrilineal (i.e., property is inherited through the male's lineage/fathers), and males have higher social standing traditionally, compared to females.

Agormanya, located in the (LMKD), is one of the HIV sentinel study sites in Ghana. It has nearly always had the highest HIV infection rates and always contributed the highest HIV/AIDS morbidity and mortality rates in Ghana since the disease was identified in the country in 1986. The 2016 sentinel site prevalence ranged from 4.2% in Agomanya (which tied with Sunyani) to 0.4% in Nalerigu, with a national average of 2.4% (Ghana AIDS Commission 2017). Partly due to Agormanya's contribution to the level of the pandemic, the Eastern Region has almost always been in the lead with HIV/AIDS infection in Ghana.

Study design and sampling

We sampled the 38 hospital-based respondents through purposeful and convenient means (Guarte & Barrios, 2006; Suri, 2011). The same applied to the study district, towns and hospitals used, due to the district's history with HIV/AIDS. The two study hospitals, the St. Martin's Depores Hospital in Agormanya and Atua Government Hospital in Atua, near Agormanya, have

separate specialized facilities and staff for HIV/AIDS-related care. Population Council (n.d.) documented that PLWHAs prefer specialized HIV/AIDS healthcare units dedicated to their care rather than being part of general healthcare services. They felt such units had trusted healthcare providers, and continuity of care from them. Furthermore, such units offer reduced stigma, and afford the chance to meet with other PLWHAs which prove beneficial to them. Also, HIV/AIDS units potentially offer integrated services which are more cost efficient.

The respondents had previously been clinically diagnosed with HIV, and self-confirmed this individually to the principal investigators before they were interviewed. All of them were in the clinic for HIV/AIDS-related healthcare. They were sampled only on weekdays because the HIV/AIDS wings of the hospitals do not work on weekends. Separate sampling was done for each hospital used. Our prior recognizance visits guided us in targeting 30 HIV-positive persons at each hospital per day. We randomly selected a third of them on days there were 30 or more of them at each hospital, and on days they were less, we selected half of them and put these in a daily pool. When the pool for the day had less than one-fourth males, we repeated the process to randomly pick every fourth male. We based this on the lower male versus female PLWHAs rates in sub-Saharan Africa in general, in Ghana as stated above, and the study district (GAC 2017; Owusu & Laar 2018). Antwi (2010) specified that over 70% of newly diagnosed PLWHAs who were receiving care for HIV/AIDS at LMKM in the first six months of 2010 were females. Our sample size was guided by previous researchers' assertion that often a sample of 30 respondents is adequate for qualitative research, particularly for homogenous samples (Guest, Bunce, & Johnson 2006; Mason 2010). More importantly, it was informed by thematic saturation of the responses (see Baxter & Eyles 1997; Atran, Medin and Ross 2005; Sedziafa, Tenkorang and Owusu 2016). Interviewing continued till the end of each day's clinic session. Respondents who

were sampled were given a unique identification code to prevent them from being re-sampled during the course of the study.

Data collection and ethical clearance

Our study is qualitative and used qualitative descriptive approach (Creswell 2012). This method permits the personal expression of a respondent's experiences and perceptions on a chosen topic (Sedziafa, Tenkorang and Owusu 2016b). The data collection took place in June and July 2015, with the aid of a pretested in-depth interview guide using similar respondents from both hospitals who were not re-interviewed in the main data collection. We sought ethical clearance and permissions from several agencies: the Ethical Review Board of the Memorial University at St. Johns, Newfoundland, Canada, the Ethics Committee for Humanities at the University of Ghana, Legon, and the Ghana Health Service' Ethical Review Board. Additionally, we received permissions from the Eastern Regional and LMKD Directorates of the Ghana Health Service, and also from the Administrators of the two hospitals used in the study.

Our Research Assistants (RAs) were trained for three days in the objectives of the study and several techniques of field data collection, to boost the quality of our data. Two RAs previously worked at the hospitals where the research was conducted. The first and second authors supervised the field data collection, together with the retiree RAs who served as daily supervisors. The RAs were mostly Krobos and the rest had some working knowledge of Krobo. Also, all of them speak Twi (the primary local language in Ghana) and English (the official language due to Ghana's history as a former British colony) fluently. At the instance of the respondents, most of the interviews were conducted in the indigenous Krobo language. In addition, Twi was used. Very few respondents asked for interviews in English.

The respondents gave a written consent for the interviews and publishing the results when they could write; otherwise, they gave verbal consent in the presence of a credible witness. Witnesses were chosen by respondents; if preferred, a retiree RA whom they know already, served as the witness. To further protect the identity of the respondents, no markers about them were recorded anywhere, and they were informed that no penalty would result if they choose to not join the study or discontinue it after starting. Those who participated were assured of confidentiality. Only one person opted out, citing time constraints. Respondents were not given any tangible rewards although the two nurses collected their medications for them, to compensate for their time. The interviews, which were audio recorded, lasted 35 to 50 minutes each, and were conducted in each respondent's preferred language.

Data analysis

The data were transcribed verbatim, and were read and reviewed by the first author for accuracy before they were finalized. Two experts in coding of qualitative data were assigned to code the data systematically by independently reviewing the transcriptions line by line to organize the data based on emerging themes and sub-themes. To enhance the validity of the data, 40% of the transcriptions were recoded. This was followed by discussions between the two coding experts and the first and second authors, guided by the lead RA who is an indigene of the research district and multi-lingual, to further interrogate the context and meaning of the data. We then proceeded to finalize the findings, using thematic content analysis which allows exploring all the narratives to examine how they paint the overall picture of the data (see Lieblich, Tuval-Mashiach, & Zilber, 1998; Owusu & Laar 2018). The deductive approach was used to assign the themes and sub-themes arrived at to the above-stated eight sub-topics. We support the quotations in the text with respondent numbers.

