Ecological factors influencing HIV sexual risk and resilience among young people in rural Kenya: implications for prevention

Gary W. Harper1*, Andrew J. Riplinger2, Leah C. Neubauer2, Alexandra G. Murphy3, Jessica Velcoff4 and Audrey K. Bangi5

1School of Public Health, University of Michigan, Ann Arbor, MI 48109, USA, 2Master of Public Health Program, DePaul University, Chicago, IL 60614, USA, 3College of Communication, DePaul University, Chicago, IL 60614, USA, 4HIV Clinical Research, New Orleans, LA 70117, USA and 5Harder + Company Community Research, San Francisco, CA 94103, USA.

*Correspondence to: G. W. Harper, Department of Health Behavior and Health Education, University of Michigan School of Public Health, 1415 Washington Heights, School of Public Health I, Room 3850, Ann Arbor, MI 48109-2029, USA. E-mail: gwharper@umich.edu

Received on February 7, 2012; accepted on July 10, 2013

Abstract

Most new HIV infections in Kenya occur among young people. The purpose of this study was to understand ecological factors that influence HIV-related sexual risk and resilience among young people in rural Kenya and to elicit their ideas for HIV prevention interventions. Nine focus groups (N = 199) were conducted with both female (55%) and male (45%) participants (ages 14–24 years) living in rural communities in Kenya. Findings were organized into thematic areas related to the following systems of influence: (i) intrapersonal (substance use, HIV knowledge), (ii) interpersonal (peer pressure, lack of parent–child communication, interpersonal sexual violence), (iii) institutional/community (pornography, transactional sex, ‘idleness’, lack of role models) and (iv) socio-cultural/policy (Kikuyu culture, Western influence, religious beliefs, HIV-related stigma and gendered sexual scripts). Results regarding the types of HIV prevention programs that participants believed should be developed for young people in rural Kenya revealed seven primary themes, including (i) HIV prevention community/group workshops, (ii) condom distribution, (iii) job skills trainings, (iv) athletic and social clubs, (v) HIV-related stigma reduction campaigns, (vi) community-wide demonstrations and (vii) other HIV/AIDS activities led by young people. Implications for the development of culturally and developmentally appropriate HIV prevention interventions for young people in rural Kenya are discussed.

Introduction

Kenya is one of the African countries most critically impacted by the HIV/AIDS pandemic. The 2007 Kenya AIDS Indicator Survey found that over 1.4 million Kenyan adolescents and adults were living with HIV/AIDS revealing a prevalence rate of 7.4% among persons aged 15–64 [1]. Most new HIV infections in Kenya occur among young people, especially young women aged 15–24 and young men under the age of 30 [1]. Given that roughly 60% of Kenya’s population is under the age of 20, including over 5.5 million adolescents aged 10–19 [2], the higher prevalence rates among young people calls for targeted prevention intervention specifically for this population. This is especially warranted given that the number of new HIV infections has been growing significantly among young people when compared with all other age groups [1].
There is a critical need to focus on young people living in rural areas as the majority of Kenyans (81%) reside in rural areas where poverty is highest and access to much needed HIV prevention services is limited [3]. Rural young people not only struggle with limited educational and vocational opportunities and poor access to health care but also live under more restrictive social, cultural and gender norms that impact their sexual behavior [3, 4]. Young people who live in rural areas have lower levels of HIV prevention and transmission knowledge, and are more likely to engage in behaviors that can compromise their sexual health [1]. In one of the few studies comparing sexual behaviors between rural and urban young people in Kenya [5], young people in rural areas reported higher rates of HIV sexual risk behaviors (i.e. earlier sexual debut, lower rates of condom use, less HIV knowledge and more misconceptions about HIV transmission) than young people in urban areas. Given these factors, surveillance and other behavioral studies [1, 3, 5] highlight the importance of focusing on young people living in rural Kenya when studying HIV sexual health.

Bronfenbrenner’s Bioecological Systems Theory (BST) [6] is a useful theoretical framework for understanding ecological systems and factors that influence the HIV sexual risk and protective behaviors of young people living in rural Kenya. The use of an ecological approach allows for the examination of young people within their social contexts and assists with understanding reciprocal relationships between individuals and their environment. BST [6] asserts that human development occurs at different levels of social interaction and within multiple environmental systems. These developmental processes are bi-directional and occur between individuals and their environments with the interconnectedness of each system and their consequent interaction with the individuals [6–8]. Although Bronfenbrenner understood interpersonal dynamics such as sexual activity to occur in the microsystem (the most immediate environments or settings), other ecological systems are also thought to impact these sexual behaviors (i.e. exosystem, macrosystem) [9–11]. Due to the multiple influences of colonization, abandonment of many traditional ethnic practices and Kenya’s relatively recent political and economic instability [12–14], there is a clear need to examine how multiple nested and interacting systems impact HIV risk/protective behaviors among young people in rural Kenya.

