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“Bend a fish when the fish is not yet dry”: Adolescent Boys’ Perceptions of Sexual Risk in Tanzania

Marni Sommer, DrPH^{1,*}, Samuel Likindikoki, MD², and Sylvia Kaaya, MD³

Samuel Likindikoki: likindikoki@gmail.com; Sylvia Kaaya: skaaya@gmail.com

¹Department of Sociomedical Sciences, Mailman School of Public Health, Columbia University, New York, NY

²Department of Psychiatry and Mental Health, Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania

³Office of the Dean, Medical School, Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania

Abstract

Despite decades of effort, the spread of HIV/AIDS continues among many African young people. A key contributor is unsafe sexual behavior that is desired, persuaded or coerced. We explored the masculinity norms shaping pubescent boys’ perceptions of and engagement in (unsafe) sexual behaviors in Tanzania. Through a comparative case study in rural and urban Tanzania, qualitative and participatory methods were used with 160 adolescent boys in and out of school to better understand the social and contextual factors promoting unsafe sexual behaviors. Adolescent boys in both the rural and urban sites reported struggling with intense sexual desires, strong peer pressures to have sex, and social norms dissuading condom use. A growing “normalization” of AIDS suggests messages promoting the dangers of HIV infection may be less effective. Findings reinforce the need for interventions with very young adolescents. Research is needed to identify more effective approaches for promoting safer sexual practices among boys in sub-Saharan Africa. Harm reduction approaches and gender transformative approaches might prove more effective than current HIV prevention efforts focused on youth.

Keywords

adolescent health; boys; sexual behaviors; Tanzania; HIV/AIDS

INTRODUCTION

The government should try hard to reach boys before they reach puberty, and have seminars for them when they are very young... There is a Swahili saying ‘Bend a fish when the fish is not yet dry’ – it is too late later. The training for those in puberty is already too late.

– Rural School Dropout, Adolescent Boy, Tanzania

*Corresponding author: ms2778@columbia.edu; #1-212-305-1826; Room 537, 722 W. 168th Street, NY, NY 10032).

The global health community has focused much of its HIV prevention efforts in sub-Saharan Africa on adolescent girls aged 15 years and older, recognizing their unique vulnerability to infection with HIV (Hindin & Fatusi, 2009; Balmer et al., 1997; UNFPA, 2012). However, there is a need to focus greater attention on the sexual beliefs, expectations and behaviors of younger adolescent boys. Intervening early, during vulnerable transition points in the life course, may be more effective at preventing or reducing future risk behaviors in young people than waiting until mid- adolescence when gendered norms are further ingrained and risk behaviors may have begun (Bankole, Biddlecom, Guiella, Singh, & Zulu, 2007; Jackson, Henderson, Frank, & Haw, 2012). Adolescent boys may serve an important role in spreading or curbing the HIV epidemic among young people through their unsafe sexual relationships with girls (or less well documented, with other boys) and from the gendered norms they observe and potentially enact in intimate relationships later in life. Although some evidence exists on boys and sexuality from South Africa and Zambia, there is minimal evidence on the masculinity norms influencing boys' sexuality and sexual risk-taking in other sub-Saharan African countries, including Tanzania (Simpson, 2006; Morrell, 1998; Varga, 2003).

Adolescent boys' experience unique vulnerabilities to infection with HIV, such as local masculinity norms emphasizing male virility, aggression and excessive alcohol intake that may encourage sexual risk-taking and sexual violence during adolescence (Nzioka, 2001; Barker, Ricardo & Nascimento, 2007; Blinded, 2013a; Kalichman, Simbayi, Kaufman, Cain, & Jooste, 2007). The numbers and rates of HIV-related death among adolescents in Africa have increased more for males than for females since 2000 (WHO, 2014), with certain behaviors increasing risk. In Tanzania, for example, 28% of 15–24 year olds had multiple partners in the last year, with only 46% of 15–19 year old males reporting having used condoms at the last high risk sexual encounter (UNFPA, 2012). Hetero-normativity, at least in public, is often the strongly reinforced and desired sign of manhood, and one that may include the demonstration of engagement in sexual relations (with an emphasis on sexual intercourse), dominance over girls, and cultural beliefs that emphasize the potency of sperm (including that it should not be contained by condoms) (Simpson, 2005; Pulerwitz & Barker, 2008). The expression of any qualities that can be interpreted as feminine, such as suggesting safer sex practices, may be prohibitive (Mane & Aggleton, 2001).

For African young people in a number of countries, risky sexual behaviors and vulnerability to infection with HIV remain a significant challenge (Eaton, Flisher & Aaro, 2003; Boonstra, 2007). This includes the large number of young people born infected with HIV who are reaching puberty and becoming sexually active (often with insufficient guidance and support on sexuality), (Baryamutuma & Baingana, 2011) and young people who have not been infected but who are engaging in risky sexual behaviors. Of the global population of 2.2 million adolescents living with HIV, 1.8 million live in sub-Saharan Africa (UNAIDS, 2014). In 2009, twenty countries in sub-Saharan Africa accounted for nearly 70% of the world's new HIV infections among adolescents (UNFPA, 2012). In eastern and southern Africa, unsafe sex remains the most common risky behavior among 15–24 year olds (UNICEF, 2012). Recent evidence also suggests that unsafe sex is a growing risk behavior among 10–14 year olds, with the risk almost equal between boys and girls (Plummer, 2012). The World Health Organization (WHO) (2014) recently highlighted the

huge gap in evidence on the sexual behaviors of 10–14 year olds, the largest age group of young people in sub-Saharan Africa, a factor hindering effective policy and programming. There is an urgent need to better understand, from the perspectives of boys themselves, the social and contextual factors shaping adolescent boys' sexual maturation (defined as sexual initiation, partnership formation, childbearing) in sub-Saharan Africa that may lead them to engage in unsafe sexual behaviors, and place them and their current or future partners, at risk of infection with HIV (Juarez, LeGrand, Lloyd, & Singh, 2008).

Addressing adolescent HIV risk in Tanzania

In Tanzania, the HIV prevalence among 15–24 year olds is 1.7% for males and 3.9% for females (UNICEF, 2013). Among adolescent girls and boys aged 15–19, less than one-third used condoms at last sexual encounter (Nzioka, 2001). Despite almost two decades of HIV-funded interventions in Tanzania, there exist varying levels of HIV knowledge among adolescents, and even young people with high levels of knowledge report engaging in unsafe sexual practices (Katikiro & Njau, 2012). A rigorous HIV prevention trial conducted in rural Mwanza, Tanzania (1999–2002) integrated multiple interventions at the primary school level (e.g. peer education and social marketing of condoms) to reduce risky sexual behaviors and vulnerability to HIV infection. Although self-reported levels of increased knowledge and of decreased unsafe sexual practices indicated intervention success, the use of biomarker data showed unsafe sexual behaviors had not diminished (Doyle et al., 2010). Other interventions have been implemented by non-governmental organizations, the Tanzanian government, bi-lateral and international agencies. These have illustratively included social media campaigns about the dangers of sugar daddies (the “fataki” campaign), a focus on youth friendly services, and implementing “life skills” trainings in schools. However, few if any of these efforts have targeted early adolescence, or the gendered norms influencing boys' engagement in unsafe sexual behaviors.

Currently, a multi-level HIV prevention trial is being conducted through a school-based initiative in Dar es Salaam, Tanzania, aimed at improving the HIV knowledge and safe sexual practices of urban primary school adolescents (Aaro et al., 2006). Preliminary findings have highlighted the minimal sexuality communication received by young people from adults, and the influence of peers on sexual initiation. Despite the lack of adult-adolescent sexuality communication, when it does occur, preliminary analyses suggest positive benefits for safer sexual practices (Kawai et al., 2008; Kajula, Sheon, De Vries, Kaaya, & Aaro, 2014). Notwithstanding these and other important efforts to address young people's HIV risk in Tanzania, too little remains known about the specific pressures on adolescent boys' to initiate and engage in unsafe sexual behaviors, the structural factors shaping their vulnerability, and boys' own perspectives on how to increase safer sex behaviors. Such evidence could be utilized for the development of more gender transformative approaches for reducing vulnerability to HIV (Dunkle & Jewkes, 2007).

