

Jaboya (“Sex for Fish”): A Qualitative Analysis of Contextual Risk Factors for Extramarital Partnerships in the Fishing Communities in Western Kenya

Zachary A. Kwena¹ · Chris A. Shisanya² · Elizabeth A. Bukusi¹ · Janet M. Turan³ · Shari L. Dworkin⁴ · Grace A. Rota¹ · Isaac J. Mwanzo⁵

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Abstract Extramarital partnerships exacerbate high HIV prevalence rates in many communities in sub-Saharan Africa. We explored contextual risk factors and suggested interventions to reduce extramarital partnerships among couples in the fishing communities on Lake Victoria, Kenya. We conducted 12 focus group discussions with 9–10 participants each ($N = 118$) and 16 in-depth interviews ($N = 16$) with fishermen and their spouses. Couples who participated were consented and separated for simultaneous gender-matched discussions/interviews. Interview topics included courtship and marriage, relationship and sexual satisfaction, extramarital relationships and how to intervene on HIV risks. Coding, analysis, and interpretation of the transcripts followed grounded theory tenets that allow analytical themes to emerge from the participants. Our results showed that extramarital partnerships were perceived to be widespread and were attributed to factors related to sexual satisfaction such as women needing more foreplay before intercourse, discrepancies in sexual desire, and boredom with the current sexual repertoire. Participants also reported that financial and sociophysical factors such as family

financial support and physical separation, contributed to the formation of extramarital partnerships. Participants made suggestions for interventions that reduce extramarital partnerships to minimize HIV risks at the community, couple, and individual level. These suggestions emphasized improving community education, spousal communication, and self-evaluation for positive behavior change. Future studies can draw upon these findings as a basis for designing community-owned interventions that seek to reduce community-level HIV risk through a reduction in the number of sexual partners.

Keywords Extramarital partnerships · Fishing communities · Married couples · HIV · Fish-landing beaches · Lake Victoria · Jaboya

Introduction

Extramarital partnerships have been associated with many psychosocial and health problems (Chemaitelly, Awad, Shelton, & Abu-Raddad, 2014; Demaris, 2013; Fox, 2014; Rahimi, Fatehizade, & Yousefi, 2014). Among the psychosocial problems are: poor quality of spousal relationships, intimate partner violence, separation, and divorce (Conroy, 2014; Rahimi et al., 2014). Indeed, in many communities around the world, extramarital partnerships have been cited as the single most common cause of marital dissolutions (Buss & Shackelford, 1997; Previti & Amato, 2004; Shackelford & Buss, 1997). In terms of health, extramarital partnerships have acted as conduits through which HIV enters into marriages due to wider sexual networks. Sexual networks grow in size by individuals starting extramarital partnerships that form links between their existing networks (Helleringer & Kohler, 2007; Schmid & Kretzschmar, 2012). Married couples, who already have an existing long-term sexual relationship, form larger complex sexual networks that enhance the chances of

✉ Zachary A. Kwena
zkwena@kemri-ucsf.org

¹ Center for Microbiology Research, Kenya Medical Research Institute, Kisumu, Kenya

² Department of Geography, Kenyatta University, Nairobi, Kenya

³ Department of Health Care Organization and Policy, University of Alabama at Birmingham, Birmingham, AL, USA

⁴ Department of Social and Behavioral Sciences, University of California at San Francisco, San Francisco, CA, USA

⁵ Department of Community Health, Kenyatta University, Nairobi, Kenya

HIV entry to the marriage every time any of the partners get involved in unprotected extramarital sex in a network with an HIV infection (Potterat et al., 2002). Thus, from a public health perspective, finding ways to break or disconnect the conduit/bridge that links couples to wider sexual networks is a critical avenue for HIV prevention.

One of the ways to break the links between couples and wider sexual networks is by implementing and adhering to the “ABC” approach. This approach advocates abstaining from sex (A), being faithful to one partner with known HIV status (B), and using condoms consistently with partners of unknown HIV status (C). Although the ABC approach has been heralded as highly successful in reducing new HIV infections in countries like Uganda and Thailand (Shelton et al., 2004), not all aspects of the approach apply to all individuals and/or all the time. For instance, when the approach is examined closely, it becomes clear that abstaining from sex is not a practical option for married couples; simultaneously, people who are at risk of HIV infection either cannot or often do not like to use condoms. For example, it is challenging for women to request condoms in sexual relationships due to economic inequalities, sexual scripts, and gendered power differentials between women and men (Dworkin & Ehrhardt, 2007; Wingood & DiClemente, 2000). Because of the limitations of the model, numerous scholars have suggested to expand it to cover other aspects that make people vulnerable (Collins, Coates, & Curran, 2008; Dworkin & Ehrhardt, 2007) as well as encompass newer biomedical interventions such as pre-exposure prophylaxis, treatment as prevention and male circumcision (Baeten et al., 2012; Cohen et al., 2011). However, the rollout and uptake of these newer interventions have been slow and may take a long time to reach a reasonable coverage to make an impact on reduction of new HIV infections (Herman-Roloff et al., 2011; Liu et al., 2014).

Behavioral interventions that focus on the “B” part of the model (reducing and preventing extracouple partnerships) seek to curtail large sexual networks from forming; these have not been studied very frequently (Murphy, Greene, Mihailovic, & Olupot-Olupot, 2006). If condoms were to be used correctly and consistently, these would be sufficient to prevent most of the infections that might come through sexual networks. However, this is not the case because condoms are viewed as resulting in unpleasurable sex for both women and men (Hensel, Stupiansky, Herbenick, Dodge, & Reece, 2012; Higgins, Hoffman, & Dworkin, 2010; Higgins & Wang, 2015). Thus, interventions focused on reducing extramarital partnerships remain a key behavioral dimension in the fight against HIV as well as checking on psychosocial problems that may result, especially among women.