To develop effective HIV prevention programs for young people in rural Kenya, sexual experiences must be understood within the specific socio-cultural contexts that influence these young people. Prior research with young people in Kenya has demonstrated that gendered sexual scripts and cultural expectations regarding sexual encounters play a powerful role in shaping participation in HIV-related risk and protective behaviors [15–20]. Such sexual scripting typically places males in a position of power over females, whereby males typically pursue a female for the purposes of ‘playing sex’ (i.e. engaging in vaginal sexual intercourse) by giving her gifts with the expectation that she will assume a submissive role and submit to this request [15, 17, 19, 20]. Violence and forced sex are then often viewed as traditional consequences for young women who do not submit to young men’s request for sex.

Religion has also been shown to influence young peoples’ decisions regarding participation in sexual activity and utilization of protective measures in Kenya [19], with recent data demonstrating that those young people who practice the tenets of their religion and attend worship services regularly engage in lower rates of sexual risk behaviors [21]. In addition, young people gain information about sexual behavior and HIV from a variety of sources in their communities, which in turn can influence their attitudes and behavior. These include venues such as schools, where young people may learn inaccurate information due to teachers’ discomfort with or negativity toward HIV, [22] and venues where sexual risk behaviors may occur such as porn video shows and local brews [17]. Collectively, these studies demonstrate the need to thoroughly examine the multiple socio-cultural and contextual factors that may influence sexual risk and protective behaviors among young people in rural Kenya.
The focus of this study is on young people from the largest ethnic group in Kenya—the Kikuyu. Advances in technology and globalization have promoted Western influences that may conflict with traditional Kikuyu cultural values and practices. Due to these influences, some traditional practices that once promoted healthy adolescent sexual development have been abandoned [12–14]. On the other hand, Western influences have also resulted in more health-promoting practices, especially for women, such as decreases in female circumcision and polygamy, and increases in marriage by choice for women [13]. Christian influence and the growth of rural and urban capitalism have also been identified as driving forces behind the development of a more Western identity by many Kikuyu individuals [13]. Despite these influences, some aspects of traditional Kikuyu culture that promote healthy adolescent development have remained, such as the well-structured system for socialization of individuals throughout the lifespan called age-sets. These are groupings of individuals of the same age range that hold a set of similar responsibilities and social duties, as they experience the same developmental milestones (e.g. childhood, circumcision, marriage, childbirth) [23–25].

Prevention interventions seeking to address the risk and protective behaviors of young people in rural Kenya must be developed or culturally adapted, rigorously evaluated and then scaled-up to thwart the spread of HIV in Kenya. Although culturally based reproductive health and HIV prevention programs have demonstrated a high degree of acceptability and shown evidence of behavior change among young people in various parts of Kenya [26–30], there is a need to develop additional theoretically grounded interventions that address the range of ecological factors that influence adolescents and young adults who are at risk for HIV infection. The development and scale-up of comprehensive and culturally relevant interventions which target these multiple ecological factors could help achieve better results in preventing the spread of HIV on scale with the magnitude of the epidemic. Interventionists should understand the array of interconnected systems that impact the sexual behavior of young people in Kenya to ensure that these interventions are culturally and developmentally appropriate. The purpose of this study was to understand the range of ecological factors that influence HIV-related sexual risk and resilience among young people in rural Kenya, and to elicit their ideas for HIV prevention interventions. Although the majority of factors discussed by young people were focused on risk, resilience was included as a construct of focus as it offers information regarding factors to include in strengths-based interventions that can assist young people with adopting healthy coping responses to multi-systemic stressors.

Methods

Participants

We conducted nine focus groups with a total of 199 young people recruited from rural communities located in the Limuru and Kikuyu divisions of the Kiambu West District of Kenya. Participants were between the ages of 14–24 (female mean age = 18; male mean age = 19), with slightly more females (55%) than males (45%) represented. Given the geographic location of the study, all young people who participated in the focus groups were from the Kikuyu ethnic group. The Kikuyu are the largest of more than 40 ethnic groups in Kenya, and constitute ~17% of the total Kenyan population [31].

Procedure

Participants were recruited through existing recreational groups for young people formed by members of the community and informational flyers posted in the community, with the vast majority of young people being members of the recreational groups. Ethical approval was obtained through the primary investigators’ Institutional Review Board, and verbal consent was given by all participants prior to their participation in the study. The focus groups were conducted at four different community centers located in the targeted communities, so those
young people who attended the focus group together were typically from the same community and often the same recreational group. Focus groups were conducted in gender segregated groups (average group size = 20 young people) and were facilitated by trained gender-matched facilitators. Focus group facilitators were US-based researchers who were members of a University-affiliated capacity building team working in Kenya. Members held expertise in focus group methodology and shared prior experience working with young people in rural Kenya. All focus groups were conducted in English and participants had to be able to understand and speak English to participate. Focus group sessions were audio recorded and transcribed verbatim.

