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Jaboya vs. *Jakambi*: Status, negotiation and HIV risk in the "sex for fish" economy in Nyanza Province, Kenya

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Abstract

Background: In Nyanza Province, HIV incidence is highest (26.2%) in beach communities on Lake Victoria. Prior research documented high mobility and HIV risks among fishermen; the mobility patterns and HIV risks faced by women in fishing communities are less well-researched.

Aims: To characterize the forms of migration and mobility among women in the fish trade in Nyanza; the spatial and social features of beach villages; and characteristics of the sex-for-fish economy and its implications for HIV prevention.

Methods: Qualitative methods, including 6 months of participant observation and field notes in women's common migration destinations in and surrounding Kisumu, and in-depth semi-structured interviews with 15 male and 40 female migrants selected from these destinations. Data were analyzed using Atlas.ti software.

Results: Female fish traders are often migrants to beaches and also highly mobile. They are at high risk of HIV transmission and infection via their exchange of sex-for-fish with *jaboya* fishermen.

INTRODUCTION

The early burden of the HIV epidemic in East Africa was borne disproportionately by populations living in areas near the shores of Lake Victoria, in the Rakai District of Uganda, Mwanza and Kagera Provinces in Tanzania, and Nyanza Province in Kenya (1), and still today, the region's highest HIV prevalence and incidence rates are found in the fishing communities surrounding the lake. Among fisherfolk in southwest Uganda, HIV prevalence was 29% in 2009 (33.9% in women and 23.9% in men), far exceeding the national level of 6.4% in adults (2). Situated across the lake in Kenya, Nyanza Province is a region heavily affected by HIV, with a 15.4% prevalence that is double the national average (3). A recent study from Kisumu in Nyanza found that 25% of women and 16% of men who provided blood samples were HIV seropositive (OR 1.7)(4). HIV incidence is especially pronounced in the population living and working in the rural beach villages that dot the shoreline of the lake; an estimated 26.2% of new infections occur in these fishing communities (5). There are approximately 142 such beaches along the Lake Victoria shoreline, where some 19,000 men work within the fishing industry (6), as boat owners, fishermen, net-makers and repairers, and brokers. A study among the fishermen in the larger Kisumu District in Nyanza found 25.6% of them to be HIV infected (7). The epidemiological data on infection rates in fishing communities along Lake Victoria has been described as limited but convincing, but there is in particular a paucity of robust data on infection rates among female fish traders in Kenya.

The mobility of fishermen is believed to have contributed to the sustained, enormous epidemic in the areas surrounding Lake Victoria (7, 8). Fishermen in Nyanza have been difficult to reach with interventions because of their high mobility and unavailability during the day, yet several interventions (e.g. circumcision and male microbicide trials) have aimed to address their

high HIV infection and transmission risks (9). Yet the mobility of female fish traders, who are involved in the processing, transporting and retailing of fish in the region, has never been studied; nor have the HIV prevention needs of female fish traders been explored in HIV research. The exclusion of women as active participants in studies of the inland fisheries sector economies has been noted in the literature (10), but the male gender bias in the research on mobility among fisherfolk has not yet been recognized. The exclusion of women from the categories of 'migrant' and 'highly mobile' individuals in fishing communities is exemplary of a broader phenomenon: in studies of migration in the region, including studies of HIV acquisition and transmission risks among migrants, women's participation in migration and their unique patterns of mobility have often not been measured. Studies have been grounded in the intellectual presupposition that women's HIV risks are derived from their status as the "stay at home" spouses and sexual partners of migrant men, rather than from their direct participation in migration and the risks it confers (11). The role of women's migration in the sustained, enormous epidemic in the region has been under-recognized (12). Across sub-Saharan Africa, the few studies that have examined HIV risks to female migrants found higher risk behavior and HIV prevalence among migrant compared to non-migrant women (12-19) and to migrant men (12). In Kenya, previous studies have found high levels of participation in migration by both men and women (20, 21) and higher sexual risk behaviors among migrants than non-migrants (14). Women's mobility is high and possibly increasing in Kenya (14, 20, 22), and the highest levels of HIV prevalence in Kenya have been found in women in Nyanza Province, yet to our knowledge, no studies have yet described the migration and mobility patterns of women in fishing communities in Nyanza Province, nor explored the role of women's mobility may play in fueling the enormous HIV epidemic in western Kenya.