Polygyny in many sub-Saharan African communities is considered both as a type of marriage and a value system with its roots in the economic aspects of power relations where wealthy men had a higher propensity of being involved in it (Hayase & Liaw, 1997). The explanation for this can be derived from the polygyny threshold model, which holds that polygyny is driven by female’s choice of mate who commands more resources

(Pribil & Searcy, 2001). For men, polygyny becomes attractive because it is seen as a potential source of labor to expand resource possession. This may include labor for wealthy men’s economic activities in the farms, such as herding cattle and cultivating land. Among the Luo, this is still a very prevalent practice estimated to be practiced by 20% of this population (Kenya National Bureau of Statistics, 2015) despite interruptions that were introduced by Christianity (Muthengi, 1995). As was the case elsewhere in sub-Saharan Africa, the decline in polygynous unions among the Luo was accompanied by the growth of various forms of multiple and/or serial informal marriages (Karanja, 1994). Polygyny in many cases is not considered as a form of extramarital partnership since individuals involved may be in sanctioned marriages. Polygyny creates small isolates of concurrent partnerships in which the virus is trapped until one or more of the infected spouses start a new relationship (Reniers & Watkins, 2010). In these instances, polygyny has been shown to be protective against HIV infection (Reniers & T’faily, 2012; Santhakumaran et al., 2010).

Extramarital partnerships are common in fishing communities (Agot, 1995; Kwena, Bukusi, Omondi, Ng’ayo, & Holmes, 2012; Kwena et al., 2010a, 2010b). These partnerships occur either in the context of sex work or *jaboya* (sex-for-fish) systems that are mainly due to gendered divisions of labor that further create power imbalances between men and women (MacPherson et al., 2012; Mojola, 2011). The gendered division of labor is partly caused by superstitions and other cultural norms that prevent women from getting involved in actual fish-catching activities offshore for fear of misfortune. This effectively limits women to processing and selling of fish obtained from men. This scenario gives men undue power to dictate the terms of engagement with women who want fish from them, including asking for sexual favors. With prohibitive traditions that bar women from fishing, some women are known to lure men into sexual relationship as an easy way to access fish. Thus, female fish processors/traders get involved in sexual relationships in order to secure the rights to buy often scarce fish from the fishermen (Kwena et al., 2012). Kwena et al. further depicts a system in the fishing communities where high-risk sexual behaviors appear to be institutionalized, which require decisive long-term interventions to change. Sex workers, on the other hand, trail fishermen to areas of fish abundance to benefit from resulting high cash flow (Nagoli, Holvoet, & Remme, 2010). Thus, sex workers may position themselves strategically in fishing villages to attract men to earn income. Other than sex workers, young women either from the fishing or the neighboring villages often exchange sex with money or other gifts for survival (Kiwanuka et al., 2014). All of these interactions are influenced by power dynamics based on differential ownership of resources which have been observed to make both men and women vulnerable to participate in riskier sexual encounters (Masanjala, 2007).

Some aspects of the contexts of extramarital partnerships among married couples can be understood within the framework of social exchange theory. The theory posits that individuals

weigh the benefits and costs of a relationship in consideration of their investment in the relationship in order to determine whether or not they remain in it (Sprecher, 1998). If the benefits (love, smiles, hugs, gifts, satisfactory sex) they derive from the relationship are greater than the costs (verbal arguments, humiliations, punishments, abuse), then they maintain the relationship. If the costs are greater than the benefits, they are more likely to dissolve the current relationship and seek a better one. However, if the costs outweigh the benefits, but the individual has a substantial investment (time, children, money, reputation, self-disclosure) in the relationship, they may keep the relationship but reach out to establish other concurrent relationships that provide the benefits that they fail to experience in their primary relationships. Within this theoretical framework, understanding dyadic perspectives of the contexts under which extramarital partnerships take place in fishing communities is crucial in designing appropriate HIV prevention interventions. Thus, we set to explore: (1) contextual risk factors for involvement in extramarital partnerships and (2) suggested interventions to reduce extramarital partnerships among married couples in the fishing communities on Lake Victoria in Western Kenya.

Method

Participants

We conducted 12 FGDs with 9–10 participants each ($N = 118$) and 16 IDIs ($N = 16$) with fishermen and their spouses between August 2011 and March 2012. Table 1 shows the characteristics of the participants we enrolled. Of 60 couples invited for focus groups, 59 (98.3%) consented to participate in the discussions; all eight couples (16 individuals) invited for in-depth interviews participated in the study. The flexibility of focus groups and individual in-depth interviews as qualitative methods enable researchers to elicit meaningful and culturally salient responses from participants (Mack, Woodson, MacQueen, Guest, & Namey, 2005). The final numbers of FGDs and IDIs were determined based on saturation of themes, stopping at a point where no new primary or secondary themes arose. Kisumu County has a total of 43 fishing beaches and efforts were made to enroll married couples from a wide diversity of beaches.

Participants for both the FGDs and IDIs were identified in collaboration with the beach management unit (BMU) officials. The FGD and IDI guides were developed in English and translated into the local language, Dholuo. Fishermen, who were over 18 years old, married, and knowledgeable about the fishing community together with their spouses, were included in the study.