A semi-structured focus group guide was developed based on Bronfenbrenner’s BST [6] and used by facilitators to assure consistency in focus group content. In the first part of the focus groups, participants were asked to describe multiple systemic influences on both sexual risk and protective behaviors. This process began with general open-ended questions regarding participants’ views on what led young people to become infected with HIV and what helped protect young people from becoming infected with HIV, followed by more targeted questions and probes grounded in the multiple systems presented in the BST. In the final section of the focus groups, young people were asked to share their ideas for the development of future HIV prevention interventions. This process began with a general open-ended question regarding participants’ views on what types of HIV prevention interventions would be beneficial for young people in Kenya, followed by more specific probes and questions to gather detailed information about the ideas that were generated by the group. Participants were not presented with any prevention program ideas by the facilitators, thus this discussion was solely focused on the range of ideas presented by the young people. We utilized a constructivist approach to elicit data, whereby participants defined and described their experiences and influences using their own terms and conceptualizations.

Analysis

As we were seeking to learn about the range of ecological factors that influence HIV sexual risk and protective factors, our analysis utilized a psychological phenomenological framework [32, 33]. Phenomenology is specifically focused on describing what a given group of participants have in common as they experience a particular phenomenon, and it is an inductive analytic approach that allows the patterns, themes and categories of analysis to emerge from the data [32, 33]. It differs from other approaches to qualitative inquiry in that the primary focus is on identifying elements of a particular phenomenon by describing both ‘what’ the phenomenon is and ‘how’ it is experienced by a particular group of people [32, 34]. These data are then presented through textual descriptions of the phenomena based on summaries of the experiences described by respondents. The composite descriptions offer an explanation of the underlying structure which exists across the respondents’ experiences [32, 35]. This allowed us to learn about the socio-cultural behaviors, language, roles and interactions within a culture-sharing group, and to focus on individual and shared experiences and meanings given to those experiences.

Although our analysis relied predominately on a phenomenological inductive approach which was guided by the data, we also employed aspects of deductive analysis that took into account our guiding developmental theoretical framework—the BST [6]. This latter deductive influence took the form of the creation of initial a priori codes which represented the three primary systems presented in the BST that have been demonstrated to influence sexual behavior among adolescents (i.e. microsystem, exosystem and macrosystem) [9–11], as well as one additional code for individual characteristics (ontological factors) which is typically situated at the core of the BST’s nested interconnected systems. This combination of analytic strategies allowed us to conduct a phenomenological analysis that was directly guided by the data (inductive), but was also influenced by existing adolescent research and theory through...
the use of *a priori* codes that were based on BST (deductive).

Data coding and analysis were iterative and interactive processes conducted by a multidisciplinary team with backgrounds in public health, psychology, communication, education and international relations. All individuals also had experience working directly with young people in rural Kenya. The team first read all interview transcripts to increase familiarity with the data. Next, the team assigned *a priori* codes and created emergent codes. Transcripts were then re-read to create pattern codes that connected subsequent concepts under larger headings.

Consistent patterns in meaning, concepts and themes across all interviews were then identified [32, 36], and data matrices were created as visual representations of the findings. Coding and analytic activities were discussed during weekly team meetings, and discrepancies in coding and interpretation were resolved through consensus. Given the phenomenological framework that guided data collection and analysis, we assured that different voices were represented and that conceptual ‘outliers’ were not silenced by the average or dominant perspective by presenting all voiced themes instead of only those that were endorsed by a majority of participants [32, 35]. Finally, we conducted a modified member checking process with a Kenyan young man who had participated in one of the focus groups. Along with the primary author, he reviewed the emerging themes and sub-themes to confirm the credibility of the findings and alignment with the lived experiences of a young person living in rural Kenya.

**Results**

The results regarding multiple ecological factors that influence participant’s HIV-related sexual risk and resilience behaviors are presented first, followed by participants’ recommendations for what to include in future HIV prevention interventions for young people in rural Kenya. Given our theoretical grounding in Bronfenbrenner’s BST [6], we organized our findings regarding factors impacting risk and resilience into thematic areas related to the following systems of influence: (i) intrapersonal (ontological) factors, (ii) interpersonal (microsystem) factors, (iii) institutional/community (exosystem) factors and (iv) socio-cultural/policy (macrosystem) factors (see Fig. 1). Given our focus on presenting findings that could be used for the eventual development of sexual health promotion programs, our thematic labels were also influenced by the Njoroge et al. social ecology framework presented in their analysis of sexuality among young people in Kenya in the era of HIV/AIDS (although we combined institutional and community factors into the same level) [37]. As with the BST [6–8], we view the various systemic influences as occurring through bi-directional interactional processes between individuals and their environments, and recognize the interconnectedness of each system and its consequent interaction with the individual. Thus, although some specific factors were categorized into a particular system in the model, they also may assert their influence through interactions with other factors in connected systems.