There has also been insufficient attention to the use of harm reduction approaches (those that aim to minimize harm rather than prevent the behavior altogether). Such approaches have been successful in reducing rates of infection with HIV among other populations (Vlahov & Junge, 1998; Wolfe, Cohen, Doyle, & Marlogin, 2013), and are overdue for consideration as

an approach for protecting African young people in vulnerable contexts. Current approaches have generally advocated for abstaining from sex altogether, or for using condoms. However, in many African contexts, parents and teachers are uncomfortable with the idea of providing safer sex education to young people, or with the provision of condoms in schools. Given that all or nothing approaches (e.g. encouraging abstinence) in response to HIV-related sexual risk have not been sufficient, harm reduction approaches may be a potentially effective mechanism for protecting African young people (Berkman, Garcia, Munoz-Laboy, Paiva, & Parker, 2005; Parker, Easton & Klein, 2000).

To better understand the masculinity norms and other social and contextual factors influencing boys' sexual risk-taking in the Tanzania context, and provide empirical evidence to begin filling this existing gap in the literature, we conducted an in-depth study with adolescent boys in rural and urban Tanzania. We sought to explore, from the perspectives of boys' themselves, their experiences of puberty, their interpretations of manhood within the changing social context around them, and specifically, the masculinity norms that may be leading boys to engage in unsafe behaviors such as unsafe sex, initiating alcohol and other drug use, and engaging in violence. As research from numerous African countries has documented, inherent societal norms rooted in gender inequality contribute to the increased violence against girls and women. This in turn increases vulnerability to HIV (Dunkle & Jewkes, 2007).

It was important to explore an urban versus a rural context. There were anticipated to be differences in traditional practices and rituals around puberty, with the rural areas, for example, expected to have stronger lingering traditional rites or puberty ceremonies. There were also expected to be differences observed in the predominant or alternative local masculinity norms being shaped simultaneously by tradition and modernization, and the strength of the permeation of globalizing influences shaping boys' perceptions on manhood and sexuality. For example, urban areas were expected to contain stronger influences from globalization, such as from mass media, the internet, and global marketing (e.g. alcohol companies). Our expectation was that influences from globalization and modernization are creating experiences of adolescence in conflict with more traditional expectations of young manhood, particularly in urban contexts. Understanding the ways in which these influences are shaping boys' identities and sexual risk-taking behaviors is important for identifying interventions to counter the risk-generating influences.

Conceptual framework

We used an ecological framework of adolescent health (Blum, 2012) to assess the multiple levels of influence shaping Tanzanian boys' transitions through puberty today, and in particular those shaping their perceptions of sexuality, and engagement in unsafe sexual behaviors (Bronfenbrenner, 1979). This included an exploration of historical and cultural norms related to manhood at the societal level, of the external influences shaping boys' perceptions of sexuality, sexual desire, and sexual behavior (e.g. internet, pornographic videos), along with boys' interpersonal interactions and individual level experiences. The conceptual framework guided an exploration of boys' emotional and physical experiences

among their families and peers, in school and in the larger community, along with the norms shaping their perceptions of manhood.

The study was also guided by relevant gender theory, framing the shifting gendered dynamics between the generations, and between adolescent boys and their male and female peers in and out of school (Kimmel, 2000; Connell, 1996). Connell's descriptions of a hegemonic masculinity existing within a given society (the most dominant masculinity in a given era, time, and place), alongside of a plurality of masculinities, provided guidance for exploring what predominant masculinity norms are currently being conveyed to boys growing up in the local context, while also enabling insights into alternative masculinities that might create opportunities for healthier adolescent transitions for boys. As Barker and Ricardo emphasize (2005), it is important to recognize the multiple masculinities that exist across and within countries in sub-Saharan Africa, and to explore the range of masculinity norms influencing boys transitioning into adulthood, including those that may lead to engagement in unsafe sex or other risky behaviors. The two theoretical approaches were complimentary in providing insights into boys' transitions into adolescence in modernizing Tanzania, and specifically for exploring how boys' gendered experiences within their own identities, and among their peers, families, and communities, are shaping their perceptions and experiences of young manhood and sexuality in rural and urban Tanzania (Ortner & Whitehead, 1981; Ampofo, 2001).

Study setting

The study was undertaken in rural and urban northern Tanzania, in which the predominant ethnic group is the Chagga (the Pare are also present but in smaller numbers). The Chagga follow a patrilineal system of descent and inheritance, and are the third largest ethnic group in Tanzania. The project areas included the urban setting of Moshi, and the rural setting of Rombo, both in Kilimanjaro region. Kilimanjaro has relatively low HIV rates compared to other regions of Tanzania (TACAIDS, 2008). Urban Moshi is a busy commercial town with a heavy presence of non-governmental organizations and Western tourists. There are numerous primary and secondary schools, vocational training centers, churches and mosques, internet cafes, and many hospitals and clinics. Rural Rombo has a marketplace area, a handful of primary and secondary schools, and one large hospital. Study settings in each of the sites included a secondary school (for students) and a vocational training center (for out of school boys).

METHODS

We conducted a comparative case study in 2011–2012 that used multiple methods, including ethnographic observation of boys' environments, in-depth interviews with adolescent boys in and out of school (n=16), key informant interviews with adults who interact in boys' daily lives (e.g. parents, teachers, religious leaders), focus groups with primary school teachers, participatory activities with groups of adolescent boys in and out of school (80 boys per site, n=160), and archival review of relevant documents (e.g. curricula). The research was intentionally conducted with older boys (aged 16–19) to capture their reflections on the transition through puberty. [See Table 1 for sample details] Additional details on the

methods (recruitment and sampling), including findings on the boys' experiences of violence and the parent-son dynamic are published elsewhere (Sommer et al., 2013a; Sommer et al., 2013b). The research team, consisting of the Principal Investigator (PI; American woman) and male research assistant (RA; Tanzanian in his mid-20s) spent four weeks in each of the study sites (one urban, one rural), conducting observations, interviews, and meeting four times (once per week) with each of the groups of adolescent boys for the participatory activities. Each group met a total of four times. The interviews were conducted in a confidential setting (a room off campus from the schools or training centers), with the participatory group work conducted in classrooms after school had ended each day, to allow for additional confidentiality of discussion. Prior research by the PI in the same region enabled entrée to the sites, and the male RA's Chagga ethnicity, and childhood spent in the region, further enabled the building of trust. Reflexivity on the part of the PI, an American woman older than the Tanzanian adolescent male participants, was a constant aspect of both the data collection and analysis process

This article focuses on the triangulated findings from the ethnographic observations, the in-depth interviews with boys, and one of the participatory activities conducted with boys, specifically a written activity exploring peer pressures related to risk-taking [See Table 2 for methods details]. For the interviews, a semi-structured interview guide was used to explore from boys' perspectives local masculinity norms around sexual risk-taking, allowing for open-ended responses. For the participatory activity discussed in this article (*peer pressure stories*), boys were asked to write in Swahili an anonymous one page story about a past experience of peer pressure, one in which they did something that they really did not want to do, or that they did, but later regretted. Additional details on the instructions provided to boys are included in Table 2. The researchers did not indicate a specific interest in sexual behavior. The intention was to capture a range of risk behaviors boys had engaged in during puberty. The use of participatory methods was essential given the sensitive nature of the topics being explored (Minkler & Wallerstein, 2001) and the aim of having boys' openly share their lived experiences, perceptions and questions without fear of punishment or censoring. Additional participatory activities elicited other aspects of boy's growing awareness of their sexuality, body changes and experiences of violence (Sommer et al., 2013a; Sommer et al., 2013b; Sommer et al., In Press). The participatory activities were field tested with adolescent boys prior to the start of the data collection, and were adaptations of methods used successfully in the principle investigator's prior research with adolescent girls in Tanzania in 2006–2007 (Sommer, 2009). All adolescent boys were asked to provide informed consent prior to the start of any research activities.

The study received IRB approval from the Columbia University Medical Center in New York, and from the National Institute of Medical Research in Tanzania.

Data analysis

We used thematic analysis for the multiple sources of data, including field notes, narrative notes, transcripts, analytic memos, and data collected through participatory verbal and written activities (Bernard, 2002; Cresswell, 2007; Denzin & Lincoln, 2000). The data was coded and analyzed separately by the PI and research assistant, and reviewed by the entire

research team (the Tanzanian co-investigators). Systematic analysis began with multiple readings of the field notes to generate themes and hypotheses, followed by coding of the data collected. Open coding was used to identify appropriate categories, themes and issues that emerged from the data, (Emerson, Fretz & Shaw, 1995) with axial coding used to build connections within categories. On-going analysis permitted the team to integrate local experts' insights into the final selection of priority themes from the research. The major themes that emerged from the analysis incorporating the observations and participatory methodologies included: (1) the desire for sex; (2) intense peer pressures to have sex; and (3) condom hesitations.