Procedure

The fishermen were approached at the fish-landing beaches, briefed about the study, and asked whether they were willing to participate in the study along with their spouses. Those who were

Table 1 Socioeconomic and demographic characteristics of FGD and in-depth interview participants ($N = 134$)

Attribute	Frequency (%)
Age	
Less than 25 years	42 (32.3)
25–29 years	35 (26.9)
Over 29 years	53 (40.8)
Education	
Primary	76 (58.5)
Post-primary	54 (41.5)
Religion	
Catholics	26 (22.8)
Protestants	22 (19.3)
Independent churches	66 (57.9)
Occupation	
Fishermen	63 (48.5)
Fish trader	24 (18.5)
Housewife	16 (12.3)
Other	27 (20.8)
Income per month	
Less than \$12	55 (42.3)
\$12–24	16 (12.3)
Over \$24	59 (45.4)
Marriage	
Monogamy	104 (80.4)
Polygamy	26 (19.6)
Length of marriage	
Less than 6 years	66 (50.8)
6–10 years	27 (20.8)
More than 10 years	37 (28.5)
Children	
One or none	27 (20.8)
Two	38 (29.2)
More than two	65 (50.0)

willing were asked to inform their spouses about the study and find out if they were also interested. The interested couples were then invited to participate in either an FGD or IDI at the study clinic at Ober Kamoth Health Center. When the couples invited arrived at the study clinic, they were given details about the study and consented together as a couple before being separated into different rooms for either FGDs or IDIs. The group discussions and interviews for the separated couples took place concurrently to avoid partner influence in the interviews or discussions. Participating couples were given a number that the moderator/interviewer called out each time the person wanted to speak, instead of using their names, for confidentiality purposes. The numbers also helped us to link views from spouses on different issues discussed. The discussions and the interviews were audio-recorded using a voice-activated digital recorder and were later uploaded to a computer in password-protected files.

On average, the FGDs took 1.5 h while the IDIs lasted for approximately 1 h. Both the discussions and the interviews were conducted in the Dholuo language by gender-matched moderators/interviewers to encourage open discussions on sensitive issues. While the FGDs were deliberately limited to discussion of group norms and diversity of views in the group, IDIs went beyond group normative data to cover personal and couple details. We covered a wide range of issues in both the FGD and IDI guides that included courtship and marriage in fishing communities, relationship and sexual satisfaction, extramarital relationships, and suggested interventions for extramarital relationships. A trained transcriptionist transcribed verbatim resultant audio files into Dholuo and later translated into English. The study was approved for implementation by the National Ethical Review Committee for the Kenya Medical Research Institute that allowed participants to be given a transport reimbursement of \$6. Additionally, the study was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

Data Analysis

We collected and descriptively summarized sociodemographic data from all 134 participants to describe the study population. We started our data analysis by scanning through the transcripts as they became available to develop broad codes and eventually fine codes. The broad codes represented the main thematic area of (1) contextual risk factors and (2) suggested interventions for extramarital partnerships. Analysis of the transcripts from both FGDs and IDIs followed grounded theory tenets that allow analytical themes to emerge from the participants to define sub-themes during the process of transcripts reading, exploration, and coding responses (Mack et al., 2005; Myers & Macnaghten, 2001). Using the NVivo9 (QSR International Pty Ltd, Melbourne, Australia) qualitative data analysis software, we coded the transcripts, categorizing the data into broad codes (themes) and in each identified broad code, fine codes (sub-themes).

Coding reports were discussed in a series of meetings between the lead author and the study staff to refine the coding framework. In each of the two broad codes, we identified cross-cutting themes. For instance, on the broad code of contextual risk factors, we identified themes that we categorized as sexual satisfaction related, such as not having foreplay before sexual intercourse, exhausting work, discrepancies in sexual desire, a lack of variation in sexual positions, availability of sex on demand, and high libido levels and financial and sociophysical environment related, such as family financial support, physical separation, beach culture, early marriages, and revenge activities for suspected spouse infidelity. For the broad theme on perceived intervention, we identified themes at community, couple, and individual levels from the emic (insider) perspectives. We further explored these themes from the perspectives of male and female partners within the couples. Although several themes applied to both men and women, some

were more salient for one gender or the other, and we report these differences where they existed. We used the constant comparative analysis to discover dominant social and structural processes that assisted us in understanding behavior in different contexts of the couples. Since this study involved dyads, we conducted analysis by making comparisons: (1) within a single interview, (2) between different interviews conducted, (3) between interviews from different genders (not necessarily spouses), and (4) in dyadic pairs at couple level (Boeije, 2002).

This study had a qualitative goal of understanding the contexts of risk of married couples engaging in extramarital partnerships as well as their own prescribed solutions. Several of the key investigators were locals and had worked in the community for many years and had a clear understanding of the communities' history, contemporary structure, and the nuances of social interaction within it.

Results

Contextual Risk Factors for Extramarital Partnerships

Extramarital partnerships were reported to be common in the fishing communities. These partnerships mainly involved fishermen and women traders who buy and take fish to the markets. There were also accounts of women who were not necessarily fish traders/processors but who trail and entertain fishermen. One participant estimated that over three quarters of the people at the beach become involved in extramarital partnerships:

I think the percentage of those who engage in such sexual activity [extramarital relationships] is three quarters. Only one-fourth do not engage in it. Be it women or men, three quarters of us at the beach engage in it. (FGD# 1 with men)

We identified two broad themes for contextual risk factors for extramarital partnerships based on whether or not they were related to sexual satisfaction. These broad themes were sexual satisfaction and financial and sociophysical environment-related risk factors.

Sexual Satisfaction-Related Risks for Extramarital Partnerships

Absence of Foreplay Participants reported that absence of foreplay and poor preparations for sex was one reason for lack of satisfaction within marriage and therefore a motivation for seeking extramarital partnerships. This was an observation that was made by several dyads. They explained that preparations needed to start long before the actual sex with partners sending seductive signals to each other. With a little foreplay before the sexual act, women were described as being more likely to be sufficiently lubricated to make sex enjoyable to both partners. The absence of foreplay was described

as resulting in unsatisfactory sex that was perceived as a reason for extramarital partnerships:

Lack of sexual satisfaction is caused by lack of preparation. When you go to bed for sex, you must prepare her as she prepares you. When preparing each other, you both enjoy it. However, when [you] don't prepare the wife, when done with her, she will cheat you to sleep and relax. He therefore sleeps until morning. He will keep doing this shoddy work daily and it becomes very hard [for women] to manage. (FGD# 5 with women)

Exhausting Work Both female and male members of couples perceived that men did not sexually satisfy women because of fatigue from work and lack of stamina. The exhaustion resulted in unsatisfactory sex and/or low frequency of sex in marriage.