**Factors influencing HIV-related sexual risk and resilience**

**Intrapersonal (ontological) factors**

Young people who participated in the focus groups noted the following intrapersonal factors associated with sexual risk and resilience: (i) lack of knowledge regarding HIV transmission and protection and (ii) substance use. With regard to lack of knowledge regarding HIV transmission and protection and (ii) substance use. With regard to lack of knowledge, participants noted that many young people in the community have low levels of basic knowledge about HIV/AIDS and lack accurate information regarding the transmission of HIV. In addition, many young people in rural Kenya had inaccurate information about condoms and other forms of HIV prevention, and expressed concerns that other young people also possessed such myths. One male participant noted:

...they [young people in rural Kenya] are given half of the information [about
HIV/AIDS. They are not given all the facts. Also, they are not encouraged to use condoms. He shared that the information many young people in the community receive about HIV/AIDS simply covers definitions of HIV and AIDS and discusses the four fluids that carry the virus. Such educational programs generally lacked a thorough discussion of condoms, and in some cases educators either asserted that condoms were only minimally effective at providing protection from HIV or that condoms provided no protection at all from HIV. Because many of the young people had inaccurate information about the effectiveness of condoms they did not think that condom use was important. It should be noted that it was difficult to discern if the existing lack of accurate knowledge regarding HIV transmission and protection was solely due to educational programs that offered either partial or inaccurate information, or if other individual-level factors (e.g. lack of attention during programs, poor memory recall, etc.) or factors existing within the other external systems of influence described in our ecological model (e.g. peer pressure, religious beliefs, etc.) also impacted the current level of knowledge.

Substance use was also a common theme identified by participants as a factor which impacted increased risk of HIV among young people in rural Kenya. Participants noted that alcohol (chang’aa) and marijuana (bangh) were easily accessible to young people in their community, and that use of these substances was widespread. One male participant said:

So by that [substance use] you lose control because you are gaining access to drugs, some drugs which are even stimulating sexually.

This was echoed by a female participant who stated:

... drugs are driving [young people] to have sex.

Participants discussed drugs and alcohol generally as substances that had either a stimulating effect that resulted in an increased desire to engage in sexual activity or a more calming and sedative effect that lead to lowered inhibitions. In either instance, these substances led to a potential impairment in young peoples’ ability to make informed choices about sexual activity and condom use. The widespread accessibility and usage of drugs and alcohol thus appear to have an influence on young peoples’ decisions regarding risk and resilience.

**Interpersonal (microsystemic) factors**

Young people who participated in the focus groups noted the following interpersonal factors associated with their risk and resilience behaviors: (i) peer pressure (positive and negative), (ii) lack of parent–child communication and (iii) interpersonal sexual violence. Participants noted examples of peer pressure that were both positive (i.e. promoting healthy sexual behaviors) and negative (i.e. promoting risky sexual behaviors). Many young people noted that there is tremendous pressure to ‘play sex’ (i.e. engage in sexual intercourse). Specifically, male participants suggested that they experienced pressure from their friends to adhere to a masculine...
ideal which involved having sex with females, having multiple sexual partners, or impregnating a female. One young man stated:

...the pressure from the friends say you are not a man, you are not a real man if you cannot breed. You see that pressure he will give into it because now you go and approach your girlfriend, and you find yourself doing it because of the pressure of the friends.

However, not all influence from peers was negative as some young people discussed how peer education about HIV/AIDS was effective and influential. A female explained:

So if you have the accurate information [about HIV/AIDS] and you give it to the other people and you then you behave nice...then others will look up to you and you also get the message to continue the trend.

In both instances, friends and peers have a significant influence on the sexual behaviors of young people in rural Kenya, but whether or not this is positive or negative depends upon whether or not friends promote healthy or risky behaviors.

Participants also noted that there was a lack of parent–child communication. Young people noted that their parents were not very likely to talk to them about sex, HIV/AIDS or other sexually transmitted infections (STIs). A young man commented:

Parents also need to be educated to gain knowledge about AIDS so that they are able to teach their children.

In his opinion, one of the reasons that parents do not communicate with their children about HIV/AIDS is because the parents themselves lack the knowledge and skills to do so.

Many young people in rural Kenya also suggested that interpersonal sexual violence, including rape, was contributing to the spread of HIV/AIDS. A young woman argued:

We’ve got so many rape cases in our country; I believe they can also spread the HIV/AIDS.

Participants noted that rape can sometimes take place within a relationship, while other times it can be a form of political or systematic violence.

**Institutional/community (exosystemic) factors**

Young people who participated in the focus groups noted the following related institutional/community factors associated with their risk and resilience behaviors: (i) ‘idleness’, (ii) transactional sex, (iii) access to pornography and (iv) lack of role models. Idleness, in the form of boredom and excessive free time, was seen as contributing to risk behavior for young people in rural Kenya. Participants attributed two factors to idleness in their community, namely a lack of jobs and a lack of activities specifically for young people. Without jobs young people are left not only without money and resources but also without productive activities in which to engage. A young male commented:

If youth had job opportunities [they] will go to work instead of putting themselves at risk or having sex.

A young woman discussed the lack of social and recreational activities specifically for young people that were available in her community, and felt that if young people had social and recreational opportunities they would not engage in sexual risk behaviors:

You get AIDS though being idle, so if you have something you are doing, you may get involved instead of staying that way...[Young people] go, they start drinking, misbehaving.

Participants discussed transactional sex as an ecological factor that was multi-dimensional, and stated that young people participated in such encounters for different reasons. The predominant forces that influenced participation in transactional sex included a need for survival and a desire for social status. These were not always mutually exclusive, and several young people also talked about experiencing pressure from peers to engage
in transactional sex. A young female illustrated the complexity of factors that may lead a young person to engage in transactional sex:

Like, [a young person may engage in sex work] through maybe poverty, where you sell your body for material gains, and maybe through peer pressure. [Your peers may] show you they’re doing it and [you] must do it then... yeah.