Yet an estimated 30,000 women also migrate to the beaches in Nyanza Province to buy fish, prepare them for the market and broker sales of fish to other female traders (6). Locally, and anecdotally, many women in the fishing industry are known to also be highly mobile, as they transport fish from beach villages to market areas. Many maintain dual residences, or have several temporary residences or lodgings between which they circulate. Lake Victoria beaches are also known, locally, to attract female migrants in search of economic opportunities, particularly widows and other women fleeing marital and family conflicts. This study is the first to directly address this gap in the literature, and to describe migration and mobility among women in the fish trade in Kenya.

In addition to the mobility of male fishermen, a key factor thought to contribute to the HIV epidemic among fisherfolk is a phenomenon in lakeside communities that has been alternatively termed "Fish-for-Sex" (10, 23) and "Sex for Fish" (1), in which transactional sexual relationships are established between female fish traders and fishermen as a part of the local fish trade economy. In this arrangement, fishermen grant preferential access to fish to female fish traders whom they select as 'customers' (in Nyanza, known as *jakambi*), in exchange for sex. In our study, it was said that women "pay twice", with money as well as with their bodies, in order to secure access to a steady supply of fish which they then buy, process and sell in local markets. In Nyanza, the term *jaboya* refers primarily to fishermen in these relationships, but it is also used to refer to the system of sex-for-fish relationships (1) as well as to a type of hook commonly used in fishing at the lake. Prior research on sex-for-fish economies has been limited, but a small number of studies, largely in the fisheries and development literature, have documented its occurrence in other small-scale fishery settings across sub-Saharan Africa (1, 2, 10, 23, 24).

It has been posited that the sex-for-fish economy is "new" in the region (10, 23), and scholars have attributed its origins to a convergence of economic and ecological processes underway over the past three decades (1, 10, 23) rather than to "tradition" or longstanding cultural practice. Mojola (2010) in particular has highlighted linkages between the sex-for-fish trade and the deteriorating ecology of the lake: declines in Kenya's formal sector economy since the 1980s led to increased dependence on the lake for subsistence, resulting in environmental degradation, declining fish populations, and greater competition for fish (1). The ecological context, she argues, converged with the "gendered economy" in Kenya– the gendered structure of the local labor markets, skewed compensation structures and unequal gender power relations– to make women vulnerable to participation in transactional sex for subsistence income. Béné and Merten (2008) have emphasized a 'New Institutional Economics' interpretation of the sex-for-fish trade (10): they have argued that inland fisheries in Africa not well linked to outside systems of consumption and production, and that under these conditions, traders have to find strategies to reduce the transaction costs of 'hunting' for fish in situations where the fish supply is highly uncertain and fishermen are highly mobile. In this account, sex-for-fish is a strategy to ensure secured access to fish supply, greatly reducing the risks and transaction costs of the trade in an unstable market situation.

In their analyses of sex-for-fish exchanges at the Kafue River Flats of Zambia (23), Merten and Haller posited that a stigmatization of women involved in sex-for-fish deals may be increasing, as the discourses of HIV prevention programs converge with the moral prescriptions of Christianity to produce shame, moral distress and social exclusion of female fish traders. In this setting, women involved in the trade have invoked *lumambo*, a former customary regulation of extramarital sexual relations among the Ila, to provide legitimacy and a cover of respectability

for sex-for-fish exchanges. According to Béné and Merten (2008), a stigmatization of women involved in the sex-for-fish trade exists not only in local communities, but has been perpetuated in the fisheries literature, in which fish-for-sex has been confused with prostitution[1], and women discursively placed as victims within the fisheries sector economy. Viewed "only as sexual partner, spouse or prostitute" (10), this literature has overlooked the active role that women play as economically productive agents within the sector. While there are women who engage in commercial sex work in many fishing communities, women involved in the sex-for-fish economy process, transport and retail fish, and are thus integrated in the "fish value-chain." (10) In this account as well as others from the public health literature (1, 23), scholars have emphasized the agency of female fish traders, and have foregrounded the female pursuit of male fishermen in a context of fierce competition for fish, perhaps as a strategy to counter 'victimization' discourses within the extant literature.