The truth coming out is that we don't satisfy our wives as expected. This is because we work very hard and sometimes come back home very tired. You must perform in bed as well as the lake... When back home, they [men] can sleep only to wake up in the morning. This man becomes very useless to his wife. (FGD# 1 with men)

On the flipside, it was reported by several participants that some women have insatiable sexual desires that were difficult to satisfy with limited energy, especially after a day's hard work at the lake:

Some of them [women] require seven or eight rounds [sexual contacts] per day. As for you, there's little energy left that should be distributed evenly. This little energy must satisfy her as well as provide your daily income. You also need to help people with the little energy. (34 year old male boat owner)

Fishing as an occupation is understood to require a lot of physical energy that leave the men involved physically depleted. This was reported to have an obvious effect on men's sexual performance that was perceived to be the reason for their spouses seeking sexual satisfaction elsewhere. Similarly, women were also affected by exhaustion as a result of engaging in farm work and household chores that affected their sexual desire. The lack of interest in sex due to exhaustion was sometimes mistaken by partners within a couple as an indication that the affected partner may be involved in extramarital sex. Lack of stamina by some men was also identified as a big issue in women's sexual satisfaction, particularly when men hurriedly reached climax and ejaculated before their spouses. This was perceived as leading women to look for other sexual partners within their networks that could sexually satisfy them:

Sometimes he just takes a minute and then leaves you there when you are still "hanging" and you cannot even tell if this thing is over or still continuing. Sometimes we aren't satisfied, yet we can't explain it [to our partners]... We are left

wondering... and can be very happy if we can get someone who can do it better and make you feel that your body is satisfied. I can just continue with him because his sex is sweet and your husband can then do it on short time basis. (FGD# 1 with women)

Discrepancies in sexual desire. Unsynchronized and unmatched sexual desires between spouses were another reason reported for extramarital partnerships. The offended partner most often sought sexual partners from their social networks to fulfill their desires:

A man can come to the house when the wife is in the mood. She knows that today she will cook early for her husband so that she can have sex with him. So after she has taken the children to bed, she comes back and tries to also put her husband in the mood, all in vain. She tries again but the man just turns his back on her. Sometimes you might find the husband is in the mood and he wants this woman, but the woman has already had young men and "tasted" them. She has had enough of the "stick" outside. So now she does not want to "taste" yours. (FGD 5 with men)

Low frequency of sexual intimacy within couples was often perceived by both men and women as a cause for extramarital partnerships. The low frequency was associated with lack of interest in sex by one member of the couple resulting in discrepancies in sexual desire:

In a family like the ones we have, we always lack attention from the men we marry. We can stay very long like a month without sex but when the men come back, they do not sense anything wrong. We are expected to have sex using our eyes by just looking at them. That can make me look for someone who can set his mind on me and knows what I need. (FGD# 1 with women)

High Libido Levels Participants perceived that high libido levels resulted from consuming certain fish species; this was viewed as driving extramarital partnerships in the fishing communities. People who consumed these fish species were described as having a strong urge for sex all the time, resulting in extramarital partnerships when their spouses were either unwilling to offer or not physically accessible. The fish species perceived to lead to high libido were *okoko* (*Synodontis afrorescheires* sp.), *sire* (*Schilbe mystus* sp.), and *mbuta* (*Lates niloticus*):

The fish that they eat is Okoko and Sire that contains oils. It is fish that once you have eaten and drank soup then you feel your blood "getting hot" even if you are a woman... Sire has oil towards its tail that if you eat while it is still raw, goodness, you will not escape! You must get pregnant! (FGD #3 with women)

Availability of Sex on Demand Participants also reported that men engaged in extramarital partnerships because of availabil-

ity of sex on demand within their social networks. One woman noted that while it was not possible for the young girls that fishermen prefer to marry to yield to men's sexual demands every time, slightly older women who migrate to the beaches for business usually after divorce or the death of their spouses were always desirous of having sex with the fishermen:

Young men love older women; they say that older women are not troublesome and if someone says that he "wants" [sex], it doesn't matter what time it is, she will agree to "give" him but the young girls are still embarrassed and are afraid to "sleep" [have sex]... But an older woman, if you go to her, you will leave satisfied because she is ready all the time and when you meet she is happy to see you erect. (FGD#3 with women)

Spousal Communication Poor spousal communication about sexual desire and feedback on sex experiences was perceived as shaping one's involvement in extramarital partnerships. The couples emphasized the need for open discussion about sex, including partners giving each other feedback on their sexual experiences. Without feedback, it was difficult for the spouses to know whether or not they were sexually satisfying:

Lack of communication ensues because you fear asking him [for sex] and he also fears doing the same. After some time, a partner will decide that if he is living with someone who doesn't talk to him, then I should get a person who will talk to me. (FGD# 6 with women)

Variation in Sexual Positions Preferences for different sexual positions or a desire to achieve more sexual pleasure were the other attributes of sexual satisfaction identified by both genders. Without these, affected spouses may get tempted to engage in extramarital sex. For instance, one woman said the following:

Do you know that there are men who do not know how to work with their penis? He just penetrates you and remains stiff in you like a crocodile! Now you are so suffocated that you do not even know what to do. Yet, there is someone else who has a big penis and knows how to use it. (FGD# 3 with women)

This was reinforced by another woman who said that there were women who preferred having sex in a particular position that allowed them to reach climax.