Results

Socio-demographic background of respondents

The respondents were 32 females and six males. On average, they were aged 48 years (range = 25-68 years), with the exception of one woman who could not specify her age. They mostly had low socio-economic background, especially the females. Six respondents did not have any formal education, and only two respondents had been educated to the tertiary level. The remaining respondents had dropped out of school after three years of primary level education. Nearly half (18/38) of our respondents had cohabited and never married formally. Six each were widowed or currently married. Twenty-seven respondents were indigenous Ga-Dangbe, and three each were Akans and Ewes. On average, they had been diagnosed HIV-positive for 6 years (range = six months to 13 years). Fifteen of them had been diagnosed between one and five years.

Thematic findings

Stigma, discrimination and abuse

Our results show that although there were very few males (6/38) compared to females (32/38), in proportionate terms, gender may have had some correlation with the level of stigma, abuse and discrimination experienced by the respondents. Only WLHIV reported being stigmatized, discriminated against or negatively treated in one way or the other. This included being denied food, and/or family meals were not shared with them as mainstream Ghanaian culture dictates. Almost all respondents who did not report stigmatization said they were hiding their HIV-positive status to avoid being stigmatized.

“Before I realised I had this virus, I was sick and grew lean, so when I go to look for a place to rent they will look at me from head to toe. Yes they refuse to give it to me.” (R20, WLHIV).

“When the symptoms started...they stopped drinking water from the same pot with me. They stopped eating with me and they told all the kids--those who are not my children but live in the same house with me, not to eat from me.” (R26, WLHIV).

“In getting accommodation I always pray to get a place where nobody knows about my HIV status...I pray nobody tells them I am HIV positive else they will change their attitude towards me so all the time I am afraid. If they know you are HIV positive they will never let you stay in the house because nobody wants to be in the house with such a person.” (R1, WLHIV).

Disclosure/non-disclosure of respondents' HIV-positive status

Regarding disclosure, three main patterns were found regarding the gendered nuances. First, the respondents' attempts in hiding their HIV-positive status was gender-neutral. Second, whom they disclosed their HIV-positive status to showed a gendered pattern. Third, disclosure of HIV-positive status to romantic partners was mixed in terms of gender. To avoid being stigmatized and discriminated against, the vast majority of the respondents were working hard on keeping their HIV-positive status secret and had told only few people. This applied to both MLHIV and the WLHIV equally. However, all of them, except one MLHIV, had disclosed to at least one person. Usually, this happens when the person who accompanies them for the initial diagnosis when they are often too sick to go alone gets to know the results of their HIV test. Also,

healthcare workers usually request them to come to HIV/AIDS clinics with one confidant (NAP+ et al., 2014; Author et al., 2016). All MLHIV who were married had disclosed to their wives. The same applied to the WLHIV. The next most frequent confidant for MLHIV was a female sibling.

Contrarily, the WLHIV had typically disclosed to a female sibling, or in few cases, their mother, followed in rare cases by a second female sibling, and then followed by an adult biological child. The WLHIV were far less likely to have disclosed to more than one person, and no WLHIV had disclosed to a male sibling. The WLHIV were also more likely to have told a sister who is also HIV-positive, compared to those who are HIV-negative. The few WLHIV who had disclosed their status to their adult child/children did so in instances where they critically needed support from the latter; no MLHIV had disclosed their status to their child/children.

“Because during the counselling they told us to bring somebody who loves us--like your wife, someone who could know your secret. So, because my wife was dead I brought my sister and she got to know my status. So when we started with the medications, I also got to know her (HIV-positive) status.” (R29, MLHIV).

“I have been treating the sickness for over a year but the symptoms recur after I have seen the doctor. So with the infection breaking out on my skin it was decided that I should come with one of my children for my medication.” (R35, WLHIV).

Notably, the two MLHIV who had steady girlfriends at the time of the study had not disclosed their HIV-positive status to their girlfriends while the only WLHIV who mentioned having a steady boyfriend had disclosed her HIV-positive status to him. Two other WLHIV were in non-steady sexual relationships but had not disclosed to their partners.

Family life and family relationships

The MLHIV seemed to have more family support and connectivity, both at the nuclear and extended family levels. Most of the MLHIV (two-thirds) were married, one was dating and another was a widower. Conversely, few of the females were married (2/32), or cohabiting (4/32). The WLHIV were mostly separated, divorced or never married. Only WLHIV were divorced, separated or cohabiting. Twelve (out of 32) of the WLHIV were widowed while only one out of six MLHIV was widowed. Seven out of 32 WLHIV were never married while one out of six MLHIV was never married.

Apart from one MLHIV who mentioned that of late his wife had been nagging him a lot for infecting her with HIV, the married MLHIV said their spouses live cordially with them, despite knowing their HIV status. In contrast, very few of the WLHIV said their siblings, children and other extended family members who know their HIV-positive serostatus relate to them well. The WLHIV were far more likely to have very young children and/or young extended family dependants, and to be mostly raising them single-handedly.

Nevertheless, some WLHIV had cordial family relationships:

“My husband’s relatives who know I have this disease relate to me very well. Some of them buy things for me. They have not maltreated me in anyway.” (R3, WLHIV).