Both males and females commented that it was not uncommon to engage in sexual activity in exchange for food or money. They commented that young people will have sexual relationships to gain access to basic survival needs (e.g. food, shelter and clothing). A young man stated:

Yes because when you are poor you want to earn something to make you live. And maybe you see that the only way that you can do that is to have sex with someone to pay you. Yeah, to you are being paid to play sex with someone to pay you. So because you want to earn a living, you want to eat, you want to clothe, you see there is maybe no other option maybe that like girls going to streets and trying to find somebody, a customer. And then he pay you money.

Participants in the female groups noted that such transactions may occur through dating older men as they can provide basic needs. One young woman agreed:

I would just like to emphasize what that lady said about someone sleeping with a man just to get by. A lot of the youths around are in poverty... and most of the older men, they are infected.

Participants also noted that socio-economic status imbalances could lead young people to exchange sex for money so they could purchase items that would elevate their social standing in their community. A young woman claimed:

... because of the need to be equal with someone who is well up, you will be tempted to take money from a guy who is ready to offer the money in exchange for sex.

These structural factors influence the dyadic and cultural factors discussed earlier, which may lead some young people to choose older sexual partners to gain materials goods, or lead other young people into sex work to have access to food and money.

Widespread access to pornography was seen as a major influence in the sexual behavior of young people in rural Kenya. Specifically, participants noted the ease with which young people could gain access to pornography through movies/images viewed in cyber cafes, public porn video shows and print-based magazine. One male noted:

Yes, you can even get the [pornographic] magazines in the streets. There are always magazines in the streets.

Participants argued that easy access to pornography, even in rural areas of Kenya, was influencing young people to become more sexually active. Some participants also talked about how relatively easy access to pornography coupled with the influence of Western cultural norms that support the viewing of pornography can lead to increased viewership. This illustrates the interconnectedness of the various systems in our proposed ecological model, as it demonstrates an interaction between an institutional/community factor (i.e. access to pornography) and socio-cultural/policy factor (i.e. Western influence).

Participants also noted that there was a substantial lack of positive adult role models for them. Several suggested that adults were often ‘preaching’ to young people regarding protective behaviors, but then were typically not following their own advice, thus setting a poor example. A young woman commented:

I think also lack of role models. Let’s say, like the older people... preach with water and take wine. Meaning that maybe they say that you shall not be promiscuous and they are the first ones to run to those people, to the bar maids.
Young people noted that this perceived hypocrisy made them less likely to take seriously any positive messaging that they received from adults. Participants noted that this was a similar challenge experienced by both males and females.

Participants also noted the social constraints surrounding an open discussion about sexuality and sexual behaviors with adult role models. One female stated,

You do not talk about these things with parents. It is just not done.

Most female participants became visibly uncomfortable and expressed reluctance with the idea of attending a workshop for both parents and young people to discuss HIV/AIDS.

Socio-cultural/policy (macrosystemic) factors
Young people who participated in the focus groups noted the following socio-cultural/policy (macrosystemic) factors associated with their risk and resilience behaviors: (i) traditional Kikuyu cultural beliefs (both positive and negative), (ii) Western-cultural influences, (iii) religious beliefs (both positive and negative), (iv) HIV-related stigma and (v) gendered sexual scripts. Traditional Kikuyu (and Kenyan) cultural beliefs were found to be both positive (i.e. health promoting) and negative (i.e. health compromising). Health-promoting influences included traditional Kikuyu and Kenyan values which promote self-respect, respect for elders, abstaining from sex until marriage and honoring virginity. However, not all young people felt that cultural values were health promoting. Some participants described how traditional Kikuyu and Kenyan practices such as wife inheritance, arranged marriages, polygamy and sex after circumcision were still common. A young man explained:

You find that a young girl is forced in a marriage by parents to an old person, to an old man, maybe even to be a fifth [wife]. He [the husband] has to sleep with the girl before she goes to the husband’s house . . . if the man is infected, you see he has already infected the girl, a very young girl.

Other participants spoke about how Kikuyu (and Kenyan) culture does not encourage parent–child communication about sex. This further illustrates the interconnectedness of the various systems in our proposed ecological model, as it demonstrates an interaction between a more proximal interpersonal factor (i.e. lack of parent–child communication) and a more distal socio-cultural/policy factor (i.e. traditional Kikuyu culture). In addition, young people shared that some traditional Kenyan cultural beliefs had been used to promote myths about cures for HIV/AIDS. The most commonly discussed myth reported by participants was the erroneous belief that if a man has sex with a virgin he will be cured of the virus. Although several young people stated that this belief is no longer commonly held in their communities, some individuals still believe it is true.

While both positive and negative traditional Kikuyu and Kenyan cultural values were present, participants noted that they have been changing over time with the influence of Western cultures and values. Western influences were noted in several realms of young peoples’ lives, including a greater focus on individualism and materialism, and more permissive values related to sexual activity and substance use. One male explained:

Twenty years ago, as a country, we looked at our African culture and traditions. And uh that should we miss today because we lose so much of the African values which we respected our age groups, we respected ourselves.