RESULTS

Of the overall peer pressure stories collected, there were interesting differences in the rural versus urban samples. In both sites, a large number of school dropouts described stories of regretting unsafe sexual behaviors, while many students in urban site similarly wrote about regretted sexual experiences. In contrast, far fewer rural students reported such behaviors. Adolescent boys in both sites described regret for overuse of alcohol, stealing, tobacco use, use of violence and disrespect for parents and school performance. Below we describe more specifically the specific themes that emerged from the triangulated data.

The desire for sex

As with young people experiencing sexual maturation everywhere, many adolescent boys in both rural and urban Tanzania expressed confusion over the intense new sexual desires they felt, describing physical sensations that were insufficiently acknowledged and explained by the adults in their lives. Although some Tanzanian ethnic groups had (or continue to have) traditions around the conveyance of puberty guidance, the majority of the boys in the study received little to no guidance upon reaching puberty. Puberty traditions, such as being sequestered with elder men from the community to learn cultural norms of manhood, have primarily disappeared among the Chagga. However, reports from the small number of participating boys in the study from other ethnic groups suggested that existing traditions from their cultural groups are more focused on becoming a man within society (e.g. head of the household, respected by community) than with providing guidance on the physical and emotional changes of puberty, including sexuality and sexual desires.

Numerous boys in both sites had questions about why they felt intense emotional and oftentimes physical responses (such as an erection) upon seeing a girl with a shorter skirt than deemed culturally appropriate, or a girl who sat close to them at school. As one rural school dropout explained, the main challenge facing boys in adolescence is "the desire for sex – most start having sex when they are 15 years old – some are still in primary school." Some boys had their own interpretations of the emotions (or sexual desires) of puberty, with one rural student recounting a story in which he regretted having had sex with a girl who he met in a disco one night, both of whom were caught and punished by her parents. He explained:

When I remember that mistake, I remember it's not my mistake because it's puberty. That's why I did such a thing. It's a normal thing for a boy who is in puberty.

The boy's interpretation of puberty as including all-powerful sexual emotions that cannot be resisted, was similar to that of a number of other boys in both the rural and urban sites. It is unclear if this was an explanation being learned from peers, parents, the media, in school or from other social influences. Another boy, a rural student, described similar overpowering sensations in his peer pressure story, explaining "...women drive me a bit crazy." He shared how these thoughts can turn into a sexual encounter:

Sometimes you may just sit, and a neighbor girl comes and says 'hey brother. I see you these days and you don't even greet me.' So you will start having a desire for her...and say 'I'm sorry sister, where do you prefer to go and have a rest when you get out of school? We can go and rest at the new bar.' When you get to the bar, you eat and take some drinks. After having sex with the girl, you leave her and tomorrow you look for another one.

It was not clear from this story where the two had sex (meaning in the bar, or a guesthouse, or some other secret locale), which would be useful to understand for the purposes of safer sex interventions, including those aimed at harm reduction (e.g. providing free condoms in bars frequented by adolescents). The boy provided further insight into these sexual dynamics, describing how these encounters eventually become "meaningless" and that he would likely be better off focusing on his schoolwork. There was no mention of guidance offered or sought from elder boys or men (or women) about how to manage these sexual desires, or of self-analysis around the strong desire to have a new girl each day. A number of boys reported desire wearing off for specific girls once sexual relations had been attained. A small number of boys also questioned some of the predominant masculinity norms around male sexual desire, but were more concerned about the potential psychological damage they might experience if they refrained from having sexual relations at a young age. The latter related to a belief or norm that some boys had internalized that a man would suffer mental health problems if he did not engage in sexual intercourse once his body became able (e.g. in adolescence).

Many boys recounted similarly specific regrets related to sexual interactions, either on-going or one-time encounters. They identified a drop in educational performance; an acquired habit of stealing so that they could provide girls with requested material goods (e.g. a *maandazi* or donut at school tea break); or having caused an unwanted pregnancy. A material transaction in exchange for sex with girls was frequently mentioned by boys. However, such masculinity norms of providership, common to much of sub-Saharan Africa, appeared to be more complex in this study, with some boys describing how their female schoolmates would also acquire a boyfriend (aka sexual relationship) through purchasing tea and soda for their desired mate. There was very little, if any, personal reflection from boys about their sexual partners, usually described as girls, in terms of a loss of intimacy or romantic disillusionment or dismay when an encounter with a sexual partner ended. However, some boys did describe experiences that sounded like heartache and depression when a romantic relationship ended or when a girl who they sought after was not interested

or left them for another boy. A few boys also expressed regret that girls who they had impregnated had been forced to leave school, or that they themselves had been forced to marry the girls, damaging their own educational or career aspirations.

One coping mechanism boys identified as being used to handle new sexual desires, particularly in the rural site, was the use of alcohol. As a rural student explained, many boys start drinking alcohol in Form 2 (usually mid-adolescence) “because they don’t want to think about girls.” There were other explanations for alcohol use, such as the employed out of school boys describing particularly problematic peer pressures to drink on pay days. In-school boys who described using alcohol as a coping mechanism for sexual desires frequently reported that drinking was combined with attendance at discos or cultural ceremonies, which often led to unsafe sexual encounters (Sommer et al., 2013a). Many regrets were expressed about accompanying a woman to her house or a guesthouse subsequent to becoming heavily intoxicated. In contrast to this finding, but also problematic in terms of risky behaviors, was the frequently asked question among urban boys about the veracity behind what they had heard from elder boys and men about the potential for *Konyagi* (strong local distilled spirits) to perpetuate an erection. There were numerous advertisements (e.g. billboards) for *Konyagi* observed by the research team in the urban area in particular, with the small plastic packets of alcohol readily available for sale at kiosks in both rural and urban areas. Pressures around sexual performance were not explicitly explored in this study, but the frequency with which the question about *konyagi*’s influence on erections arose, both in the rural and urban areas, demonstrated strong existing masculinity norms around expected sexual prowess and also likely some performance anxiety.

A final observation regarding sexual desire, reported from both the rural and urban sites, was the suggestion that girls (and adult women) are becoming more forward in their requests for sexual relations with boys. Although boys primarily described themselves (or other boys) as the sexual initiators, there were a number of stories or experiences recounted in which boys felt compelled to respond to a girl’s (sometimes forceful) sexual demands, something they described regretting. As one urban student explained:

One of my classmates, a girl, loved me so much. I thought she loved me like a brother, but I was wrong. She loved me like her lover. So one day, on a Saturday evening, she phoned me and told me to come over. So I went, thinking she was lonely and wanted company. She welcomed me and gave me juice. And that is the only thing I remember after finding myself naked with her on the bed at 8pm. Up to this day, I keep thinking, why did I have my first sex by force and without my cooperation?

The boy’s behavior demonstrates the fulfillment of a masculine norm (e.g. taking any opportunity for sex) despite his questioning of his own behavior. Although the majority of boys agreed that boys were the primary initiators in most sexual relationships, it is important to note these potentially shifting gendered sexual dynamics being enacted between girls and boys (Dworkin & O’Sullivan 2005). Although much of the HIV literature documents adolescent girls’ relationships with older boys and men, the boys in the study suggested that most of the boys having sex were doing so with “age-mates” or older women, indicating the

need for greater attention to promoting safer sex with adolescent boys. It is also interesting to note the boy's description of the classmate loving him as a "lover" indicating they type of existing sexual scripts (the learned aspect of human sexual encounters) (Simon & Gagnon, 2003; Dworkin & O'Sullivan, 2007) being utilized by boys in describing conceptualizations of romantic sexual partners.