It means that what can make a person to make a step of going to another person is because sometimes a woman would like having sex in a particular way and the man does not like it that way, and that is what will make her to go to another person to fulfill her desires. (26 year old homemaker married to fisherman)

For some women, there were sex positions that were uncomfortable and exposed them to painful sex, especially if there

was no adequate preparation and foreplay to provide sufficient lubrication. Men also had issues about their partners not being able to introduce or learn new sexual skills or positions that were less boring and more satisfying.

Some ladies only know one style. They want us to use the same style daily even if it is boring. It makes us try other ladies to enjoy other styles. When you tell your wife to try a new style which is sweeter, she just looks at you. (FGD#1 with men)

The desire to avoid the perceived boredom of monogamy was also cited as a reason for engaging in extramarital partnerships. Because of the desire for sexual variety, fishermen equated sticking to one partner to being on a single diet throughout one's life. They argued that diet change is necessary to avoid monotony.

Some people think that they cannot eat vegetables on a daily basis. We must use chicken sometimes. The vegetable is the wife he has lived with all his life. So they believe that if you try someone else from outside, who is the chicken, may be sweeter than the daily vegetable. (FGD# 2 with men)

Financial and Sociophysical Environment-Related Risks for Extramarital Partnerships

Family Financial Support Some participants reported that lack of adequate financial support caused women married to fishermen vulnerable to engaging in sex for survival. Participants reported that some fishermen did not leave their families with adequate money to survive on while they were away fishing. In an effort to keep the children in school and find food, women engaged in extramarital partnerships to support their families. This idea was expressed in equal measures by both men and women:

Most fishermen don't take care of their wives. You find that someone who works in Kisumu is taking care of the wife yet all you do is fish and drink. You eat from a hotel and don't care what she eats and that is why if someone brings her shopping in a paper bag, she will be easily attracted. So if we don't take care of our wives, it will never reduce [extramarital partnerships]; it is all about taking care of your wife. (FGD#3 with men)

Equally, women narrated how they were sometimes left in awkward situations with not enough money but with children to feed, dress, and take to school while men migrated to other beaches to fish. In these situations, women engaged in sex to get support.

We also become unfaithful because these men can go out for a while and don't come back home even after a week yet we have children to feed at home. You also expect to dress yourself to go out to get some of the things you require. You can also get someone far away from the village that can help you and support you. (FGD# 1 with women)

Women perceived that it was a lack of financial support that led women to have extramarital relationships:

You will have to find another person who has money, fish and is also ready to offer them to you. You will have to give [have sex] him to get this fish and money. I therefore think that men are the ones who encourage us into such activities. This is because if you are left alone, you will also get someone else. (FGD# 5 with women)

Physical Separation Physical separation due to migratory patterns of fishermen was perceived to lead men and women to pursue extramarital partnerships. It was difficult for couples who were used to frequent sexual encounters to remain monogamous during this time.

As a fisherman, we move from one place to another while leaving our wives behind. It will really affect her when you aren't around. This is one of the causes of unfaithfulness... It can be difficult to control your desire when you are used to making love on a daily basis. (48 year old fisherman)

Additionally, physical separation by distance, in combination with the money fishermen obtained on a daily basis, exposed fishermen to the potential for having extramarital partnerships:

Our character as fishermen and in this job of fishing, we do move a lot, from one beach to another. So, when we leave Kisumu and go somewhere else to fish, staying alone there when your wife is not around makes us have second thoughts due to the money we also get. We then start dating other ladies. We end up being unfaithful. (FGD #1 with men)

The Fish for Sex Economy, Masculine Norms, and Peer Pressure Participants described that it was common at beaches for fishermen to show off their masculine sexual prowess in seducing women. They often competed among themselves to win women who come to the beaches. This resulted in several fishermen knowingly having sex with the same women and bragging about it:

Another issue is that when fishermen are at the lake, they see a woman at a beach and admire her. They ask each other if it is possible to get the said girl. One will say that, "I managed to get her." This will make you to try your best [to also have her]. They make sure they manage so that when these two fishermen meet again, he says that "I also got the woman I wanted." The other fisherman will be shocked, "You found her!" then that means that "we are together." (FGD#2 with men)

Other participants explained that a high concentration of women who exchange fish for sex or money was a risk factor for extramarital partnerships within the fish for sex economy. Exchanging sex for money or an opportunity to buy fish from fishermen, especially during low fish-catch seasons, was institutionalized as

part of the culture at the beaches. Almost everyone venturing into the fish business was aware of this expectation:

The reason why unfaithfulness is common amongst fishermen is because of the many women who are at the beaches. They wait for men just like a crocodile waiting for food. They are busy waiting for both fish and money. They [fishermen] therefore know that you can get a woman easily at the beach. (FGD#5 with women)

Both men and women agreed that peer norms of masculinity (defined as men needing to have many sexual partners) were compelling some men to be involved in extramarital partnerships. Fishermen were said to tease and mock those who had no accounts of new multiple partnerships:

What brought this, we were in a certain occasion with some of my friends, we were drinking and we also had girls, they were also drinking. Then my friend told me "Hey guy, I have given you this one" they were visitors, they had come to visit one of my brothers' wives. So we had lined them up, so he told me "My brother, I give you this one." I said "You have given me?" So this is why I seduced her and even had sex with her. (34 year old fisherman)

In the sex for fish economy, interactions were sometimes exploited and turned into sexual exchange either by women in order to get fish or men in order to obtain sex.