“...Sometimes before I could get up to go to the toilet I would defecate on myself, but she [daughter] would wash all my clothes. I was happy with the way she related to me, so I didn’t care much when people didn’t behave nicely towards me. She really strengthened me. My son...whenever he comes home, despite being a male, he would do my laundry, even when, excuse my language, I couldn’t get up quickly enough and would defecate on

myself...So despite the bad attitude of the (extended) family members I wasn't bothered because my children love me...If I had to come to the hospital we would wake up at 4 a.m. They would come with me, join the queue and stay through counseling and everything...So they really did well for me. It made so happy.” (R31, WLHIV).

In contrast, five out of six MLHIVs who said their wives and siblings know of their HIV-positive status said they treat them well. Three out of four married MLHIV whose wives were HIV-negative mentioned that their wives live cordially with and are supportive of them. Contrarily, the only WLHIV whose husband was HIV-negative said her husband starved her and disengaged from her, hoping that she would die, until her extended family members came for her, subsequently leading to a divorce.

“I was staying with my husband when I fell sick and he said he was no longer going to marry me because I was going to die...Because he said I should die, he sometimes refused to give me food....” (R26, WLHIV, divorced).

Housing/accommodation

We observed some gender differences in the housing conditions with their implications for the health and well-being of the respondents. The WLHIV reported much more housing-related problems compared to the MLHIV. The MLHIV lived in more secured housing than the WLHIV. Only one MLHIV had changed his home since his HIV diagnosis. MLHIV were less likely to live in extended family housing premises and had more rooms/space to themselves and their households. Conversely, the vast majority of the WLHIV were sharing overcrowded extended family accommodations, were often sharing a single sleeping-cum-living room with several extended and nuclear family members, and were more likely to live in rented homes with several tenants. Also, WLHIV were more likely to live in sub-standard accommodations, often

without water, toilet and kitchen facilities. These included kiosks/quickly-put-together wooden structures, and old houses with extensive structural defects, and/or to have been restricted to isolated places such as the veranda, in their extended family compound homes.

Furthermore, only WLHIV reported having their homes at unsecured places such as muddy, marshy places and locations susceptible to flooding. For more than a half of the WLHIV, such housing limitations interfered with taking their medications. No MLHIV reported housing-related interference with taking their medication.

“I keep it [ARV] in hiding. Staying with someone is not like being on your own.” (R16, WLHIV).

“The family house, and you know these old houses. Recently the Council [Municipal Office] came to warn us that if the building collapse resulting in death, they will not let us go scot free...the family house is old and so it leaks when it rains. You’d have to collect the water in bowls. [It is a] hut [mud house]. So even the Council gave us a warning that it could kill someone but alas! I can’t rent a place...Whenever it’s about to rain, with the winds blowing strongly I become frightened. The roof shakes fiercely. Yes. Just as I said, we set up a bed outside because the room isn’t big. The building is also made with mud, and its state is... [Frightening?] Yes, it’s scary, so people from the Council came to warn us. So I am not able to sleep indoors, I sleep outside.” (R31, WLHIV).

Employment and financial well-being

Compared to the WLHIV, the MLHIV seemed to fare much better in terms of employment and also, financially. The fifteen respondents who were unemployed comprised one male and

fourteen females. This MLHIV had retired voluntarily while the WLHIV mostly were unemployed involuntarily. One MLHIV and WLHIV each said the HIV infection had sapped their energy and thus they could not work. Two WLHIV said prospective employers discriminate against them and do not employ them based on their looks. All three respondents who were formal sector employees were MLHIV. Another three were trained artisans. Two WLHIV were seamstresses and one MLHIV was an auto-electrician. All the nine petty traders were WLHIV, and mostly did not have technical training for their vocations. The only MLHIV among the four farmers was engaged in commercial farming; all the WLHIV who farmed were doing so on subsistent basis. With the exception of the MLHIV farmer, all the five MLHIV who were employed had formal training for their jobs, whereas only two of the 18 employed WLHIV had had formal training as seamstress for their jobs. Furthermore, all those who stopped working immediately after their HIV-positive diagnosis were WLHIV.

“At first I was a caterer but when cooking the knife can cut you so I have stopped. Even when I am cooking for the home and the knife cuts me I quickly get up and stop what I am doing; I don’t continue anymore. I don’t want to end up infecting other people.” (R15, WLHIV).

Reported health status and accessing healthcare

Gender differences were observed in the reported physical health of the WLHIV versus the MLHIV. The MLHIV self-reported lesser body weaknesses and much fewer co-morbidities compared to the WLHIV. Yet, in terms of emotional and psychological health, there were no gender differences. In spite of the fact that the WLHIV reported more challenges related to unemployment, housing, money, discrimination, abuse and stigma, and lack of social support, almost all of the respondents said they were sad, worried and/or distressed about several of the

challenges they have. Their worries mostly cantered on what they felt was seemingly uncertain future for their young dependents: underage children and grandchildren. The WLHIV worried about their housing challenges as well.

“Sometimes I think a lot. I am worried and frustrated because I believe anything can happen to me at any time. This is mainly due to financial problems. I think a lot sometimes especially because of my financial crisis.” (R5, WLHIV, unemployed).

“Currently it is my wife’s attitude [which makes me sad]. She doesn’t take care of the farm. It isn’t that she is sick and so cannot go, but because of this [blames him for infecting her] she said she won’t go. She doesn’t go and I go to and fro...” (R34, MLHIV).