In this paper, we focus on aspects of the sex-for-fish economy that have been neglected in the literature to date. First, the existing literature on sex-for-fish has replicated a gender bias in its attention to the mobility of male fishermen and its implications for the spread of HIV epidemic, while the mobility of female fish traders has not yet been studied. This study thus addresses a neglected topic in health and population studies: the HIV prevention needs of female migrants and highly mobile women working in the fish trade. Examining the mobility of female traders is important for a full understanding of the dynamics of the local epidemic, but also for understanding other aspects of women's agency, social status and livelihood strategies. Secondly, this study complicates models of gender power relations as they have been applied to

[1] Yet prostitution in Kenya has already been problematized as a category of women's economy activity, e.g. by Luise White (25), who in The Comforts of Home (1990) documented the active role women played in the development of colonial Nairobi, reframing the concept of 'prostitution' to encompass a range of strategies women undertook to claim space and citizenship in the new urban areas created under colonialization.

accounts of sex-for-fish economies. As we describe, the gendered power relations between *jaboya* fishermen and their *jakambi* female partners are complex, and women's levels of empowerment and disempowerment vary by situation and specific points of interaction. We document women's accounts of their exchanges of sex for fish as *jakambi*, or customers of the *jaboya* fishermen, and contextualize these experiences within the broader rubric of their migration and mobility trajectories. As we show, not all fish traders engage in exchanges of sex for fish; rather, the most socially or economically vulnerable women at the beaches choose to do so, as a result of their status as migrants and of the circumstances that drove their migration. We characterize the forms of migration and mobility among women in the fish trade in Nyanza Province, Kenya; describe the spatial and social features of beach villages; and describe features of the sex-for-fish economy at beaches on Lake Victoria and its implications for the HIV epidemic.

METHODS

This study is a subset of a larger study of female migration and HIV risks in Nyanza Province, which focuses not only female migrants in the fish trade but on a broader population of women in the Kisumu area who are migrant or highly mobile (26). We used two qualitative research methods: 1) six months of participant observation and field notes (Bernard 1994) in the "high HIV risk environments" (Weir et al. 2004) in common migration destinations in and near the Kisumu area of Nyanza Province, and 2) in-depth semi-structured interviews (Chase 2008) with 15 male and 40 female migrants selected from these destinations using theoretical sampling techniques (Strauss and Corbin 1998). Interviews with men were carried out to explore men's perspectives on findings that emerged from daily debriefing and preliminary reading of women's interviews in the same locations. The field research team comprised American and Kenyan Co-

Principal Investigators and two research assistants (RAs) from Kisumu who were native speakers of the local languages. Both were trained in the qualitative data collection methods used for this study.

The study began with 29 key informant interviews with local stakeholders, including government officials across a range of sectors, representatives of non-governmental organizations, and female migrants. From these interviews, we identified potential typologies of female migrants and highly mobile women in the area, and garnered information about their potential migration destinations. The research team visited potential sites on the basis of key informant recommendations, and selected seven sites for intensive participant observation. The sites included the largest market in Kisumu (Kibuye, one of the largest markets in East Africa), held daily, at which all manner of retail goods are sold and wholesale goods are purchased for resale at smaller markets in Kisumu, regional markets and beyond. Traders in goods from Uganda, Tanzania and Kenyan cities some distance from Kisumu (e.g. Nairobi and Mombasa) also circulate through the market. We also selected six beach villages within a day's driving distance from Kisumu, including a beach village on an island; these were settings exemplary of small, medium and large beaches and island beaches on Lake Victoria. The team obtained permission to carry out research at the beaches with the Beach Management Unit, a local governance structure, at each setting.

We then carried out participant observation in the selected destinations and used theoretical sampling to select participants for in-depth interviews, according to the initial typologies of female mobility garnered from key informant interviews, followed by sampling based on typologies emergent from findings of the research. The two RAs carried out intensive participant observation in the research sites under the supervision of the two PIs. The PIs

purposely did not carry out participant observation beyond the initial days' visit, in order to minimize disruptions to the normal social ebb and flow in the sites. Through informal conversations in the research settings during participant observation, the RAs identified individuals eligible for participation in the study, and invited their informed consent to participate in interviews. In accordance with principles of grounded theory (Charmaz 2006; Muhr 2010; Strauss and Corbin 1998), the team continued to sample as the study progressed on the basis of emergent findings and analysis, until theoretical saturation was obtained.