Intense peer pressures to have sex

Peer pressures during adolescence are a globally recognized occurrence that often leads young people, and boys in particular, to engage in unsafe sexual and other risky behaviors (Buhi & Goodson, 2007; Wood, Maforah & Jewkes, 1997). The adolescent boys in rural and urban Tanzania recounted similar such experiences, with numerous boys describing significant peer pressures to "have a girlfriend" which colloquially meant to engage in sexual relations with girls. Other reported peer pressures included seeking out pornography with one's peers and consuming alcohol (which many boys described as subsequently leading to the increased pursuit of sexual liaisons with girls). From the written stories, numerous boys described being prodded into pursuing girl by their peers for a range of reasons, including a desire to fit in, to be perceived as a man, to experience the described "sweetness" of girls, and to demonstrate their ability to seduce. The latter again demonstrates an enactment by the boys of a masculine norm, that of demonstrating the ability to initiate (and perform) sexual relations with a woman (Varga, 2003).

In terms of the rural versus urban difference in boys' experiences of peer pressures related to sex, a number of students described how urban boys are much more exposed to globalization, to different ways of dressing, and to porn, and thus have greater "temptations" (meaning sexual ones) than rural boys who are busy with farming tasks, not around their peers as often, and exposed to less external influences. These represent neighborhood level influences of difference (Blum et al., 2012) along with macro level influences on low-income country contexts (e.g. the impact of urbanization on adolescent daily experiences). One urban student, when probed to explain what life was like in terms of peer pressures experienced in the school dormitories, explained:

The pressure is simply too high because the town boys are more exposed to things. In the dorms they see and hear a lot, and want to try things. They talk about how they have a girlfriend, then focus on shaving, changing the way they dress, the way they walk, how their pants are, they watch porn – all so they can get a girlfriend. The biggest pressure is having a girlfriend, the pleasure of having a girlfriend, of discussing having a girlfriend.

Urban students were sometimes observed to be checking downloaded photos on their phones, which boys described in interviews as often being pornographic in nature, and to be modeling the clothing styles of popular musicians (e.g. low waist slim leg pants). Rural observations revealed minimal to no changes in clothing styles and much less frequent phone use, suggesting lower levels of influence from modernization and stronger traditional norms around dress and behavior. A large number of boys in both sites reported attending discos (where they reported meeting girls and occasionally having sexual liaisons), and were observed watching foreign movies at local video huts that were reported to often have

pornographic or sexually explicit and/or violent content. These various neighborhood level factors (e.g. exposure to pornographic video huts) were found to have differing levels of influence depending on parental monitoring (a family level factor) of adolescent boys' whereabouts in the evenings (Sommer et al., 2013a). The pressure described to be able to discuss girlfriends, or to experience the pleasure of girlfriends (also interpreted as sex) is one that may be learned from the modeling of older boys and men's discourse in peer or generationally mixed gatherings with younger boys listening to discussions.

Many boys wrote about specific experiences of intense peer pressure to pursue a girl and demonstrate their sexual prowess. The latter being another perceived to be necessary demonstration of a strong masculine norm. Numerous students described scenarios of male friends teasing or mocking them for not having girlfriends, or simply pressuring them to have girlfriends, given they themselves had girlfriends. One urban student explained the challenge of expressing heartfelt emotion for a girl to peers, and then his subsequent regrets about acting on the peer advice he received:

I used to love one girl, and I told my friends. They started to laugh at me, and ask me, what kind of a man is afraid [to ask out] a girl? My heart hurt, so I followed the girl to tell her I loved her. The girl understood me and told me she loved me too. From that day onward, I used to spend my time with her. After several months I impregnated her. It brought problems at home. I went to tell my friends, those who had convinced me, and they started to laugh at me, and said, when you were eating your meat, were we together? Did we send you?

There are varying possible cultural interpretations of "eating meat." One being that successfully seducing a girl represents a reward (given the limited nature of meat consumption as an expensive food item) (findings similarly described by Wamoyi et al., 2011). Alternatively the analogy may represent a dehumanizing of females within the sexual interaction (e.g. girls being an object of consumption), belittling the boyfriend's original description of emotion. The boys' reference to "did we send you?" indicates their resistance to being culpable for engaging in peer pressure (e.g. the masculine norm related to demonstrating sexual prowess) that contributed to the impregnating of the girlfriend.

A few of the boys' stories suggested that the intense peer pressure they felt from other males to engage in sex with girls, led to an experience where the boy had committed an act of sexual violence against a girl or woman. While a few boys described stories they had overheard of other boys or men engaging in sexual violence, most of the stories described the boy's own use of violence in sexual encounters. Such stories were vivid examples of how gender inequalities contribute to violence, and in turn shape girls' (or potentially other boys' if they are the victim) vulnerability to HIV. Many of the peer pressure stories described regretted sexual violence that was linked to excessive alcohol intake. As one rural student described:

It was a Saturday and I will never forget it. I was with my friends heading to the bar to take alcohol. We were with girls, and after taking alcohol, we got back late to the house...When we went inside, we started having sex. And myself, because of the alcohol, I found myself with a girl. We were four and we had sex with one girl.

And after regaining consciousness, I regretted this behavior so much. Some friendships are very bad.

It is unclear if boys perceive such behaviors as solely linked to alcohol use, or if they have considered the larger societal gendered power dynamics that are at play in their lives. The research team's observations about the ease of availability of alcohol for adolescent boys within the community (e.g. home brew within family households and ceremonies, young men in bars, promotions including free beer at concerts) also indicated strong neighborhood level factors that may play a role. Although the number of boys reporting experiences of sexual violence was small, the study methodology, which requested that boys write peer pressure stories was left very open-ended. Thus the description of sexual violence was entirely unprompted, with the possibility that there may have been more such descriptions if the story writing assignment had been explicitly focused on recounting stories of sexual violence.

Condom hesitations

Throughout the stories and interviews, it became clear that the use of condoms among adolescent boys continues to be low. A small number of rural students reported that some boys wear condoms, because they and the girls feared pregnancy and getting kicked out of their homes, or because the girls feared being kicked out of school. Nevertheless the self-reports of condom use remained lower than expected after multiple decades of investment in HIV prevention in Tanzania. Observations (including informal conversations) conducted at both urban and rural shops selling condoms suggested few adolescent boys were customers. One rural student described that it is the older adolescent boys in Form 5 and 6 (upper secondary school) who are most likely to impregnate girls in Forms 3 and 4 (mid to late adolescence). The girls are then forced to leave school. Upon probing as to why the boys are not wearing condoms, he explained:

Because people say that you cannot take a lollipop with the wrapper. It reduces the sweetness. Once you start having sex without a condom, you cannot change to using a condom. Sometimes someone will try to use a condom and not use a condom to compare the difference. So then in that moment, they forget about HIV and pregnancy because the temptation is so high to not use a condom.

The same boy went on to explain that boys in the younger grades (Forms 1 and 2) believed they were too young to get a girl pregnant, so would have sex without a condom. The suggestion the boy made that once you have started not using a condom it is difficult to start wearing one indicates a need for HIV prevention efforts to target younger adolescent boys and be more effective at condom promotion. As one rural dropout explained, "some boys believe that for sex to be good, you have to start when you are young." When asked where this belief came from, he indicated boys learn from their peers, from the "places where boys tell stories." He relayed the same rationale about lollipops and sweetness (one that was heard from numerous boys), and explained that young people want to feel good in the moment and "not think about tomorrow." This comment represents a common phenomenon in adolescent development, that of a disconnection between the desire to seek new experiences and the normative biological development of self-regulation (Steinberg, 2004).

Other boys provided additional explanations for why condoms were not acceptable, with one urban dropout suggesting that for boy dropouts, there is an intense interest in women and sex, but “I don’t think they [the boys] know how to use condoms. And I don’t think they really know about them – it’s not because they cannot afford them.” From a review of the current school curricula and observations conducted in rural and urban schools, it became evident that there remains discomfort with teaching about sexual and reproductive health. This, combined with observed societal and parental discomfort about conveying more comprehensive sexuality (including condom use) content, likely prohibits the provision of explicit guidance to young people on how to use condoms. Given that boys are under intense pressures from peers and other members of society (including girls) to demonstrate the masculine norms of confidence and prowess with sexual partners, anxiety around sexual performance when wearing a condom (or in not knowing how to correctly put on a condom) may be an additional important barrier that has been insufficiently addressed in the promotion of safer sex interventions with youth. Another urban dropout, who in front of his peers insisted condoms did not allow for sweetness during sex, later during the confidential interview, admitted that he had not yet had sex (or used a condom). He suggested that boys needed to be taught such things during puberty, when they are young and have not yet started having sexual relations. The predominance in this study population of masculine norms related to the ability to maintain an erection, and the centrality of male sexual pleasure, are similar to findings from elsewhere in the HIV and sexuality literature (Dworkin & O’Sullivan, 2004; Vittelone, 2000).