This is an example of how traditional Kenyan cultural values promoted healthy behavior; however, this participant went on to say:

Nowadays, we [young people in rural Kenya] have fallen . . . now it’s hardly OK to be a virgin . . . We are so much on Western values. That’s why they are copying what’s on TV.

Many participants agreed that the influence of Western culture has changed traditional Kikuyu and Kenyan culture and affected sexual behavior of many young people in rural Kenya.
Many participants also noted that religious culture and values had a significant impact on their sexual attitudes and behaviors. As with Kenyan/Kikuyu cultural values, there were examples of both health-promoting and health-compromising religious influences apparent in the data. Most participants in the study identified as Catholic, and many believed that Christianity and Catholicism had some positive influences on their sexual behavior because it promoted sexual responsibility, self-respect and spiritual guidance. One male noted that he was taught by religious leaders the importance of keeping his body physically and sexually healthy:

To give your body self respect and know that it is the temple of God, and should stop illicit behaviors.

However, many other young people noted that there were some elements of religious influences that were health compromising, namely that the Catholic Church perpetuated myths about condoms and discouraged condom usage. One male participant exemplified this erroneous belief and broader myths about contraceptive use promoting HIV infection that were perpetuated by some religious leaders, as he argued that ‘sinful sex’ (i.e. sex with contraceptives) was actually spreading HIV:

...[young people become infected] from the contraceptives they use, the ones they are using are infected. So the more they use, they use the contraceptive, the more they get infected with HIV/AIDS.

As demonstrated with peer pressure and traditional Kenyan/Kikuyu cultural beliefs, religious influences can have both a positive or negative effect on the risk and protective behaviors of young people in rural Kenya depending on the messages being promoted.

Participants also noted that widespread stigma related to HIV and other STIs had an influence on their risk and resilience behaviors. This included general stigma in the community toward people living with HIV/AIDS and other STIs, as well as additional concerns about confidentiality in seeking treatment for HIV/AIDS and other STIs. One female said that

[Young people] don’t think that the doctors... keep the information confidential. So they think that if they go for a test and are realized to have a certain STI that their peers will somehow come to know and then they’ll be discriminated upon.

This fear of stigma or breach of confidentiality was seen as a major barrier for young people in getting tested for HIV and STIs, and also for seeking treatment when necessary.

The issue of gendered sexual scripts and the lack of equality inherent in those scripted roles were pervasive, specifically for female participants. Many young people echoed themes discussed earlier, such as the prevalence of violence against women, rape and inequality within marriage. One female suggested that:

I think the female gender should be educated on their rights... like when to say NO even when he’s your husband.

Both male and female participants noted that females are often disempowered in Kenyan society. They discussed how this often takes power away from women regarding decisions about when to have sex, with whom and how (i.e. with or without a condom), thus placing them at an increased risk for HIV infection.

Recommendations regarding HIV prevention programs and services

After describing multiple systemic factors that influence the HIV-related sexual risk and resilience of young people, participants then offered recommendations for HIV prevention programs and services designed specifically for young people in rural Kenya. These ideas included: (i) HIV prevention groups and workshops, (ii) condom distribution and condom use skills building, (iii) job skills trainings, (iv) athletic and social clubs, (v) HIV-related stigma reduction campaigns, (vi) community-wide demonstrations and marches and (vii) other
activities led by young people promoting education related to HIV/AIDS and STIs.

HIV prevention groups and workshops offered in community settings were seen as an ideal forum for promoting knowledge and skills related to HIV prevention. Participants argued that if these workshops were to be effective for young people in rural communities, they should be designed and led by young people themselves. Young people felt that such interventions should include opportunities for active participation and discussion by participants, and involve skits, role plays or videos to convey information in a more engaging manner. Participants suggested that having someone living with HIV/AIDS be part of the workshop would be beneficial in de-stigmatizing HIV/AIDS.

Participants emphasized the importance of promoting accurate knowledge about condoms in all HIV prevention efforts, including skills training on how to use condoms effectively. They also stressed that programs should distribute free condoms to dispel the many cultural and religious myths about safer sex. The combination of free condoms alongside training in condom use skills was expected to increase consistent and effective condom usage among young people.

To address the influence of unemployment, poverty and ‘idleness’ young people suggested that programs and services offering job skills training should be implemented. They expressed the belief that if young people receive practical knowledge and skills they can use in a job interview or put on a job application, this could give them an opportunity to find employment, which would help to liberate them from the constraints of poverty. Another recommendation that also addresses the concern of ‘idleness’ is the formation of social and/or athletic clubs that would provide young people with an opportunity to engage in productive activities when they are not in the classroom or are out of school on holidays. In addition to providing young people with positive social interactions and activities, participants suggested that these social and/or athletic clubs could also be a venue to promote HIV prevention education.

Participants suggested that community-level HIV/AIDS stigma reduction campaigns would be helpful to address the misconceptions and myths about HIV/AIDS. Participants also recommended the initiation of community-wide demonstrations and marches that would increase community members’ awareness about a range of HIV prevention issues, as well as HIV/AIDS stigma reduction. Young people noted that this was an effective strategy in spreading information to the entire community, particularly if held by an organized group of community leaders. Such community initiatives would decrease stigma for people living with HIV/AIDS and also improve access to HIV/STI testing and treatment services for young people.