“...nobody supports me with my children’s school fees and other things. Because of this sometimes I can’t sleep. I am always thinking about some of these issues so I am not happy. Life has not been easy for me at all especially because my husband is dead so I have to take care of all the children by myself.” (R1, WLHIV, unemployed).

“I feel I am just in this world for nothing, I feel hopeless, I don’t have anywhere to go, and I don’t have anything to do.” (R23, WLHIV).

However, the MLHIV seemed much better resourced to seek healthcare, meet their scheduled hospital appointments, and follow prescribed ART compared to the WLHIV. For instance, more stressful housing and non-disclosure to persons within shared housing, translated

into a much higher proportion of WLHIV hiding their medications (ARVs). Similarly, with more unemployment and discrimination within and outside the home, the WLHIV were less likely to have money for transportation to the hospital. Moreover, WLHIV were more likely to be saddled with younger children, which interfered with attending scheduled hospital appointments for a few of them.

Additionally, having far less social support meant that more WLHIV had challenges with food for taking their ARV; no MLHIV mentioned having challenges with food.

“Financial problem. I don’t have money so sometimes coming to the hospital is a problem. What to eat is also a problem; we have been warned by the nurses not to take the drugs if we don’t eat any good food. Sometimes I don’t take the drugs in the evening because I can’t get good food or enough food to eat due to my financial problem.” (R7, WLHIV).

“...it came to a time I was not getting food to eat so I became sick and the rate at which I was falling sick was high. I grew lean. Even in that condition I will be in bed and will be hungry but my father and sisters will cook and will turn their back to face me and eat; they will not give me some to eat...so I will dress up and go beg for food. That was the reason why I went to buy a flask...So [my father] named the flask ‘beggar’s flask.’ (Laughter). I normally don’t take my medicine because I don’t get food to eat, so on days I want to take the drug, I will feel like vomiting, I then drink water and wait for a while before taking my drugs...As for the drugs my father forces me to take them but he won’t give me food to eat.” (R23, WLHIV).

Finally, there were huge differences in adherence to medication by the MLHIV compared to the WLHIV. This may be attributed to the much higher literacy status of the MLHIV compared to the WLHIV. All six respondents who were not formally educated were WLHIV. Also, more WLHIV had only basic school education. Only WLHIV mentioned for instance that inadequate formal education interfered with their ability to take their ARVs on time. In fact, the few respondents who mentioned having skipped their previously scheduled hospital appointments or having gone late were WLHIV.

“Hmmm. The issue is I don’t know how to read, but I have to take 5 medicines all on time. The time; as for this, that is the only thing, and they also know that I take my medication on time. I take the medicine out myself. If I ask the person whether it’s 5 [p.m.], and they say yes, I would take my medicine.” (R35, WLHIV, illiterate).

Expression of sexuality and sexual life

Compared to the WLHIV, the MLHIV were far more likely to be in a romantic relationship; while the vast majority of the WLHIV were not in a romantic relationship; all the males, except one widower, were in sexual relationships and said they were having sex regularly. Conversely, the vast majority of the WLHIV said they were abstaining from sex and romantic relationships.

“No I don’t. For twelve years now I have not had sexual intercourse.” (R7, WLHIV).

“I don’t even think about sex, all I think about is how to be strong and healthy once again.” (R13, WLHIV).

For respondents who were in a regular/stable relationships (married or co-habiting), one MLHIV mentioned having two regular sexual partners—a wife and a girlfriend. No WLHIV in a regular/stable sexual relationship mentioned having more than one sexual partner. However, three WLHIV who were in casual sexual relationships were changing boyfriends frequently.

Only WLHIV said their poor housing conditions interfered with their wish to have sex, and/or other extended family/housemates alert suitors to their HIV-positive status. No MLHIV mentioned any form of restriction/interference with their wish to be sexually indulgent.

HIV/AIDS status of past and current sexual partners

For respondents who knew the HIV status of their current regular sexual partner, the WLHIV were far more likely to mention that their partners were HIV-positive. Thirteen WLHIVs had HIV-positive partners while only one MLHIV did. Also, all the WLHIV said they got the infection from their husbands/male partners. The reverse was not true. In addition, only two WLHIV said they could not tell the HIV-positive status of a past or current sexual partner. One MLHIV and a WLHIV each said they were suspicious of an unconfirmed HIV-positive status of a current or past sexual partner. Of the MLHIV who were married at the time of the study, the majority (3/4) said their spouses were HIV-positive while of the two married WLHIV, one had an HIV-positive spouse. Three of the four WLHIV who were co-habiting had HIV-positive partners; one did not know of the HIV serostatus of her partner.

“...the man I am with now is a womanizer, but no matter how much I complain he would never stop. So...he gave me the virus...” (R25, WLHIV).

“I was worried but it was my husband who gave me the virus...” (R15 WLHIV).

Discussion

The WHO (2018) noted that gender determines health inequities—doing so both separately, and as a confounding variable to several social constructs such as age, sexual orientation, socio-economic status, ethnicity, and disability. With specific reference to HIV/AIDS, across certain cultures, including SSA, the experiences of WLHIV and MLHIV are different (Ramjee and

Daniels 2013; Saki et al. 2015). Our findings resonate with the findings from other locations/cultures in SSA. We found that the experiences of Ghanaian WLHIV were mostly different from those of Ghanaian MLHIV. These differences are more cultural than they are biologically-based, particularly regarding the patrilineal Krobo culture which gives more social privileges to males compared to females. Previous research (Saki et al. 2015; Sia et al. 2016; Ramjee and Daniels 2013) noted the negative effect of culture in translating an HIV/AIDS status into social problems mostly skewed against WLHIV. Our findings corroborate those of Ramjee and Daniels (2013), the MLHIV we studied had better command over resources. This situation is also generally applicable to the whole of Ghana. Furthermore, MLHIV had higher socio-economic status, all of which translated into giving them privileges over owning and utilizing resources (Ramjee and Daniels 213; Sia et al 2016).