A final reason provided for not using condoms was a distrust of their safety. As one rural dropout explained:

Some also have the idea that condoms are not safe, that they have bacteria or viruses in them. ...they have an experiment where they will put a condom between two iron plates in the sun, and the condom will be destroyed, and they say you can see viruses moving out of it. So they believe that condoms cannot prevent HIV or pregnancy.

Given the significant investments that have been made to improve HIV knowledge and to build young people’s “life skills” around practicing and negotiating safer sexual relations in Tanzania and elsewhere in sub-Saharan Africa, these persistent suspicions about the benefit and safety of condoms are quite notable (along with indicating the need for new approaches). They may partially be explained by a comment a rural dropout made with regards to young peoples’ fears of acquiring HIV. He suggested that young people “know everything [about HIV] and may pass people in the street and even say so and so is infected. But the boys say, why are you afraid of HIV and not flu? They have become unafraid because it’s so normal.” When pressed as to why young people were not afraid when people around them are still dying of HIV/AIDS, he responded that, “the problem is puberty. It makes you crazy – you make decisions that are out of your mind.

DISCUSSION

This comparative case study conducted with 160 boys in rural and urban Tanzania sought to better understand the social and contextual factors promoting unsafe sexual behaviors. The

existing literature on adolescents and HIV in sub-Saharan Africa has insufficiently addressed the masculinity norms shaping the pubertal transition of boys, and the contribution of such norms and the social context to shaping boys' unsafe sexual behaviors. The study findings revealed some differences based on boys' rural versus urban location, while more importantly indicated the influence of masculinity norms on boys' experiences of sexuality. The intersection of these norms with adolescent boy's sexual maturation is occurring at varying ecological levels. The neighborhood level was found to be particularly salient, including the conveyance of gendered norms and cultural beliefs about sexuality expectations for adolescent boys, the ready availability of alcohol outlets as a community risk, and an apparent hesitancy to seek out condoms in community shops (Blum et al., 2012).

The predominant masculinity norms existing in both the rural and urban contexts appear to contribute to the continued widespread practice of unsafe sexual relations, intense peer pressures to engage in sex during adolescence and inhibitions around the use of condoms. These ranged from norms inculcated into young boys that a man's status is increased when he has multiple partners; that engaging in unprotected sex is a necessary aspect of manhood given the centrality of a man's pleasure; that acting aggressively with other males or in sexual encounters with girls and women (or other males) is appropriate; and that consuming heavy quantities of alcohol is an important demonstration of enacting manhood (Kalichman et al., 2007; Sommer et al., 2013b). These norms are broadly discussed and deconstructed by Flood (2003) and others in the HIV and sexuality literature, much of which discusses the need to engage directly with male sexual behaviors and beliefs to find approaches that will shift the practice of unsafe sex (Holland, Ramazanoglu, Sharpe, & Thompson, 1994).

An important but unsurprising finding was revealed by boys' concerns over their unexplained very intense sexual desires. This is similar to findings from adolescent boys in other regions of the world (Brooks-Gunn & Furstenberg, 1989; Smiler, 2008). The boys also had questions related to perceptions of expected male sexual performance. The desire to augment sexual prowess, and/or lower sexual inhibitions, has been documented about boys and men in numerous countries (Connell & Messerschmidt, 2005; Barker & Ricardo, 2005; Simpson, 2005). The belief that appeared to have been inculcated in many boys was that of the existence of an all-powerful male sex drive, findings that are similar from research conducted with adolescent boys in South Africa (MacPhail & Campbell, 2001). Our findings also revealed some boys (particularly those for whom Christianity was very important) questioning the sexual dimensions of hegemonic masculinity. This suggests the potential for exploring alternative, less risky, masculinities in Tanzania among boys. Understanding the neighborhood sources of such influence (e.g. religious schools) on the derivation of such norms boys is of equal importance.

Although we discuss the specific findings on the intersection of boys' alcohol use and their increased engagement in unsafe sex and violence elsewhere (Sommer et al., 2013b), it is important to note here the ways in which predominant masculinity norms around alcohol intake were observed to be influencing the uptake and heavy use of alcohol among many boys. There exists an extensive literature from the region on the ways in which masculinity norms contribute to heavy alcohol intake, and subsequent engagement in unsafe sex and

sexual violence, both increasing HIV risk (Tapert, Aarons, Sedlar, & Brown, 2001; Lewis, Litt, Crouce, Blayney, & Gilmore, 2012; Jewkes, 2002). Gender transformative interventions are needed to address the masculinity norms conveying such beliefs and behaviors, along with structural and environmental interventions, such as alcohol policies that restrict alcohol sales to young people or reduce the number of alcohol outlets in a given community (Blinded, 2013b).

A particularly problematic finding was the continued shunning of the use of condoms among adolescent boys and their sexual partners (findings similarly described by Flood, 2003). This has been documented with young people in other sub-Saharan African countries (Dehne & Riedner, 2005; Bearinger, Sieving, Ferguson, & Sharma, 2007), and cannot be separated from the literature on the centrality of male pleasure as a priority (Pleck, Sonenstein, & Ku, 1993; Ward, Merriweather, & Caruthers, 2006). The boys' commentaries on condoms being like lollipops with wrappers, that reduce the pleasure of sex, is a belief that has been reported for decades in the HIV literature from the region (Higgins, 2010). There appeared to be some increased condom usage in the rural site, due to young peoples' concerns about parental punishment or the negative repercussions for girls' schooling of unwanted pregnancy. In contrast to a Kenyan study in which adolescent boys blamed girls for pregnancy occurring (Nzioka, 2001), our findings suggested boys felt responsible for not having been more careful. While the Kenyan boys appeared to suggest that contraception (or knowing her "safe days" of the month) was entirely a girl's responsibility, the Tanzanian boys were much more likely to blame their peers or themselves for an unintended pregnancy. Affordability was not raised as an issue in hindering condom use, a finding that differs from many other studies conducted in sub-Saharan African that indicate condom affordability is a barrier hindering young people's safer sex behaviors (Adih & Alexander, 1994).

There are many possible interpretations for the continued low condom use. These include the continued widespread conveyance of masculinity norms about diminished sexual enjoyment with the use of condoms, the inaccessibility of condoms for younger adolescents who were engaging in sexual relations (such as boys' embarrassment about asking for condoms in local village pharmacy shops or parents not wanting to discuss sexuality with sons), boys' lack of knowledge on how to use a condom and/or admit to not knowing how to use a condom, and perpetuating misbeliefs around the dangers of condom use (e.g. condoms containing viruses) (Siegler, Mbwapbo, McCarty, & DiClemente, 2012). There was also reported to be some normalization of HIV/AIDS among adolescent boys, diminishing some of the fear factor that may have previously been expected to increase the use of condoms in sexual encounters.

A review of young people's HIV narratives across six African countries identified older male modeling of (usually negative) perceptions of condom use as being very influential on younger adolescent boys (Winskell, Obyerodhyambo, & Stephenson, 2011). In a culture of masculinity norms where male sexual prowess and sexual confidence is the ideal, new approaches that enable boys to express insufficient knowledge about how to use condoms are needed, along with new sexual scripts in which condom use supports rather than threatens boys' enactment of manhood. There is a need for older male role modeling to shift

the norms around condom use (e.g. alter the hegemonic masculinity norms around condom use) or promote other safer sex approaches, as was found with boys in Zambia (Dahlback et al., 2003). More extensive research is also needed with adolescent boys and girls in Tanzania, and elsewhere in sub-Saharan Africa, to understand the dynamics and discourse within actual sexual encounters that may be amenable to and in need of reshaping for safer sex encounters.