Participants further noted that the development of HIV prevention activities should involve young people whenever possible. Involvement of young people would not only increase the relevance and effectiveness of these activities but also leverage the positive aspects of peer influence on HIV risk and protective behaviors. Both male and female focus group members were open to the idea of having co-gender prevention workshops. The female groups, however, were slightly more hesitant about the idea and some expressed the desire to have gender-specific workshops. Both male and female participants also strongly recommended that parents and adult role models be exposed to the same educational information. They did not, however, want to have the workshops together with parents or adults. In fact, members in one female focus group gasped when the facilitator probed about the potential of parents and young people attending the same workshop.

Discussion

Focus group participants identified a range of factors at multiple systemic levels promoting various HIV-related risk and resilience, including intrapersonal, interpersonal, institutional/community and socio-cultural/policy level influences. Some of these factors were negative/health compromising, such as lack of HIV-related knowledge, substance use,
access to pornography, lack of parent–child communication, transactional sex, interpersonal sexual violence, Western cultural influences, gendered sexual scripts, HIV-related stigma, lack of role models and ‘idleness’. Other factors could be seen as either negative (health compromising) or positive (health promoting), such as peer pressure, traditional Kikuyu culture and religious beliefs. Because all participants in the study were from similar rural geographic locations and all came from the same ethnic group (Kikuyu tribe) the results presented above are specific to this population, but may have applicability to other populations of young people in Kenya and/or sub-Saharan Africa.

Cultural norms related to gender and family

Some gender differences with regard to risk and resilience factors were revealed and are aligned with prior research with young people in Kenya that has demonstrated the highly gendered and culturally scripted nature of heterosexual sexual interactions which result in uneven power dynamics [15–20]. Participants noted that young women were more susceptible to instances of rape and sexual violence, and also that young women often had less power in relationships when negotiating condom use or the decision to have sex. Alternatively, young men reported social pressures on them as men to engage in certain risk behaviors to adhere to a masculine ideal (i.e. having sex, having multiple sexual partners or impregnating a female). Both male and female participants attributed elevated HIV sexual risk for young women to gendered sexual scripts and the inequality that women experience in those scripted roles. As women are often limited in their sexual decision-making, they often do not have the power to protect themselves from HIV. These findings suggest that future HIV prevention efforts should not only find culturally appropriate ways to empower young women but also work with young men to challenge existing male gender norms and constructions of masculinity that promote sexual risk behaviors and the disempowerment of women.

Transactional sex was an ecological factor that was complex and did not consistently exert its influence according to cultural gender norms. In situations where young people participated in transactional sex for survival purposes, the extreme poverty that lead them to engage in such behaviors appeared to diminish potential gender differences. Participants noted that both young men and women would engage in survival sex or initiate sexual relationships for material goods (such as food or money). The nature of power dynamics and gendered interactions within these transactional relationships did appear to be influenced by gender norms, with females (but not males) reporting very limited power and control in these interactions.

Discussions of cultural norms regarding the lack of direct parent–child communication about sexuality appeared to be evident in the focus groups as well, both in the ecological influences data and in the recommendations for HIV prevention programs offered by participants. This is supported by prior research with young people and family members in Kenya which has documented cultural taboos related to sexual communication between parents and their children, as well as parents’ general lack of knowledge with regard to sexuality [37–39]. One HIV prevention program in particular, the Families Matter! Program, has been able to challenge these notions of non-communication by enhancing parent–child communication regarding sexuality and improving parenting skills [40, 41]. These initial studies of the adaptation and evaluation of the Families Matter! Program were conducted in rural areas of Kenya, and since that time the program has been implemented in several regions throughout sub-Saharan Africa.

Power of peers and substance use

Given the important role that friends play in the sexual behavior of young people in rural Kenya and the strong influence of age-sets in Kikuyu culture [23–25], an examination of the role of peers in HIV prevention efforts is warranted. Studies of young people in Kenya show similar
patterns to those found in the United States with regard to the strong influence of friends on participation in a range of health-risk behaviors [42–44], including unprotected sexual activity, sex with older partners and pregnancy [45, 46]. Studies of Kikuyu young people also have shown that one of the primary sources of information on sexual activity and reproduction is their friends and peers [47–50].

The role of substance use in promoting HIV sexual risk behaviors is of concern and should be a focus of future HIV prevention efforts, especially given the widespread nature of substance use in many rural regions of Kenya. The National Agency for the Campaign Against Drug Abuse [51] issued a report of a national survey of young people ages 10–24 which found that substance use is widespread and disproportionately impacts young people particularly in rural areas, and that alcohol, ‘bhang’ (marijuana) and ‘miraa’ (amphetamine-like substance) are those most frequently abused. This report also revealed that those young people who do not attend school engage in substance abuse significantly more than those who are in school. They found that 60% of non-students used alcohol in the past 30 days compared with 8.6% of students, and that 21% of non-students smoked bhang in the past 30 days compared with <1% of students [51]. These findings are of particular concern for young people in low-income rural settings, since lack of money for school uniforms/fees and lack of adequate transportation often prohibit young people from attending school on a regular basis.