Participant observation involves a structured manner of immersion in local cultural worlds in order to learn about what people do and what it means to them, while also attending to the ways in which social and cultural factors shape and constrain individual and group practices (Bernard 1994). It is an ideal method for building an understanding of hard-to-reach and mobile populations. The RAs prepared field notes focused on their observations of the environment, social actors and relations within the settings selected for participant observation, and discussed their observations with the PIs at the end of each day of data collection. These field notes were analyzed in conjunction with data from the in-depth, semi-structured interviews.

The criteria for selection for participation in interviews were either having participated in at least one adult migration (for women, excluding migration for nuptiality[2]) or engaging in high levels of mobility. We aimed to capture as wide a variation as possible in the forms of migration and mobility among women in the Kisumu area, and therefore used measures that were inclusive of complex, localized mobility. This study defined migration as *a permanent change of residence over national, provincial or district boundaries*. We defined mobility as *a pattern of frequent*

[2] Women's migration for marriage is typical in the patrilineal marriage cultures of Kenya and the region; women leave their households of origin upon marriage and join the husband's household. Because of the ubiquitousness of migration for nuptiality in Nyanza Province, women whose only migration was for marriage were not eligible for participation in this study.

travel away from the primary residence, involving sleeping away from the primary residence at least once or twice per month.

The semi-structured in-depth interviews for this study adapted the life history approach (Chase 2008). We asked women to narrate their history of migration and current patterns of movement; the events that led up to, and reasons for, their migrations; current relationships and household arrangements; income-generating activities and social relationships in migration destinations, including discussion of who helped them in the migration process, positive benefits and negative consequences of their migration; sexual relationships; and perceptions and beliefs related to HIV risks, both those they face personally and those they perceive to be faced by others. We explored the topic of the *jaboya* economy via a series of questions to elicit participants' perceptions of its occurrence and characteristics in the setting as well as their reports of personal experience of *jaboya*/*jakambi* relationships. The guide for these interviews included these domains of inquiry, yet permitted the exploration of topics not anticipated. Consistent with human subjects research guidelines in Kenya, participants were offered a small payment incentive for their participation, equivalent to U.S. $4, to reimburse costs of transportation. Audio recordings of interviews were transcribed verbatim in their native language (either Kiswahili or Luo) and translated into English for analysis using ATLAS.ti (version 6.2.27, Cincom Systems, Berlin, 1993-2011), which facilitates the sorting, organizing, and relating of coded segments of textual data. We analyzed the interviews and field notes and developed a common set of codes describing patterns observed in the data. New codes were defined in relation to existing codes.

The study protocol was reviewed by the University of California at San Francisco Committee on Human Research and the Ethical Review Committee of the Kenya Medical

Research Institute, and approval of the procedures for protection of human subjects was garnered prior to the start of data collection. In this article, pseudonyms are used, and the names of villages are also anonymized to protect the confidentiality of study participants.

RESULTS

Physical and social features of Lake Victoria beaches. The beaches lining the shoreline of Lake Victoria range from small, relatively quiet and remote beaches to large and bustling beaches replete with hotels, bars and cafes and small market areas; all however are classified as rural and most are at least several hours' driving distance from Kisumu, the provincial capital of Nyanza and third largest city in Kenya. The beaches visited by the research team consisted of a shoreline area with a large *banda* or open-air structure at which large fish are brought in and weighed, and at which the local Beach Management Unit (a local governance structure at each beach in Kenya) has an office. There, all fishermen and fish traders must formally register their names, to have permission to buy or sell fish. Dwellings of various size and number typically adjoin the shore area; infrastructure (electricity, piped water) is generally poor. The poor living conditions observed at the beach villages reflected the high absolute poverty rates in the area (proportions living on less than $1 per day), which range from 53% to 69% (1).