Sex at the beaches is common. Men are the ones who fish but women are the first to buy them. This business between us brings us together. When we sell fish to them, we sometimes feel attracted to them and end up selling the fish at a lower price to them. This is the way to seduce them. (FGD#1 with men)

Courtship and Early Marriages Participants explained that a short courtship period that did not give young married couples sufficient time to know each other was another reason for extramarital partnerships. Most courtship periods described in this community ranged anywhere from one day to three months:

This is why you will meet her, talk to her, and end up marrying her. You will live as you try to get to know each other. You would have now known each other better if you had started the relationship earlier. He will start claiming that you were just picked and you weren't his choice. This is why they venture into sexual relationships outside marriage and think that you weren't meant to live together. (58 year old male boat builder)

Related to short courtship periods was the issue of early marriages which the participants identified as one of the contextual risk factors of extramarital partnerships. They described early

marriages, especially those involving young women as very common occurrences in the community. Participants further reported that people who marry before maturity easily get influenced when they are faced with the opportunity to become involved in extramarital partnerships at the beaches. At this young age, they do not adhere to norms of monogamy in marriage because they do not see themselves as having enough previous opportunities to have sex.

They will get into marriages without knowing how to protect the laws that govern marriage. It won't take long before they venture in unfaithfulness. This will be the time to enjoy herself with other men since she got married at a tender age and didn't get the opportunity to enjoy. The boy will also get to meet some ladies who need to enjoy themselves. This will lead to instability in your marriage as you both practice unfaithfulness. (30 year old fisherman)

Revenge for Suspected Spouse Infidelity Both men and women reported that some people became involved in extramarital partnerships to enact revenge due to their partner's behavior. This was reported more commonly among women compared to men who, culturally, had more alternative actions for a spouse suspected of infidelity. Participants described that the decision to take revenge usually occurred after several attempts to discuss and resolve extramarital partnership issues had failed.

The reason as to why this [sex outside marriage] happened is because I saw what my husband was doing, and it made me to feel angry and revenge on his action... When he has sex with someone, you will also have sex with another person which will make you to feel in the same way. (20 year old homemaker married to fisherman)

Despite the many challenges that married couples experienced that would ordinarily result in divorce, they decided to stay in the marriage. The reason provided was the level of investment committed to the marriage by individuals within a couple.

You were there when he started fishing with a rod until now that he is using nets; he decides to forget just because of this woman yet you helped him get this net. Kids have nothing to eat but we just accept to stay because we have already given birth and we cannot run away from kids. If possible, I can swallow my kids and leave this kind of marriage. (FGD#1 with women)

Suggested Interventions to Reduce Extramarital Partnerships

Participants appreciated the challenges involved in trying to arrive at a one-size-fits-all solution to dealing with extramarital partnerships. However, they were unanimous that the first step in finding solutions to extramarital partnerships was establishing associated contextual factors.

If you get to know what takes him out and lead to the unfaithfulness that is what you have to stop. This may reduce unfaithfulness. (FGD#6 with women)

Broadly, the couples suggested three levels of interventions to reduce extramarital partnerships that, in turn, reduces the risk of HIV infections: community, couple, and individual. Some of these suggested interventions cut across the three levels. Some of these interventions are informed by local folk beliefs but have significant implications on conventional interventions. One theme of community education and sensitization was identified at the community level. Three themes of spousal communication, marital counseling, and family life training and improved spousal relationships were identified at the couple level. At the individual level, participants suggested self-reassessment and positive behavior change, reduced consumption of certain fish species, and religious interventions.

Community-Level Interventions

Community Education and Sensitization Participants reported that conducting community education and sensitization could help in reducing extramarital partnerships to decrease HIV risks. This was because people get involved in extramarital relationships within their communities. Thus, community campaigns were perceived by our participants as a means to reach the people involved in reform.

We need education so that people can be told the benefits and risks of having affairs so that people can change their attitude. No one from outside will come to seduce me unless it is the next door neighbor. Yes, a neighbor when my husband has left for the lake then I quickly enter there. It is just within the community, the people of the community need to be educated. They need proper education and awareness creation in this era of HIV/AIDS (FGD#3 with women)

Couple-Level Interventions

Spousal Communication and Dialogue The theme of spousal communication and dialogue to reduce extramarital sex was emphasized by both men and women. This was seen as one of the steps toward positive couple behavioral reform and harmony. Participants overwhelmingly listed poor inter-spousal communication as one of the major factors that led to extramarital relationships among couples.

Lack of communication can lead to unfaithfulness. Once you have got the cause, you can sit down, discuss it, and iron out your differences. You can discuss all that is happening. You can list all the problems that you see and what can be done to stop it. Once you have come down, anything that he will tell you will become easy and this is a way of

stopping your husband from being unfaithful. (FGD#6 with women)

Spousal communication and dialogue were also reported to open ways for partners to provide feedback to each other on sexual matters that would, ordinarily, be difficult to bring up. Such matters included sexual satisfaction that has been cited as one of the main factors for sexual concurrency.

What we can do to stop these extramarital affairs is that when you are having sex with your wife, there is an effect that the woman feels and the man also feels. If you can sit down with your wife and talk and come to an agreement, that can be good. Because the man knows its effect on his wife and the wife also knows the effect on her man. (FGD# 5 with men)

Marital Couple Counseling and Family Life Training Participants viewed marital counseling and family life training that target couples as a unit and provides information and teachings on marital life as well as taking care of each other as having potential to solidify relationships and prevent infidelity.

I think that couples should be taught on how to make and keep a family. This is another way of making each other happy...Some training [should] offer teaching on the unfaithfulness and [how to] make us think of our family back home. (FGD#4 with men)

Participants reported that marital counseling should, in a focused way, deal with the issues of sexual desire for others that can tempt both partners. This was seen as central for reducing extramarital partnerships.

Out there, he can get a woman who is serious with work and has left the gates open [free and willing to have sex] yet you are still using bikers. You still need to be begged, yet the other girl offers him [sex] direct sex. I think all the things I have mentioned may help in the reduction of unfaithfulness. (FGD#4 with women)

Improved Spousal Relationships Participants reported that reinvigorating love and care within couples that improves the overall spousal relationship had the potential to reduce extramarital partnerships. They reported that increasing love and attachment help reduce the temptations of developing intimate relationship with other people. This can be done through basic things such as sharing meals (eating at the same table) at home, periodically taking each other for outings, joint decision-making as well as mutual respect for each other.