Although the peer pressures to engage in sexual relations were found to primarily be coming from other boys, they were also documented on some occasion to be coming from girls and older women. This contradicts the far greater attention given by program and policy makers to the sexual relations of adolescent girls with older male sexual partners (rather than their age-mates) in the sub-Saharan African context (Ott, Barnighausen, Tanser, Lurie, & Newell, 2011). This gendered dynamic, suggesting an increased sexual agency among girls, has been found elsewhere in Tanzania and in Kenya, but more in relation to sexual transactional relationships, with girls eager to acquire material goods, and provide sexual relations in return (Plummer & Wight, 2011; Silberschmidt, & Rasch, 2001; Mojola, 2014). Less evidence has documented girls' expressions of actual sexual desires for boys, as was found in this study. There is a gap in the contemporary literature from sub-Saharan Africa on female sexual desire and sexuality, with much more research attention paid to male virility and predominant sexual desires and needs (Wamoyi, Wight, Plummer, Mshana, & Ross, 2010). There has also been documentation of girls' lack of sexual agency in South Africa in particular, (Lesch & Kruger, 2005) however much more in-depth research is needed as gendered dynamics shift around sexual encounters among young people on the continent. Such topical areas are overdue for in-depth research in order to identify more successful strategies for safer sex promotion amongst both girls and boys, ones that recognize the existence of female sexual desire. This is particularly important given the findings on the shift in gendered dynamics in sexual encounters reported by boys in the study, which indicate that gender roles are continuing to change in the Tanzania context as formal education, globalization, and modernization transform society. This suggests potential impacts from the last decade of focus on girls' education through the development agenda in Tanzania (UNESCO, 2012).

The findings revealed the importance of understanding the ways in which boys do (or do not) adhere to the hegemonic masculinity norms of a given society. For example, some boys voiced feelings of shame around the existence of sexual violence, or a desire to resist the intense pressures to engage in sexual relations with girls. It is critical to understand what enables some boys to transform and move beyond their heavily gendered environments and upbringings. Public health practitioners and policy makers need a more nuanced and realistic understanding of young and mid adolescent boys' actual sexual practices, their sexual partners, and their recommendations for how best to promote safer sexual relations to ensure safe transitions through adolescence. They also need a deeper understanding of the ways in which adolescent boys' neighborhood environments may be impacting on their sexual risk behaviors in differing contexts. Adolescent boys themselves indicated that earlier interventions are needed, with the frequent analogy being offered up from the Swahili saying that you must bend a fish when the fish is not yet dry. The implication being that

interventions that occur after boys' beliefs, norms, and practices harden (such as boys rejecting condom use) is too late.

The findings that HIV prevention interventions may be reaching boys too late to impact on their safer sex behaviors are of critical importance as the epidemic continues to spread in its third decade across sub-Saharan Africa. They also indicate the need for new intervention approaches with young people, including a consideration of harm reduction interventions and of gender transformative approaches with younger adolescent boys (Greene & Barker, 2011; Igras, Macieira, Murphy, & Lundgren, 2014). Such approaches must be grounded in empirical evidence of the sexual behaviors of girls and boys under age 15, for which there continues to exist insufficient data (WHO, 2014). Participatory methodologies are a particularly effective approach for conducting research with very young adolescents. In this study, the use of such methodologies to elicit boys' experiences were critical to deepening the understanding of the contextual influences shaping boys' pubertal transitions in northern Tanzania today. Given the instructions for writing the peer pressure stories did not include a specific request to describe regretted sexual pressures (with boys writing about regrets related to alcohol, stealing and other topics), there is a strong likelihood that important evidence on boys' sexual beliefs and practices, including sexual violence, would be revealed from a study using similar participatory methods that explicitly focused on sexual interactions. This should include an exploration of the types of sexual experiences boys are having (e.g. anal, vaginal, male-female, male-male), and the sequencing of sexual encounters (e.g. fondling, intercourse). Plummer and Wight's (2011) rich description of the HALIRA project in Mwanza, Tanzania explores some of these aspects with rural Sukuma youth (Plummer & Wight, 2011).

The generalizability of this study's findings are limited by the in-depth nature of the methodology, with time needed to gain the trust of adolescent boys for conducting research on their lived experiences, and by the small number of participants who were primarily of Chagga ethnicity. Nevertheless, important insights were gained on the present day experiences of a subset of Tanzania adolescent boys transitioning into young manhood, with many of the findings not dissimilar from those in other sub-Saharan African countries (Silberschmidt, 2001).

In conclusion, as the boys in the study most succinctly stated, you cannot bend a fish when it's already dry. To be more effective, future HIV prevention interventions should be focused on very young adolescents, and if culturally and socially permitted, include a much more comprehensive sexual education, one that builds trust in and beliefs around delaying sexual intercourse, and promoting more effectively the use of condoms (including explicit guidance on how to use them). In addition, incorporating harm reduction approaches (such as providing condoms in schools) or gender transformative approaches (such as those that seek to build on the alternatively masculinities promoting healthier sexuality) may prove to be effective in improving adolescent sexual health outcomes for both boys and girls.

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References

- Aaro L, Flisher A, Kaaya S, Onya H, Fuglesang M, Klepp KI, Schaalma H. Promoting sexual and reproductive health in early adolescence in South Africa and Tanzania: Development of a theory- and evidence-based intervention programme. *Scandinavian Journal of Public Health*. 2006; 34:150–158.10.1080/14034940510032356 [PubMed: 16581707]
- Adih W, Alexander C. Determinants of condom use to prevent HIV infection among youth in Ghana. *Journal of Adolescent Health*. 1994; 24:63–72. doi: [http://dx.doi.org/10.1016/S1054-139X\(98\)00062-7](http://dx.doi.org/10.1016/S1054-139X(98)00062-7). [PubMed: 9890367]
- Ampofo A. “When men speak women listen”: Gender socialization and young adolescents’ attitudes to sexual and reproductive issues. *African Journal of Reproductive Health*. 2001; 5:196–212.10.2307/3583335 [PubMed: 12471941]
- Balmer D, Gikundi E, Billingsley M, Kihuhu F, Kimani M, Wang’ondy J, Njoroge H. Adolescent knowledge, values, and coping strategies: Implications for health in sub-Saharan Africa. *Journal of Adolescent Health*. 1997; 21:33–38.10.1016/S1054-139X(96)00293-5 [PubMed: 9215508]
- Bankole A, Biddlecom A, Guiella G, Singh S, Zulu E. Sexual behavior, knowledge and information sources of very young adolescents in four sub-Saharan African countries. *African Journal of Reproductive Health*. 2007; 11:28–43.10.2307/25549730 [PubMed: 18458739]
- Barker, G.; Ricardo, C. Young men and the social construction of masculinity in sub-Saharan Africa (Social Development Papers No. 26). 2005. Retrieved from The World Bank Documents and Reports website: <http://documents.worldbank.org/curated/en/2005/06/6022525/young-men-construction-masculinity-sub-saharan-africa-implications-hiv-aids-conflict-violence>
- Barker, G.; Ricardo, C.; Nascimento, M. Engaging men and boys in changing gender-based inequity in health: Evidence from programme intervention. Geneva: World Health Organization; 2007.
- Baryamutuma R, Baingana F. Sexual, reproductive health needs and rights of young people with perinatally acquired HIV in Uganda. *African Health Sciences*. 2011; 11:211–218. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3158520/?tool=pmcentrez&report=abstract>. [PubMed: 21857852]
- Bearinger L, Sieving R, Ferguson J, Sharma V. Global perspectives on the sexual and reproductive health of adolescents: Patterns, prevention and potential. *Lancet*. 2007; 369:7–13.10.1016/S0140-6736(07)60367-5 [PubMed: 17208622]
- Berkman A, Garcia J, Munoz-Laboy M, Paiva V, Parker R. A critical analysis of the Brazilian response to HIV/AIDS: Lessons learned for controlling and mitigating the epidemic in developing countries. *American Journal of Public Health*. 2005; 95:1162–1172.10.2105/AJPH.2004.054593 [PubMed: 15933232]
- Bernard, R. Research methods in quantitative and qualitative approaches. 3. Thousand Oaks, CA: Sage Publications; 2002.
- Blum B. Adolescent health in the 21st century. *Lancet*. 2012; 379:4–6.10.1016/S0140-6736(12)60407-3 [PubMed: 22093188]
- Boonstra H. Young people need help in preventing pregnancy and HIV; How will the world respond? *Guttmacher Policy Review*. 2007; 10:2–8. Retrieved from <http://www.guttmacher.org/pubs/gpr/10/3/gpr100302.html>.
- Brooks-Gunn J, Furstenberg F. Adolescent sexual behavior. *American Psychologist*. 1989; 44:249–257.10.1037/0003-066X.44.2.249 [PubMed: 2653137]
- Bronfenbrenner, U. The ecology of human development: Experiments by nature and design. Cambridge, MA: Harvard University Press; 1979.
- Buhi E, Goodson P. Predictors of adolescent sexual behavior and intention: A theory-guided systematic review. *Journal of Adolescent Health*. 2007; 40:4–21.10.1016/j.jadohealth.2006.09.027 [PubMed: 17185201]
- Connell, R. Teaching the boys: New research on masculinity and gender strategies for schools. New York: The Teacher’s College Record; 1996.