The division of labor within beach villages is highly gendered: fishing in the communities observed in this study exclusively involved men, while women were engaged in post-harvest activities such as drying, scaling, frying, and marketing, which often, if not always, yielded a lower profit margin than that made by fish catchers. Both men and women worked as fish brokers, but men alone acted as brokers of large fish to large restaurateurs and export companies, and fish predominated as brokers of smaller fish sales to other female fish traders. The female fish brokers held a generally higher social status than other female fish

traders, and they had a higher cash income; their role as brokers was gained either via familial relationship (i.e. they were married or related to a boat owner or head fisherman) or via social seniority as *jakambi* to a *jaboya* fisherman (i.e. they held a long-standing transactional, not romantic, sexual relationship with boat owners or head fishermen). The sale of small fish, ubiquitous in Nyanza markets, was carried out by women only. Women also worked as cooks and hoteliers for crews of fishermen, usually combining such work with fish sales. Cooks for fishing crews, often younger women, were said to especially be obligated to participate in transactional sex with crew members, in addition to preparing the tea and *chapati* the fishermen carried with them out on the boats.

The daily rhythm of life in the beach villages visited by the research team have a typical pattern, shaped by the particular types of fish caught by fishermen who frequent the beach, and the fishing methods required to extract them. Boats with crews fishing at night return in the early morning and are met at the shore by throngs of female fish traders, who jockey for position and negotiate fish purchases either directly with the fishermen or indirectly with a female fish broker. Following sales of fish, the men typically find places to sleep at the beach, and women begin cleaning and preparing fish for the market. Other boat crews embark in the mornings for daytime fishing, and their boats return in the late afternoons, eliciting the same flurry of activity at the shoreline. Throngs of fish traders ebb and flow along the shore in concert with the arrival and departure of boats. Taxis, including *matatu* busses, motorcycles and bicycles, carry women and their packed bags of prepared fish in the mornings and evenings to and from the beaches (or main roads nearby) and markets in Kisumu and the other towns in the region, on a daily basis.

Migration and mobility patterns among female fish traders. Our larger study

documented women's participation in a range of internal (within Kenya) and international (cross-border with Uganda and Tanzania) migration and mobility flows (26). While the rural to urban flow predominated as a category of women's permanent migration, e.g. to Kisumu from farming villages in Nyanza, Western and Rift Valley Provinces, many women also participate in urban to rural flows (e.g. from Kisumu to beaches along Lake Victoria), rural to rural flows (e.g. from farming villages to beaches) and urban to urban flows (e.g. from Nairobi or regional towns in Nyanza or surrounding provinces to Kisumu). Not all fish traders at beaches migrated there alone or with their children only; many women grew up on the beaches, or accompanied husbands there. However, many women at the beaches had migrated there alone or with their children only. Multiple migrations were common among women, precipitated by household shocks and major life events over the life course (e.g. orphanhood, end of schooling, nuptiality, death of another adult in the household, divorce separation or widowhood, loss or gain of employment, intimate partner violence, and Kenya's post-election violence.) While many female migrants at the beaches were widowed, many others were separated from their husbands due to marital or family conflict (including conflicts with in-laws and co-wives).

The female fish traders in this study included women with a single primary residence at a rural beach village; women with two primary residences, one at the beach and another either in Kisumu or in another rural village or town in the region; and women with a primary residence in Kisumu who travel to and sometimes sleep at the beaches. Study participants thus included either women who were migrants, but not otherwise highly mobile, as well as women who were not migrant but were nevertheless highly mobile. However, a high level of mobility was seen among the migrants, as the livelihood strategies available to female migrants often necessitated frequent travel. The following are selected 'case studies' summarizing typical life

contexts of female fish traders engaging in several common typologies of migration and mobility:

Rural to rural migrant/ rural circular mobility (2 primary residences)

- Mary, age 35, was born and raised in a rural village in Nyanza She is married to a polygamous husband and has 5 children. She was introduced into fish business by a relative. She has 2 houses, one at her matrimonial home in rural Nyanza and another at a beach where she buys and prepares her fish stock. In a typical week, she spends 3 days at the beach and 4 days at her home in the village, selling fish at a nearby market.

- Agnes, a widow age 27, was inherited and remarried, but separated with both men due to their unfaithfulness. She has 4 children, 3 from the deceased husband and 1 from the man to whom she was temporarily remarried. She trades in fish and spends 2-3 days at the beach collecting and preparing fish for the market and the rest of the days at her rural home near the market. She spends more time at her rural home during planting seasons. After the death of her husband, she did manual work that involved helping people on their farms for small pay that was not enough to feed her 4 children – even then, this was seasonal. Her sister who was a fish trader saw the difficulties she was going through and invited her to stay with her at the beach to help in her business so that she could raise some money to begin her own. She started her own fish business and rents a house at the beach where her youngest three children live.