Individual Level Interventions

Self-Reassessment and Change Self-reassessment and change emerged as one of several ways to reduce extramarital partnerships. Participants emphasized the idea of individuals starting

the change they expected within themselves to influence their partner's behavior change.

Both men and women must stop being unfaithful. One can also stop so as to discourage his/her partner from the vice. We must both come down so that the marriage can work. (FGD#1 with women)

Participants reported that avoiding peer influence that reinforced engaging in extramarital relationships had the potential to reduce extramarital partnerships.

We should reject friends who encourage unfaithfulness. You can get that a man is always relaxed and has no problem but he starts to develop bad character from friends. Let us avoid idleness as well (FGD#1 with women).

Making a personal decision to test for HIV was also reported as one of the ways to prevent extramarital partnerships within the fishing communities. Participants pointed out that there was always positive behavior change associated with testing for HIV.

...once tested [HIV negative], you will then always fear people who are [HIV] positive. (FGD# 2 with men)

Religious Interventions The power of religion to help individuals reduce the number of sexual partners was consistently cited, especially by women. While some stated that only God could intervene to change individuals, others offered a blend of deliberate efforts by individuals and the community as a whole and God's interventions. Visiting spiritual leaders to receive counseling and guiding and help relieve stress was seen as important in reducing extramarital partnerships.

I think we should also visit spiritual leaders. These people can guide us. They can also offer some counseling. This is because some people engage into such activities [extramarital partnerships] due to the stress they have in their houses. Those are some of the ways. (FGD#2 with men)

Discussion

In these fishing communities, we found perceptions that there was a high prevalence of extramarital partnerships taking place within the context of sex for fish (jaboya) economy. The extramarital partnerships were attributed to issues involving sexual satisfaction and others that were related to the financial and socio-physical environment. Couples suggested three levels of interventions to reduce extramarital partnerships and by extension HIV risk: community, couple, and individual.

We addressed a critical public health concern regarding extramarital partnerships that have been associated with HIV infections in married couples. Chemaitelly et al. (2014) estimated that two-thirds of the total HIV incidence every year in sub-Saharan Africa occurs in married or cohabiting couples of which only half of these

infections are attributable to HIV transmissions within a couple. Couples in these fishing communities attributed extramarital partnerships to lack of sexual satisfaction caused by lack of foreplay, fatigue, poor spousal communication about sex, unmet sexual wishes or boredom in sex, and discrepancies in sexual desire. Traditionally, polygyny that was rooted in many cultures in sub-Saharan Africa provided alternatives to unsatisfactory sex and worked to inhibit extramarital partnerships. The decline in polygynous unions influenced by Christian values seems to have occasioned the growth of extramarital partnerships and other serial informal marriages (Karanja, 1994). These informal relationships were geared toward achieving sexual satisfaction that could not be obtained in the primary relationships.

Even though sexual encounters are supposed to be enjoyed by both partners, men in many sub-Saharan African communities dominate and control decision-making in matters of sex (Darteh, Doku, & Esia-Donkoh, 2014; Dudgeon & Inhorn, 2004). As such, women in these communities do not necessarily have platforms to suggest changes in sexual liaisons that make them comfortable with, and enjoy, sexual encounters. The one-sided nature of communication on sexual matters may make women establish alternative relationships within their social networks that enable them to have access to what they lack in their primary relationships while still maintaining them. Unlike in developed countries such as the U.S. where over 50% of marriages are likely to end in divorce for various reasons, e.g., reduced marital satisfaction and lack of emotional support in the marital relationship (Cramer, 2006; Whisman, Dixon, & Johnson, 1997), many marriages in sub-Saharan Africa do not end but instead bud out into other supplemental relationships (Boerma et al., 2002; Kalule-Sabiti, Palamuleni, Makiwane, & Amoateng, 2007). This is because when individuals conduct cost–benefit analyses of their marital relationships, they also consider investment variables such as children and material contributions to family wealth. A high level of investment, especially in terms of children, restrains them from divorcing regardless of their cost–benefit analysis outcome. Instead, the offended partner reaches out to their social networks to seek what they lack in their marriages. This partly explains the high prevalence of concurrent partnerships in sub-Saharan Africa compared to serial partnerships in the developed world (Morris, Kurth, Hamilton, Moody, & Wakefield, 2009).

We also found that financial and sociophysical environment factors explained couples' involvement in extramarital partnerships. While women were involved in *jaboya* relationships to earn money for their families' upkeep, men were involved when they had surplus money to spend. Given the somewhat differential reasons for men (sexual pleasure) and women (economic survival) engaging in extramarital partnerships, it might seem like all we need to do is to empower these women to ask for safer sex in return. However, we know that the male condom, which is the only widely available and effective HIV prevention method in rural communities in sub-Saharan Africa, is male-controlled. With women's diminished decision-making powers in matters

of sex, this leaves them in a more disempowered position that requires intervention to focus on reducing extramarital partnerships altogether. This might be accompanied by linking them to economic empowerment programs for alternative sources of income. Additionally, while women have a genuine economic need for engaging in *jaboya* partnerships that they may be deprived of if interventions to reduce extramarital partnerships are implemented, the risk of HIV infection that is associated with this behavior surpasses this short-term economic prospect.