**HIV prevention efforts at multiple ecological levels**

Although several empirical literature reviews and theoretical articles support the notion that adolescent sexual behaviors are impacted by intersecting ecological systems of influence [52, 53], much of the literature on HIV prevention efforts has excluded a focus on influences beyond the interpersonal and intrapersonal levels [54]. Because the sexual behavior of young people in rural Kenyan is influenced at multiple ecological levels, HIV prevention interventions should go beyond basic prevention education and address risk and resilience factors at these multiple levels. Interventions should involve young people in all stages of intervention development and implementation, and use a range of culturally appropriate delivery modalities. In addition, these interventions should build on existing successful HIV prevention efforts for young people in Kenya, such as the Primary School Action for Better Health (PSABH) intervention which was delivered in Kenyan primary schools. This intervention not only produced positive sexual health outcomes 18 months after initiation of the PSABH programme but also demonstrated sustained positive effects as the young people were followed into secondary school [28, 29].

Interventions could address intrapersonal influences by providing accurate education and skill building which address HIV knowledge, substance use and self-control. Interpersonal influences could be addressed by involving family members, friends/peers and sexual/romantic partners in various aspects of the intervention. Institutional/community influences could be addressed by focusing on poverty reduction, increasing employment and addressing ‘idleness’ through the provision of social/athletic clubs or other health-promoting activities. Programs at this level could help young people find alternatives to transactional sex, such as the development of microfinance programs and income generating projects. Such programs could involve adult professionals who then could also serve as supportive role models.

At the same time, interventions must be designed with sensitivity to socio-cultural/policy influences that limit public communication between parents and young people and between genders. Socio-cultural/policy level influences could also be approached by addressing gender inequality and reducing HIV-related stigma. Traditional Kenyan/Kikuyu values and religious values should be explored to highlight the health-promoting aspects of these systems of influence. In addition, negative Western cultural influences should also be explored and interrogated, to examine the potentially health-compromising aspects of these messages. On the
other hand, there may be positive Western cultural influences that have impacted young people’s perspectives on HIV prevention and sexual health promotion that were not attributed to Western culture but were instead viewed as more progressive approaches to sexual health. These likely include cultural messages regarding sexual rights and choices for women and girls. Interventions may benefit from exploring the various ways in which young people view Western influences on sexuality, sexual health and HIV prevention to promote healthier behaviors.

The current findings not only identify the need for interventions to address multiple ecological levels but also account for how these levels interact and at times may contradict each other. Particularly for young people in rural Kenya, while participants expressed a strong desire for increased dyadic communication and education among peers and parents, cultural norms governing gender and age-related communication must be considered when designing a workshop. These findings are commensurate with more general research focused on communication norms and differences among African and Westernized cultures. For example, Awosom describes the way traditional African societies are stratified or ranked on the basis of age, wealth, sex and status [55]. This is often expressed through the value placed on honorific expressions that indicate social differentiation among people. Therefore, finally, interventions should build the capacity of local communities to continue providing these programs and services and focus on sustainable structural level change.

**Study strengths and limitations**

A strength of this study was the use of focus group discussions that allowed young people to describe factors that influence HIV-related sexual risk and resilience using their own terms and conceptualizations, and to also share their unique ideas for HIV prevention interventions. Our data analysis procedures involved an integration of a phenomenological inductive approach to data analysis with aspects of deductive analysis that were rooted in our guiding developmental theoretical framework and prior research with young people in Kenya. This approach allowed for a description of the lived experiences of participants which was situated within prior theoretical and empirical literature. This study used a community-based sampling strategy, which allowed for the inclusion of young people from the community regardless of their school status. Since study participants were primarily recruited from recreationally focused groups for young people, many had a degree of familiarity with each other prior to the focus group which appeared to help some feel more comfortable discussing sensitive topics. However, this also could have led some young people to give socially desirable responses or fail to challenge other participants’ opinions and views during the groups, leading to a more limited range of responses.

While the sampling strategy had its strengths, a limitation of this approach could also be a higher degree of homogeneity among participants, thus restricting the range of views expressed. Since several of the young people were members of the same or interacting social cliques, they may have been exposed to similar cultural and community socialization processes that influenced their views on sexual risk and resilience. In addition, the participants’ views on future HIV prevention efforts may represent a reflection of the programs they have personally experienced to date, and not necessarily represent new strategies. Since all focus groups were conducted in English, those young people who had lower levels of fluency in English were likely limited in their level of participation. In addition, the focus group facilitators were not conversant in either Kiswahili or Kikuyu, thus if the young people preferred to express either personal or culturally specific content in either of these indigenous languages the facilitators were unable to understand them.

**Acknowledgements**

The authors would like to thank all the young people who participated in this research, and especially
acknowledge the Daughters of Charity in Thigio, Kenya for their guidance and support. We also wish to thank James Mbugua for his assistance with the analysis of the qualitative data.

Conflicts of interest statement

None declared.

References