Our WLHIV's assertion that their spouses gave them the infection since the spouses died earlier may explain why our WLHIV had mostly been widowed. Several authors in SSA have noted similarly that for adolescents and younger PLHWAs for instance, men are more likely to infect the women (for example Sia et al. 2016; Kharsany & Karim, 2016). Ramjee and Daniels (2013), however, observed that in SSA, WLHIV may have a similar tendency to infect MLHV. Be it as it may, in parts of SSA, women are perceived as the transmitters of the HIV virus. The overwhelming heterosexual transmission of HIV in SSA (Ramjee & Daniels 2013; Kharsany & Karim, 2016) makes society blame women more than men, of sexual-related deviances and adultery (Ramjee & Daniels 2013; Saki et al. 2015). Owusu, Anarfi and Tenkorang (2013), however, opined that in mainstream Ghanaian culture, males are permitted to have multiple partners, and to even be polygamists but women are denied such privileges. These privileges are

considered taboo if a woman engages in them. Other studies have generalized this to SSA (Kharsany & Karim, 2016; Ramjee & Daniels 2013; Sia et al. 2016).

Nonetheless, negative branding of PLWHAs as immoral is often directed towards WLHIV (Saki et al., 2015; Kushwaha et al. 2017). Consequently, WLHIV are subjected to lots of inhuman treatment (COHRE, 2009). This partly explains why WLHIV in SSA suffer more victimization and discrimination than MLHIV (COHRE 2009; Ramjee & Daniels 2013; Kushwaha et al. 2017), which our study confirmed. Saki et al. (2015) reached the same conclusion in their study in Iran. Our findings further support UNAIDS' (2017b, c) assertion that although women are disproportionately affected by HIV globally, WLHIV have lower AIDS-related death rate than MLHIV since 2010; up to 33% higher. Furthermore, Sia et al. (2016) documented higher marital status among MLHIV compared to WLHIV in SSA generally, as we did.

Our findings further affirm those of previous authors that poverty disproportionately increases vulnerability to, and the effect of HIV/AIDS and its consequences ([Krishnan et al., 2008](#); [Igulot and Magadi 2018](#)), particularly for women (Ramjee & Daniels 2013; Sia et al. 2016). Poverty also acts through food insecurity, to extend a barrier to some WLHIV's treatment for HIV (Ramjee et al 2013; Pascoe et al. 2015). The result is increased risk for both advancing HIV and onward transmission (UNAIDS 2015). The critical link between housing and PLWHAs' health and well-being (Cloete et al., 2010; ICAD 2010; Tenkorang et al. 2017) even gets worse for WLHIV due to discrimination and gender inequality fuelled by negative cultural practices and beliefs in SSA (COHRE, 2009). Thus, WHO (2017) calls for the improvement of women's human rights and gender equality to reduce the infection rates of HIV for women and to also improve their access to and uptake of healthcare for HIV.

Furthermore, we found that compared with the MLHIV, the WLHIV we studied had much lesser quantity and quality of social support, as concluded by other researchers regarding SSA (Thong et al. 2007; Reblin and Uchino 2008; Ramjee and Daniels 2013). Vlassoff (2007) noted that it is a worldwide phenomenon for males to enjoy more social support. Social integration (Steptoe et al. 2013; Huang et al. 2017), and belonging support (defined as interaction with friends, family, and other groups) (Tomaka, Thompson, & Palacios 2006) are known to have protective effect on the health and quality of life of some populations with compromised/ailing health status (Tomaka, Thompson, & Palacios 2006). Moreover, our findings may affirm Sia et al.'s (2016) explanation of the importance of the differential distribution of marital status, particularly being widowed, divorced or separated on the disproportionate distribution of HIV/AIDS in Ghana: our WLHIV respondents were mostly separated, divorced or widowed.

However, aspects of our findings contradict some previous authors. For instance, Gorum et al. (2018) note that globally, women of reproductive age (15-44) are most likely to die from AIDS-related cases. Additionally, our findings that the WLHIV have more difficulty accessing healthcare services regularly compared to the MLHIV do not support previous conclusions that globally, adult women access antiretroviral treatment more than men. This has been attributed to a considerably high coverage of PMTCT services for pregnant WLHIV (UNAIDS 2017c). The proven effectiveness of PMTCT services is also accountable for this (; Vieira, 2017; Oleribe et al, 2018). Moreover, generally, it is explained by women's use of maternal health services during pregnancy and childbirth. Again, although we found that both WLHIV and MLHIV were hiding their healthcare seeking, we did not find any MLHIV hiding their ARVs from their wives as Obiri Yeboah et al.'s study in Ghana (2016) did.

Limitations

The key limitation of this study is that it is not possible to draw causal inferences from it because it is not representative of the general population (Steptoe et al. 2013). Resultantly, it is un-generalizable to populations outside the study sample. This limitation also emanates from the cross-sectional nature of the study. Moreover, since the study is retrospective, it may lead to recall bias in our findings (Owusu & Laar 2018).