In any case, many non-governmental organizations operating in western Kenya have women's empowerment programs that offer alternative economic activities that such women can engage in (Nathenson, Slater, Higdon, Aldinger, & Ostheimer, 2016). One such organization is Vired International that runs the "No-Sex-for-Fish Project" that gives women ownership of fishing boats as a way of owning means of production (Vired International, n.d.). The reasoning behind this project is that if women can have a control over the fish they require to sustain their fish businesses, then they might not need to get involved in *jaboya* relationships to access fish. The project is designed in a way that, as the women work, they repay the cost of building the boats, which is pooled to construct more boats for more women to benefit from. One other intervention would be working with couples to emphasize the importance of organizing and discussing financial expenditures within the household for stable families. Different typologies of household income management systems exist, ranging from pooled income to partial income and to individually controlled income. Pooled income creates avenues for joint decision-making and control that have been shown to result in stable marriages (Pahl, 1995; Vogler, Lyonette, & Wiggins, 2008). Similar to our findings, Cox et al. (2014) depicted financial dissatisfaction as a reason for women engaging in concurrent partnerships within stable relationships.

Couples' sociophysical environment, such as spatial separation, gender norms, early marriages, and desire for revenge, played a big role in extramarital partnerships. For instance, separation occasioned by mobility has been associated with extramarital partnerships in many other settings (Cassels, Manhart, Jenness, & Morris, 2013; Kishamawe et al., 2006; Mercer, Khanam, Gurley, & Azim, 2007; Vissers et al., 2008). Vissers et al. showed that mobile men were 20% more likely to report extramarital partnerships compared to non-mobile men. For women, those who are physically separated from their spouses were twice more likely to report extramarital partnerships compared to those living together. Similar to our findings, several other studies have portrayed fisherfolk as risk-takers (Knudsen & Grøn, 2010; Nguyen & Leung, 2009; Smolak, 2014; Westaway, Seeley, & Allison, 2007). For instance, a study by Nguyen and Leung (2009) that measured risk-taking among Vietnamese fishermen found a high correlation between fishing and risk-taking. The risk-taking culture is thought to be related to occupational risks fishermen face off shore on a daily basis, such as dangers of drowning and being mauled by wild animals (e.g. crocodiles and hippos). With all the occupational risks they face, the fisherfolk

may be tempted to test their endurance and ability to cope with other dangerous outcomes, such as the risk of HIV infection. While women may be forced into risk-taking adventures due to their socioeconomic and cultural vulnerabilities, this may not be a reason for complacency but instead a basis for working hard to find solutions.

Couples suggested several interventions that they believed could reduce extramarital partnerships and consequently reduce HIV risks in their communities. Some of these suggestions were based on local lay rationality that may not be directly implemented. Nonetheless, they point toward the couples' concerns which need to be considered when designing interventions. As Sensky (1996) reported, understanding religious and local lay beliefs about what the community perceive as workable solutions to a problem is important in developing appropriate interventions that respect and make reference to affected communities (see also Cornish, Priego-Hernandez, Campbell, Mburu, & McLean, 2014; Rumun, 2014). Thus, working with health psychologists, healthcare systems can find ways of incorporating religious and significant local lay beliefs into various health interventions to identify with the affected communities/individuals and improve their health or project outcomes. This may be through engaging with and listening to patients and their families and gaining understanding of how these beliefs relate to their health outcome (Rumun, 2014). If the communities feel their suggestions or believe systems are considered, they are likely to own the interventions and increase the chances of successful implementation. Despite being informed by lay rationality, some of the suggested interventions to reduce extramarital partnerships, such as community education and sensitization, marital counseling and family life training, improving spousal communication, and encouraging self-assessment, have been shown to work in certain settings (Abramsky et al., 2014; Cornish et al., 2014; El-Bassel et al., 2003; Kyegombe et al., 2014; Prochaska, 2013). For instance, Cornish et al. (2014) found that community mobilization, especially among high-risk groups, has a positive impact on sociobehavioral outcomes. Other studies have shown that improving spousal communication and overall relationship satisfaction result in reduced exposure to high-risk sexual behaviors such as extramarital partnerships (El-Bassel et al., 2003; Litzinger & Gordon, 2005).

There were several limitations to this study. Since this was a qualitative assessment that was focused on giving in-depth meaning to certain behaviors and actions, we cannot generalize the findings beyond the current locale even though participants were selected to represent a variety of gender and geographical interests. It is also likely that the results were influenced by social desirability bias on the part of participants and researchers' personal biases as well. This study was conducted in a community in sub-Saharan Africa where women have lower social status and are expected to be monogamous, while no such restrictions apply to their spouses. This might have most likely pressed participants to

conform to cultural expectations. Additionally, our study focused on married couples and their experiences with extramarital partnerships including sex for fish. As such, we did not have an opportunity to contrast their motivation for involvement in sex for fish with those of single, divorced and widowed women that were not included. Similarly, since the married couples were transported to the study clinic and underwent discussions/interviews simultaneously but in different rooms, it is possible that some of them might have reversed or edited certain responses for fear of their partners learning about their responses. However, we reassured them of the confidentiality of the information they were providing and took appropriate measures to ensure it. We also note that while some of the data were about participant's actual experiences, some were about their perceptions of others in the community. As such, it may be the case that actual realities about risks involved may not have been revealed, especially in cases where the reference was about others and not individuals themselves. Despite these limitations, the current study provided rich qualitative data with perspectives of both partners within married couples. In addition, the study was also able corroborate individual accounts with evidence from accounts of other partners affected by extramarital sexual partnerships.

In conclusion, extramarital partnerships were reported to be very common in these fishing communities and their contextual risk factors were largely based on sexual satisfaction and factors related to the financial and sociophysical environment. Our study helps to provide a basis for thinking about interventions that incrementally address risk factors to reduce extramarital partnerships and consequently the spread of HIV. A number of suggestions were made by the couples on the ways to reduce extramarital partnerships that can be evaluated and incorporated in the design of a final intervention for the communities. Incorporating local community members' suggestions into public health programming brings a sense of ownership which can considerably increase the success of interventions.

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Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.”

Informed Consent Informed consent was obtained from all individual participants included in the study.

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