Urban to urban migrant/ frequent short- and long-distance mobility

- Mercy, a 45 year-old mother of 2, born and raised in Nairobi, is separated from her husband. She traveled from Nairobi to Kisumu in 2007 to vote but never returned, after her property was destroyed during the post-election violence. She decided to stay in Kisumu and start a clothes business. She also sells fish, when she stays with her mother at a beach village in South Nyanza. She gets her fish from 2 beaches nearby and may stay overnight to collect enough stock to return with. With accumulated cash from fish sales, she makes frequent trips to Busia (on the Ugandan border) to buy clothes stock. She travels to 6 different markets in Nyanza and Western provinces to sell clothes. When she goes to the beaches to buy fish, she carries some clothes to sell to the fishermen and fellow traders.

Rural to urban migrant/ frequent short-distance mobility

- Rose, age 33, was born in rural Nyanza but raised in Rift Valley. She is married with 3 children, but lives apart from her husband, who lives and works as a carpenter in a town in Western Province. Occasionally, when he gets time off, he visits Rose at the beach where she rents a house. She migrated from Rift Valley to Nyanza, her matrimonial

home, in 2007 during post-election violence, and then moved to the beach in 2009 to start a fish and food kiosk business. She travels weekly to 2 Nyanza markets to sell fish and returns to the beach at night. She stays for 2 days at her sister's when she goes to sell fish in a Rift Valley rural market, seasonally, when fish are abundant.

Rural resident with frequent short- and long-distance mobility

- Stella, age 37, is a Luo woman married to a Kikuyu. Although still married, they were forced to live apart due to the post election violence of 2007, and still live apart. Their 3 children live with their paternal grandmother in town in Central Province. She lives at a beach in Nyanza where she buys and prepares her fish stock for the market, and her husband lives in Nairobi, where he operates a food kiosk. She has frequent phone contact with her husband and travels to Nairobi and the regional town from time to time to see him and the 3 children. She trades in fish but also runs food kiosk at the beach. She takes fish to markets in regional towns in Nyanza. She also acts as a fish broker and trades in potatoes when they are plentiful.

Most women involved in the fish trade maintained a primary beach residence, but travelled to multiple beaches as needed to obtain fish. Just as the fishermen often travelled great distances across the lake and land at multiple beaches as needed to off-load fish, female traders follow the fish on land in order to arrive when the fish arrive. A complex network of real-time communications about fish stock and pricing in various markets was maintained by both fishermen and traders, via cell phone technology. Women calculated transport costs and trade-offs of expected returns if they made trips of various distances; often they had a particular set of beaches between which they circulated, and at which they maintained relationships with fishermen.

The 'Jaboya' economy. The fish trade was considered by participants in this study to be a "good business" in Nyanza, offering women opportunities to quickly earn subsistence-level income. Startup costs were considered low (roughly equivalent to a local days' wages) and the demand for fish high; as a last resort, even if fish were not sold the stock could be used to feed children. The work also requires little training or education. Thus, the trade in fish at beaches

along Lake Victoria is a common livelihood strategy undertaken by female migrants. However, unless women are socially connected to fishermen via marital or family relationships, or are wealthy enough to pay a surcharge to fish brokers to obtain fish, women's access to fish hinges on their participation in the *jaboya* system. *Jaboya* is a term with multiple meanings, but most often refers to a fisherman with whom female fish traders exchange sex in order to buy fish. The practice is highly stigmatized in Kenya, due to its association with transactional sex and fears about HIV spread in Nyanza, and study participants even in the same locations offered widely divergent accounts about the extent to which the practice is common at their beach. Within a given beach setting, it was common for the research team to be told both that there were no *jaboya* relationships there (they were found, instead, at other beaches in the area), and to hear narratives of people's experiences with *jaboya* relationships in the setting.