Conclusion

We conclude that gender mostly influenced the health and well-being of the PLWHAs we studied. The MLHIV were much better off than the WLHIV in several respects. There were marked gender differences in the experiences of the PLWHAs with respect to housing, health status, and healthcare seeking and adherence to prescribed ART. Other differences showed in disclosure of their HIV status, and stigma, discrimination and abuse, and acceptance by family members and spouses. The WLHIV, who also were more likely to have young dependents, were more vulnerable.

Our study revealed that gender negatively filtered the already compromised social status of the PLWHAs we studied, leaving the WLHIV mostly impoverished and at the brink of destitution. The MLHIV were generally well off and faced almost no discrimination, stigmatization and abuse from both within and outside their homes. We conclude that rather than focusing on attributing these profound differences in the well-being and experiences of the MLHIV and the WLHIV solely to socio-cultural tenets, these are also human rights issues. We, thus, call for a human rights-based approach to protecting WLHIV from extreme neglect and inhuman treatments/experiences they face due to their gender-filtered HIV-positive status.

We affirm WHO's (2018: 1) recommendation that health systems should adopt gender-responsiveness "which acknowledge, understand and transform how gender determines health behaviours, access to services, pathways of health care, and how gender interacts with other determinants of health and drivers of inequities." Policy makers should work on safeguarding the human rights of WLHIV as well as introduce systems that give WLHIV greater social protection, including educating families and community members to pay closer attention to PLWHAs, particularly WLHIV.

References

References

- Amuyunzu-Nyamongo, M., Okeng'o, L., Wagura, A., & Mwenzwa, E. (2007). Putting on a brave face: the experiences of women living with HIV and AIDS in informal settlements of Nairobi, Kenya. *AIDS care*, *19*(sup1), 25-34.
- Antwi, I. K. (2010). *2010-half-year HIV/AIDS Review report of the Lower Manya Krobo District. Atua, Ghana: Ghana Health Services.*
- Asiedu, G. B., & Myers-Bowman, K. S. (2014). Gender differences in the experiences of HIV/AIDS-related stigma: A qualitative study in Ghana. *Health care for women international*, *35*(7-9), 703-727.
- Atran, S., Medin, D. L., & Ross, N. O. (2005). The cultural mind: environmental decision making and cultural modeling within and across populations. *Psychological review*, *112*(4), 744.
- Baxter, J., & Eyles, J. (1997). Evaluating qualitative research in social geography: establishing 'rigour' in interview analysis. *Transactions of the Institute of British geographers*, *22*(4), 505-525.
- Cloete, A., Strebel, A., Simbayi, L., van Wyk, B., Henda, N., & Nqeketo, A. (2010). Challenges faced by people living with HIV/AIDS in Cape Town, South Africa: Issues for group risk reduction interventions. *AIDS research and treatment*, *2010*.

COHRE (2009). Shelter from the storm: women's housing rights and the struggle against HIV/AIDS in Sub-Saharan African. Geneva, Switzerland: COHRE.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th Ed.). Boston, MA: Pearson.

Dlamini, P. S., Kohi, T. W., Uys, L. R., Phetlhu, R. D., Chirwa, M. L., Naidoo, J. R., ... & Makoae, L. N. (2007). Verbal and physical abuse and neglect as manifestations of HIV/AIDS stigma in five African countries. *Public Health Nursing, 24*(5), 389-399.

GBD (2018) Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet* **392**, 1789–1858

Guarte, J. & Barrios, E. (2006). Estimation under purposive sampling. *Communications in Statistics--Simulation and Computation, 35*(2), 277-284.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods, 18*(1), 59-82.

Higgins, J. A., Hoffman, S., & Dworkin, S. L. (2010). Rethinking gender, heterosexual men, and women's vulnerability to HIV/AIDS. *American journal of public health, 100*(3), 435-445.

Huang, Y. C., Cheng, H. L., Wahlqvist, M. L., Lo, Y. T. C., & Lee, M. S. (2017). Gender differences in longevity in free-living older adults who eat-with-others: a prospective study in Taiwan. *BMJ open, 7*(9), e016575.

Igulot, P., & Magadi, M. A. (2018). Socioeconomic Status and Vulnerability to HIV Infection in Uganda: Evidence from Multilevel Modelling of AIDS Indicator Survey Data. *AIDS research and treatment, 2018*.

UNAIDS (2012) Global report: UNAIDS report on the global AIDS epidemic 2012. Retrieved from https://www.unaids.org/sites/default/files/media_asset/20121120_UNAIDS_Global_Report_2012_with_annexes_en_1.pdf

Jewkes, R. K., Dunkle, K., Nduna, M., & Shai, N. (2010). Intimate partner violence, relationship power inequity, and incidence of HIV infection in young women in South Africa: a cohort study. *The lancet, 376*(9734), 41-48.