- Connell R, Messerschmidt J. Hegemonic masculinity: Rethinking the concept. *Gender and Society*. 2005; 19:829–859.10.1177/0891243205278639
- Cresswell, J. *Qualitative inquiry and research design: Choosing among five approaches*. 2. London: Sage Publications; 2007.
- Dahlback E, Makele P, Ndubani P, Yamba B, Bergstrom S, Ransjo-Arvidson AB. “I am happy that god made me a boy”: Zambian adolescent boys’ perceptions about growing into manhood. *African Journal of Reproductive Health*. 2003; 7:49–62.10.2307/3583345 [PubMed: 12816313]
- Dehne, K.; Riedner, G. *Sexually transmitted infections among adolescents: The need for adequate health services*. Geneva: World Health Organization; 2005.
- Denzin, N.; Lincoln, Y. *The discipline and practice of qualitative research*. Thousand Oaks: Sage Publications; 2000.
- Doyle D, Ross D, Maganja K, Baisley K, Masesa C, Andreasen A, Hayes R. Long-term biological and behavioral impact of an adolescent sexual health intervention in Tanzania: Follow-up survey of the community-based Mema kwa Vijana Trial. *PLoS Medicine*. 2010;10.1371/journal.pmed.1000287
- Dunkle K, Jewkes R. Effective HIV prevention requires gender-transformative work with men. *Sexually Transmitted Infections*. 2007; 83:173–174.10.1136/sti.2007.024950 [PubMed: 17569718]
- Dworkin, S.; O’Sullivan, L. “It’s less work for us and it shows she has good taste”: Masculinity, sexual initiation and contemporary sexual scripts. In: Kimmel, M., editor. *The sexual self*. Tennessee: Vanderbilt University Press; 2007. p. 105-121.
- Dworkin S, O’Sullivan L. Actual versus desired initiation patterns among a sample of college men: Tapping disjuncture within traditional male sexual scripts. *Journal of Sex Research*. 2005; 42:150–158.10.1080/00224490509552268 [PubMed: 16123845]
- Eaton L, Flisher A, Aaro L. Unsafe sexual behavior in South African youth. *Social Science and Medicine*. 2003; 56:149–165.10.1016/S0277-9536(02)00017-5 [PubMed: 12435558]
- Emerson, R.; Fretz, R.; Shaw, L. *Writing ethnographic fieldnotes*. Chicago: University of Chicago Press; 1995.
- Flood, M. Addressing the sexual cultures of heterosexual men: Key strategies in involving men and boys in HIV/AIDS prevention. 2003. Retrieved from <http://www.un.org/womenwatch/daw/egm/men-boys2003/EP6-Flood.pdf>
- Greene, M.; Barker, G. Masculinity and its public health implications for sexual and reproductive health and HIV prevention. In: Parker, R.; Sommer, M., editors. *Routledge handbook of global public health*. UK: Routledge; 2011. p. 199-207.
- Higgins C. Discursive enactments of the World Health Organization’s policies: Competing cultural models in Tanzanian HIV/AIDS prevention. *Language Policy*. 2010; 9:65–85.10.1007/s10993-009-9151-x
- Hindin M, Fatusi A. Adolescent sexual and reproductive health in developing countries: An overview of trends and interventions. *International Perspectives on Sexual and Reproductive Health*. 2009; 35:58–62.10.1363/3505809 [PubMed: 19620089]
- Holland, J.; Ramazanoglu, S.; Sharpe, S.; Thompson, R. Achieving masculine sexuality: Young men’s strategies for managing vulnerability. In: Doyal, L.; Naidoo, J.; Wilson, T., editors. *AIDS: Setting a feminist agenda*. London: Falmer; 1994. p. 122-150.
- Igras S, Macieira M, Murphy E, Lundgren R. Investing in very young adolescents’ sexual and reproductive health. *Global Public Health*. 2014; 9:555–569.10.1080/17441692.2014.908230 [PubMed: 24824757]
- Jackson C, Henderson M, Frank J, Haw S. An overview of multiple risk behavior in adolescence and young adulthood. *Journal of Public Health*. 2012; 34:i31–i40.10.1093/pubmed/fdr113 [PubMed: 22363029]
- Jewkes R. Intimate partner violence: Causes and prevention. *Lancet*. 2002; 359:1423–1429.10.1016/S0140-6736(02)08357-5 [PubMed: 11978358]
- Juarez F, LeGrand T, Lloyd C, Singh S. Introduction to the special issue on adolescent sexual and reproductive health in Sub-Saharan Africa. *Studies in Family Planning*. 2008; 39:239–244.10.1111/j.1728-4465.2008.00172.x [PubMed: 19248712]

- Kajula L, Sheon N, De Vries H, Kaaya S, Aaro L. Dynamics of parent-adolescent communication on sexual health and HIV/AIDS in Tanzania. *AIDS and Behavior*. 2014; 18:S69–S74.10.1007/s10461-013-0634-6 [PubMed: 24101099]
- Kalichman S, Simbayi L, Kaufman M, Cain D, Jooste S. Alcohol use and sexual risks for HIV/AIDS in sub-Saharan Africa: Systematic review of empirical findings. *Prevention Science*. 2007; 8:141–151.10.1007/s11121-006-0061-2 [PubMed: 17265194]
- Katikiro E, Njau B. Motivating factors and psychosocial barriers to condom use among out of school youths in Dar es Salaam, Tanzania: A cross-sectional survey using the health belief model. *ISRN AIDS*. 2012; 1:1–8.10.5402/2012/170739
- Kawai K, Kaaya S, Kajula S, Mbwambo J, Kilonzo G, Fawzi W. Parents and teachers' communication about HIV and sex in relation to the timing of sexual initiation among young adolescents in Tanzania. *Scandinavian Journal of Public Health*. 2008; 36:879–888.10.1177/1403494808094243 [PubMed: 19004907]
- Kimmell, M. *The gendered society*. New York: Oxford University Press; 2000.
- MacPhail C, Campbell C. "I think condoms are good but, aai, I hate those things": condom use among adolescents and the young people in a Southern African township. *Social Science and Medicine*. 2001; 52:1613–1627.10.1016/S0277-9536(00)00272-0 [PubMed: 11327136]
- Mojola, S. *Love, money and HIV: Becoming a modern African woman in the age of AIDS*. Berkeley, CA: University of California Press; 2014.
- Lesch E, Kruger LM. Mothers, daughters, and sexual agency in one low-income South African community. *Social Science and Medicine*. 2005; 61:1072–1082.10.1016/j.socscimed.2005.01.005 [PubMed: 15955407]
- Lewis M, Litt D, Crouce J, Blayney J, Gilmore A. Underestimating protection and overestimating risk: Examining descriptive normative perceptions and their association with drinking and sexual behaviors. *Journal of Sex Research*. 2012; 51:86–96.10.1080/00224499.2012.710664 [PubMed: 23067203]
- Mane P, Aggleton P. Gender and HIV/AIDS: What do men have to do with it? *Current Sociology*. 2001; 49:23–37.10.1177/0011392101496005
- Minkler, M.; Wallerstein, N., editors. *Methods in community-based participatory research*. New Jersey: Jossey Bass; 2000.
- Morrell R. Of boys and men: Masculinity and gender in Southern African studies. *Journal of Southern African Studies*. 1998; 24:605–630.10.1080/03057079808708593
- Namisi F, Flisher A, Overland S, Bastien S, Onya H, Kaaya S, Aaro L. Sociodemographic variations in communication on sexuality and HIV/AIDS with parents, family members and teachers among in-school adolescents: A multi-site study in Tanzania and South Africa. *Scandinavian Journal of Public Health*. 2009; 37:65–74.10.1177/1403494808086986 [PubMed: 19493983]
- Nzioka C. Perspectives of adolescent boys on the risks of unwanted pregnancy and sexually transmitted infections: Kenya. *Reproductive Health Matters*. 2001; 9:108–117.10.1016/S0968-8080(01)90014-X [PubMed: 11468825]
- Ortner, S.; Whitehead, H. *Sexual meanings: The cultural construction of gender and sexuality*. Cambridge, UK: Cambridge University Press; 1981.
- Ott M, Barnighausen T, Tanser F, Lurie M, Newell M. Age-gaps in sexual partnerships: Seeing beyond "sugar daddies. *AIDS*. 2011; 25:861–863.10.1097/QAD.0b013e32834344c9 [PubMed: 21358377]
- Parker R, Easton D, Klein C. Structural barriers and facilitators in HIV prevention: A review of international research. *AIDS*. 2000; 14:S22–S32.10.1097/00002030-200006001-00004 [PubMed: 10981471]
- Pleck J, Sonenstein F, Ku L. Masculinity ideology: Its impact on adolescent males' heterosexual relationships. *Journal of Social Issues*. 1993; 49:11–29.10.1111/j.1540-4560.1993.tb01166.x [PubMed: 17165216]
- Plummer, M. *Promoting abstinence, being faithful and condom use with young Africans*. Dar es Salaam: Lexington Books; 2012.
- Plummer, M.; Wight, D., editors. *Young peoples' lives and sexual relationships in rural Africa*. Dar es Salaam: Lexington Books; 2011.