Gendered discourses of responsibility and blame for the 'jaboya system'. Male and female participants alike commented that migrants find an easy start-up business at beaches, but female fish traders were both more reticent to discuss the *jaboya* economy than were the fishermen, and more apt to cast women as disempowered participants in it. As one trader noted, the *jaboya* system is considered by women to be a major drawback of the fish trade: "they [*jaboya*] are stubborn… Even if you have money they might first want to have sex with you before giving you the fish. They are hard people to deal with in the lake." The consequences of not having at least one *jaboya*, for those who do not otherwise have a familial relationship with a fisherman, are high: such women must purchase fish from another trader, who levies a surcharge (typically KSh 20 for every KSh 100 in fish.) At least one woman in the study who resisted participation in the *jaboya* economy found it impossible to afford to continue to trade in fish, and switched her business to small-scale trade in another commodity.

Moral approbation of those involved in the sex-for-fish trade was frequently voiced by women who had resisted participation in it; and many blamed the rampant local HIV epidemic on the 'moral weakness' and fatalism of the fish traders who have transactional sex with fishermen. Sarah, a 37-year old married mother of five, said the following about such women:

> "Their life is little, because when she gets someone there, she doesn't care to know their status, whether the person is sick or not. She will go with him, so that she can get fish tomorrow… won't she become infected and die soon?"

At the same time, women reported that the benefits of involvement in the sex-for-fish economy were striking, for those who pursued *jaboya* relationships. The sex-for-fish trade brought economic stability and for many, provided the income that lifted their household out of destitution-level poverty. One fish trader commented, "if you get to go to bed with a *jaboya*, then you can get more fish than you wanted." In informal conversation during participant observation in the settings, fishermen told stories about women arriving at the beach in often desperate circumstances. Female migrants who recently arrived at the beach without a pre-existing familial connection to a fisherman were especially vulnerable to establishing *jaboya* relationships. If women were particularly poor, or young and attractive, or both, they were more likely to be hired as a cook for a boat crew. The research team was told that cooks were expected not only to provide food and tea for the crew members, but also sex; thus female traders who work as cooks may especially be at high risk of HIV acquisition and transmission via multiple concurrent sexual partnerships. In her field notes from participant observation, an RA from our research team recounted a conversation with a fisherman in which he described how a crew cook also becomes like a 'mother' to the crew:

> I met this lady yesterday through a fisherman who employed her as his crew cook. The fisherman narrated to me that the lady had come to the beach while very desperate. She use to carry omena and dry it for other well-established traders at a fee of Ksh.20 per basin. Slowly she made friends with one of his crew members. The crew appointed her as a cook. Every day she is given Ksh.250 and a big fish chosen by the crew members. She is sometimes also given free omena by the crew members. He was also quick to warn me that it is not an easy job since the crew members are always drunk. Sometimes this lady has to feed them like small babies so that by the time they go to the lake they are full throughout the night [. . .]
>
> She told me that the fishermen are bad people because they like touching one's body and insisting on going to bed with her but she normally tries her best to avoid it without offending them, since she needs them for her upkeep.

While women were more likely to cast themselves (or other women) as victims within an economic system in when men hold the fish, and therefore the power to force women to exchange sex for it, fishermen often contended that women were to blame for the perpetuation of the *jaboya* system. Because competition between traders for the limited fish stock is fierce, especially in times of scarcity, they reported that it is often women who initiate the sex-for-fish transaction in order to obtain a steady and reliable supply. Demand for fish is always high, thus a steady supply guarantees economic stability. One fisherman noted, "the *Jakambi* [customers] love the fishermen too much… they love them more than they love their husbands!" In some settings, there were female traders who had earned enough money in the fish trade to not only become brokers, but also boat owners themselves. About such women, fishermen joked that they held enough power to themselves become *jaboya*. In a departure from previous accounts of sex-for-fish economies in the literature, we were told that in some instances female boat owners may make fish available to male fish brokers in exchange for money and sex, as a fisherman would. An RA from our research team recorded the following observation from one setting:

> The first boat arrives with two fishermen, a woman waits for them. The fishermen gave her fish, she gave them money. Later on, the fish traders came to her for fish, they were

> three women and one man. The women traders had cash money they were handing over to her, but I witnessed something strange: she refused to give them fish. Instead, she talked to the man, telling him the fish was Ksh.800, and she gave him the fish, but the man did not give her money. She told the man that they will meet at 4 o'clock and the man said it was okay. The man carried the fish and went away, and the women started complaining bitterly. I asked one lady, called *Rose,* why the woman did not give her and the other two women fish, yet they had cash in their hands? She replied that the woman preferred the man, because they had something going on. I asked, 'Something like what?' and she replied that the woman had lots of money and she owned the boat; that man was her lover. In her own words, the woman was a *jaboya* to the man.