- Kharsany, A. B., & Karim, Q. A. (2016). HIV infection and AIDS in sub-Saharan Africa: current status, challenges and opportunities. *The open AIDS journal, 10*, 34. doi: 10.2174/1874613601610010034.
- Kutnick, A. H., Gwadz, M. V., Cleland, C. M., Leonard, N. R., Freeman, R., Ritchie, A. S., ... & Belkin, M. (2017). It's a process: reactions to HIV diagnosis and engagement in HIV care among high-risk heterosexuals. *Frontiers in public health, 5*,100. doi: 10.3389/fpubh.2017.00100.
- Lieblich, A., Tuval-Mensah, R., & Zilber, T. (1998). *Narrative Research: Reading, Analysis and Interpretation*. Thousand Oaks, CA: Sage.
- Reblin, M., & Uchino, B. N. (2008). Social and emotional support and its implication for health. *Current opinion in psychiatry, 21*(2), 201. doi: 10.1097/YCO.0b013e3282f3ad89.
- Saki, M., Kermanshahi, S. M. K., Mohammadi, E., & Mohraz, M. (2015). Perception of patients with HIV/AIDS from stigma and discrimination. *Iranian Red Crescent Medical Journal, 17*(6). doi: 10.5812/ircmj.23638v2.
- Mason, M. (2010). Sample size and saturation in PhD studies using qualitative interviews. In *Forum qualitative Sozialforschung/Forum: qualitative social research, 11*(3).
- Mbonu, N. C., van den Borne, B., & De Vries, N. K. (2009). Stigma of people with HIV/AIDS in Sub-Saharan Africa: a literature review. *Journal of tropical medicine, 2009*. doi: 10.1155/2009/145891.
- Milloy, M. J., Marshall, B. D., Montaner, J., & Wood, E. (2012). Housing status and the health of people living with HIV/AIDS. *Current HIV/AIDS Reports, 9*(4), 364-374. doi: 10.1007/s11904-012-0137-5.
- Mill, J. E. (2003). Shrouded in secrecy: breaking the news of HIV infection to Ghanaian women. *Journal of Transcultural Nursing, 14*(1), 6-16.
- National AIDS/STI Control Program (NACP). (2003). *Estimating National HIV Prevalence in Ghana using Sentinel Surveillance Data*. Accra: NACP, Disease Control Unit, Ministry of Health.
- NACP. (2013). NACP Archives. Accra: NACP.
- NACP. (2018). *2017 HIV Sentinel Survey Report*. Paper presented at the National HIV and AIDS Research Conference, Accra International Conference Centre, Accra.

National Association of Persons Living with HIV/AIDS, Ghana AIDS Commission and UNAIDS. (2014). Persons Living with HIV Stigma Index Study, Ghana. Revised Report. Accra, Ghana: NAP+, GAC & UNAIDS. Retrieved from <http://www.stigmaindex.org/sites/default/files/reports/GHANA%20Stigma%20Index%20report%202014.pdf>

Obiri-Yeboah, D., Amoako-Sakyi, D., Baidoo, I., Adu-Oppong, A., & Rheinländer, T. (2016). The 'fears' of disclosing HIV status to sexual partners: a mixed methods study in a counseling setting in Ghana. *AIDS and Behavior*, *20*(1), 126-136. doi: 10.1007/s10461-015-1022-1.

Oleribe, O. O., Enenche, E., Udofia, D., Ekom, E., Osita-Oleribe, P. I., Kim, J. U., & Taylor-Robinson, S. D. (2018). Assessment of the effectiveness of PMTCT program in eight service delivery points in North Central Nigeria. *HIV/AIDS (Auckland, NZ)*, *10*, 253.

Owusu, A.Y., Anarfi, J.K., & Tenkorang, E.Y. (2013). The socio-cultural contexts of sexual socialization and sexual behavior of young people within the family setting in Ghana. *Ghana Social Science Journal*, *10*(1&2), 104-122.

Owusu, A. Y., & Laar, A. (2018). Managing HIV-positive sero-status in Ghana's most HIV concentrated district: self-perceived explanations and theoretical discourse. *African Journal of AIDS Research*, *17*(1), 82-90.

Pascoe, S. J., Langhaug, L. F., Mavhu, W., Hargreaves, J., Jaffar, S., Hayes, R., & Cowan, F. M. (2015). Poverty, food insufficiency and HIV infection and sexual behaviour among young rural Zimbabwean women. *PLoS One*, *10*(1), e0115290.

Ramjee, G., & Daniels, B. (2013). Women and HIV in sub-Saharan Africa. *AIDS research and therapy*, *10*(1), 30.

Rankin, W. W., Brennan, S., Schell, E., Laviwa, J., & Rankin, S. H. (2005). The stigma of being HIV-positive in Africa. *PLoS medicine*, *2*(8), e247.

Rivera-Rivera, Y., García, Y., Toro, V., Cappas, N., López, P., Yamamura, Y., & Rivera-Amill, V. (2014). Depression correlates with increased plasma levels of inflammatory cytokines and a dysregulated oxidant/antioxidant balance in HIV-1-infected subjects undergoing antiretroviral therapy. *Journal of clinical & cellular immunology*, *5*(6).doi:10.4172/2155-9899.1000276

Kushwaha, S., Lalani, Y., Maina, G., Ogunbajo, A., Wilton, L., Agyarko-Poku, T., ... & Nelson, L. E. (2017). "But the moment they find out that you are MSM...": a qualitative investigation of HIV prevention experiences among men who have sex with men (MSM) in Ghana's health care system. *BMC Public Health*, *17*(1), 770.doi.10.1186/s12889-017-4799-1.

Sedziafa, A. P., Tenkorang, E. Y., Owusu, A. Y., & Sano, Y. (2017). Women's Experiences of Intimate Partner Economic Abuse in the Eastern Region of Ghana. *Journal of Family Issues*, 38(18), 2620–2641. doi.org/10.1177/0192513X16686137

Sia, D., Onadja, Y., Hajizadeh, M., Heymann, S. J., Brewer, T. F., & Nandi, A. (2016). What explains gender inequalities in HIV/AIDS prevalence in sub-Saharan Africa? Evidence from the demographic and health surveys. *BMC Public Health*, 16(1), 1136.