- Pulerwitz J, Barker G. Measuring attitudes toward gender norms among young men in Brazil: Development and psychometric evaluation of the GEM scale. *Men and Masculinities*. 2008; 10:322–338.10.1177/1097184X06298778
- Siegler A, Mbwambo J, McCarty F, DiClemente R. Condoms “contain worms” and “cause HIV” in Tanzania: Negative Condom Beliefs Scale development and implications for HIV prevention. *Social Science and Medicine*. 2012; 75:1685–1691.10.1016/j.socscimed.2012.07.010 [PubMed: 22877934]
- Silberschmidt S. Disempowerment of men in rural and urban east Africa: Implications for male identity and sexual behavior. *World Development*. 2001; 29:657–671.10.1016/S0305-750X(00)00122-4
- Silberschmidt M, Rasch V. Adolescent girls, illegal abortions, and “sugar-daddies” in Dar es Salaam: Vulnerable victims and active social agents. *Social Science and Medicine*. 2001; 52:1815–1826.10.1016/S0277-9536(00)00299-9 [PubMed: 11352408]
- Simon W, Gagnon J. Sexual scripts: Origins, influences and changes. *Qualitative Sociology*. 2003; 26:491–497.10.1023/B:QUAS.0000005053.99846.e5
- Simpson A. Sons and fathers/boys to men in the time of AIDS: Learning masculinity in Zambia. *Journal of South African Studies*. 2006; 31:569–586.10.1080/03057070500202873
- Smiler A. “I wanted to get to know her better”: Adolescent boys’ dating motives, masculinity ideology, and sexual behavior. *Journal of Adolescence*. 2008; 31:17–32.10.1016/j.adolescence.2007.03.006 [PubMed: 17537500]
- Sommer M. Where the education system and women’s bodies collide: The social and health impact of girls’ experiences of menstruation and schooling in Tanzania. *Journal of Adolescence*. 2009; 33:521–529. [PubMed: 19395018]
- Sommer M, Likindikoki S, Kaaya S. Boys’ and young men’s perspectives on violence in northern Tanzania. *Culture, Health and Sexuality*. 2013; 15:695–709.
- Sommer M, Likindikoki S, Kaaya S. Parents, Sons, and Globalization in Tanzania: Implications for Adolescent Health. *Thymos: Journal of Boyhood Studies*. 2013; 7:1931–1945.
- Sommer M, Likindikoki S, Kaaya S. Tanzanian boys’ transitions through puberty: The importance of context. *American Journal of Public Health*. In Press.
- Steinberg L. Risk taking in adolescence: What changes and why? *Annals of the New York Academy of Science*. 2004; 1021:51–58.10.1196/annals.1308.005
- TACAIDS. The HIV epidemic in Tanzania Mainland: Where have we come from, where is it going, and how are we responding?. 2008. Retrieved from <http://www.tacaids.go.tz/documents/Tanzania%20Epidemiological%20Review%20Report.pdf>
- Tapert S, Aarons G, Sedlar G, Brown S. Adolescent substance use and sexual risk-taking behavior. *Journal of Adolescent Health*. 2001; 28:181–189.10.1016/S1054-139X(00)00169-5 [PubMed: 11226840]
- UNAIDS. UNAIDS Fact Sheet on adolescents, young people and HIV. 2012. Retrieved from http://www.unaids.org/en/media/unaids/contentassets/documents/factsheet/2012/20120417_FS_adolescentsyoungpeoplehiv_en.pdf
- UNESCO. Global partnership for girls’ and women’s education. 2012. Retrieved from http://www.unesco.org/eri/cp/factsheets_ed/TZ_EDFactSheet.pdf
- UNFPA. Adolescents and young people in sub-Saharan Africa: Opportunities and challenges. Johannesburg, South Africa: UNFPA; 2012.
- UNICEF. Progress for children: A report card on adolescents. New York: UNICEF; 2012.
- UNICEF. Tanzania statistics. 2013. Retrieved from http://www.unicef.org/infobycountry/tanzania_statistics.html
- Varga C. How gender roles influence sexual and reproductive health among South African adolescents. *Studies in Family Planning*. 2003; 34:160–172.10.1111/j.1728-4465.2003.00160.x [PubMed: 14558319]
- Viettelone N. Condoms and the making of “testosterone man”: A cultural analysis of the male sex drive in AIDS research on safer heterosex. *Men and Masculinities*. 2000; 3:152–167.10.1177/1097184X00003002002

- Vlahov D, Junge B. The role of needle exchange programs in HIV prevention. *Public Health Reports*. 1998; 113:75–80. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1307729/>. [PubMed: 9722812]
- Wamoyi J, Fenwick A, Urassa M, Zaba B, Stones W. “Women’s bodies are shops”: Beliefs about transactional sex and implications for understanding gender power and HIV prevention in Tanzania. *Archives of Sexual Behavior*. 2011; 40:5–15.10.1007/s10508-010-9646-8 [PubMed: 20652390]
- Wamoyi J, Wight D, Plummer M, Mshana G, Ross D. Transactional sex amongst young people in rural northern Tanzania: An ethnography of young women’s motivations and negotiation. *Reproductive Health*. 2010; 7:1–18.10.1186/1742-4755-7-2 [PubMed: 20429906]
- Ward L, Merriweather A, Caruthers A. Breasts are for men: Media, masculinity ideologies, and men’s beliefs about women’s bodies. *Sex Roles*. 2006; 55:703–714.10.1007/s11199-006-9125-9
- Winskell K, Obyerodhyambo O, Stephenson R. Making sense of condoms: Social representations in young peoples’ HIV-related narratives from six African countries. *Social Science and Medicine*. 2011; 72:953–961.10.1016/j.socscimed.2011.01.014 [PubMed: 21388731]
- Wolfe, D.; Cohen, J.; Doyle, H.; Marlogin, T. Breaking the links: Legal and paralegal assistance to reduce health risks of police and pre-trial detention of sex workers and people who use drugs. In: Sommer, M.; Parker, R., editors. *Structural approaches in public health*. UK: Routledge; 2013. p. 145-158.
- Wood K, Maforah F, Jewkes R. “He forced me to love him”: Putting violence on adolescent sexual health agendas. *Social Science and Medicine*. 1998; 47:233–242.10.1016/S0277-9536(98)00057-4 [PubMed: 9720642]
- WHO. Health for the world’s adolescents – a second chance in the second decade. 2014. Retrieved from <http://apps.who.int/adolescent/second-decade/>

Table 1

Sample characteristics of adolescent boys (aged 16–19) in rural and urban northern Tanzania

Education Status	Urban	Rural
Students	60	60
Out of School	20	20

Table 2

Ethnographic observation, in-depth Interviews and participatory methods

Method	Description of research topics explored
Ethnographic Observation	<i>Observations of public (e.g. schools, markets, internet cafes, bars) and private spaces (e.g. households).</i>
In-Depth Interviews	<i>Boys were asked to respond to a series of open-ended questions about their growing up experiences within Tanzania society.</i>
Peer Pressure Stories	<i>Boys were asked to write an anonymous story about an experience in which they did something against their wishes and/or that they later regretted. They were asked to describe what happened, how they felt, how they responded or reacted, and to include their advice for younger boys who might find themselves in a similar scenario.</i>