Skinner, D., & Mfecane, S. (2004). Stigma, discrimination and the implications for people living with HIV/AIDS in South Africa. *Sahara-j: Journal of Social Aspects of HIV/AIDS*, 1(3), 157-164.

Steptoe, A., Shankar, A., Demakakos, P., & Wardle, J. (2013). Social isolation, loneliness, and all-cause mortality in older men and women. *Proceedings of the National Academy of Sciences*, 110(15), 5797-5801. doi: 10.1073/pnas.1219686110

Krishnan, S., Dunbar, M. S., Minnis, A. M., Medlin, C. A., Gerdtz, C. E., & Padian, N. S. (2008). Poverty, gender inequities, and women's risk of human immunodeficiency virus/AIDS. *Annals of the New York Academy of Sciences*, 1136, 101. doi.org/10.1196%2Fannals.1425.013

Suri, H. (2011). Purposeful sampling in qualitative research synthesis. *Qualitative research journal*, 11(2), 63-75. doi: 10.3316/QRJ1102063.

Tadele G., Abebaw W., Kifle L., Ebrahim M., Teha S., Mesfin D., Mulugeta S., and Abdulsemed W. (2018). A gendered analysis of Living with HIV/AIDS in Ghana's most HIV Endemic District *Archives of Public Health* 76(51). doi.org/10.1186/s13690-018-0299-8

Tenkorang, E. Y., Owusu, A. Y., & Laar, A. (2017). Housing and Health Outcomes of HIV Positive Persons in the Lower Manya Krobo District, Ghana.

Teye-kau, M., Tenkorang, E. Y., & Adjei, P. B. (2018). Revisiting the Housing–Health Relationship for HIV-Positive Persons: Qualitative Evidence From the Lower Manya Krobo District, Ghana. *Qualitative health research*, 28(8), 1217-1228.

The Population Council (n.d.). Available at "<http://www.popcouncil.org/research/assessing-the-benefits-of-integrated-hiv-and-reproductive-health-services-t>" \t "_blank (Accessed 16/3/2017).

Thong, M. S., Kaptein, A. A., Krediet, R. T., Boeschoten, E. W., & Dekker, F. W. (2006). Social support predicts survival in dialysis patients. *Nephrology Dialysis Transplantation*, 22(3), 845-850.

Tomaka, J., Thompson, S., & Palacios, R. (2006). The relation of social isolation, loneliness, and social support to disease outcomes among the elderly. *Journal of aging and health, 18*(3), 359-384.

UNAIDS. (2012). Every minute, a young woman is infected with HIV. Geneva, Switzerland: Joint United Nations Program on HIV/AIDS (UNAIDS); UNAIDS. 2014. The Gap Report ISBN: 978-92-9253-062-4.; 2014. [Accessed on 12 July 2015].

UNAIDS. (2015). Empower young women and adolescent girls: Fast-track the end of the AIDS epidemic in Africa. https://www.unaids.org/sites/default/files/media_asset/JC2746_en. Accessed May 24, 2019.

UNAIDS. (2017a) estimates from the AIDS info online database. Additional disaggregations correspond to unpublished estimates for 2016 provided by UNAIDS, obtained from country-specific models of their AIDS epidemics. Geneva, Switzerland: Author.

UNAIDS. (2017b). Ending AIDS: Progress towards the 90-90-90 targets. "<https://www.unaids.org/en/resources/campaigns/globalAIDSupdate2017>" Accessed July 31, 2019.

UNAIDS. (2017c). *When women lead change happens: Women advancing the end of AIDS.* Available at <https://www.unaids.org/en/resources/documents/2017/when-women-lead-change-happens>. Accessed July 31, 2019.

United Nations. (2011). *The Millennium Development Goals Report 2011.* New York: United Nation. Available at [http://www.un.org/millenniumgoals/pdf/\(2011_E\)%20MDG%20Report%202011_Book%20LR.pdf](http://www.un.org/millenniumgoals/pdf/(2011_E)%20MDG%20Report%202011_Book%20LR.pdf) Accessed July 31, 2019.

Van Hollen, C. (2010). HIV/AIDS and the gendering of stigma in Tamil Nadu, South India. *Culture, Medicine, and Psychiatry, 34*(4), 633-657.

Vlassoff, C. (2007). Gender differences in determinants and consequences of health and illness. *Journal of health, population, and nutrition, 25*(1), 47.

Vieira, N., Rasmussen, D. N., Oliveira, I., Gomes, A., Aaby, P., Wejse, C., ... & Unger, H. W. (2017). Awareness, attitudes and perceptions regarding HIV and PMTCT amongst pregnant women in Guinea-Bissau—a qualitative study. *BMC women's health, 17*(1), 71.

WHO. (2017). Consolidated guideline on sexual and reproductive health and right of women living with HIV. Geneva, Switzerland: WHO. Available at https://www.who.int/gender_rights/Ex-Summ-srhr-women-hiv Accessed October 22, 2018

WHO (2018). Gender and Health. Available at <http://www.who.int/news-room/factsheets/detail/gender>. Accessed October 13, 2018.

WHO. (2019). Global Health Observatory (GHO) data. Geneva, Switzerland: Author. Available at: <https://www.who.int/gho/hiv/en>. Accessed October 7, 2019.