Conflict, negotiation and interdependence. The economic dependence of female fish traders on male fishermen was apparent in the settings observed in this study, as has been documented in prior literature. Yet fishermen and traders described their economic interdependence as well: especially in the context of declining fish stocks, many fishermen rely on their *jakambi* to stake them with cash or food when boats arrive at the shore without fish. Fish traders are relied upon to pay to repair nets, buy hooks and lines, and provide cash to pay for boat repairs. Women may use sex to cement these relationships of mutual economic dependence, but the claims they make for preferential access to fish extend beyond the sex-for-fish exchange. Women not involved in *jaboya* relationships, i.e. wives or relatives of fishermen, provide these forms of economic support to fishermen as well. Through these forms of economic interdependence, the status of *jakambi* can be elevated to that of more socially acceptable categories of wife, mother, or auntie to a fisherman.

Moreover, even if women 'succumb' to the sex-for-fish exchange, they are actively engaged in negotiating and setting the terms of such arrangements. One woman openly discussed trying to limit her sexual contact with her *jaboya* to the minimum required to maintain the relationship. Using the euphemism of "giving tea" for the sexual exchange, she said, "So long as you give them that tea, though it's not a must you give it all the time"…"you tell them, yesterday

I gave you something, today let's just work, I'm not very fine." Moreover, while moral judgments surrounding the *jaboya* economy were expressed within every setting of this study, a competing narrative about its positive effects for women was also voiced, grounded in the every day realities of food purchased and school fees paid in exchange for the fish procured via transactional sex. Because of their reliable access to fish, female traders with *jaboyas* were also able to work as brokers to the female traders without such relationships, ensuring their steady cash income. They may held also a higher social status within the community of fishermen. One trader and broker, after having established *jaboya* relationships with a crew of fishermen, established a *jaboya* relationship with their boss, the boat owner. She told us that these fishermen said, " 'look, this customer of ours has become friends with our boss.' They just like you and respect your opinion." The research team was told that *jakambi* of highest status, such as those who maintain transactional sexual relationships with boat owners, will often act as arbiters of the sex-for-fish trade for other women, granting access to certain fishermen to newcomers to the beaches. Thus, the levels and types of empowerment and disempowerment women derived from participation in the *jaboya* economy are more complex and nuanced than perhaps has been fully recognized in the research to date.

In conclusion, despite the apparent intimacy between some *jaboya* and *jakambi*, both men and women insisted that these relationships were strictly transactional. Most of the men and some of the women participating in these relationships are married and in some instances co-habiting with spouses. Despite this, jealousy and possessiveness can enter these relationships. In her field notes, one RA described a conversation she had with a trader about attempts women make to cultivate romantic relationships away from the beach:

> In the evenings [the fish traders] spend their time doing different things, some fry fish if they are to go to the market the following day— a vehicle normally comes for them at 5 a.m. in the morning. Others take the opportunity to enjoy themselves by visiting the bar. But even though there is a bar at the beach, they prefer going to the bar in the other shopping center in [nearby town "*A"*]. According to them, this minimizes gossip at the beach. *Agnes* told me that when you visit the bar you can even dance with somebody […] with no strings attached, but when the lover of the person gets to hear about it, you will be the talk of the beach and this can even ruin your relationship with the fishermen. So to avoid all that, it's better you relax in the bar far from the beach.

This quote illustrates the emotional resiliency of female fish traders who, despite engagement in a form of transactional sex for their day-to-day livelihood, nevertheless seek out the fulfillment and pleasure of purely romantic, non-transactional relationships as well. It also illustrates the transitory nature of relationships for many at the beaches, contexts where alcohol and marijuana use is normative even among women, and where risk-taking (both occupational and sexual) is also common. As one woman commented, "a beach is where relationships are broken."

DISCUSSION

This study is the first to describe migration and mobility patterns among women in fishing communities on Lake Victoria in Nyanza Province, Kenya. This aspect of the *jaboya* sex-for-fish economy is crucial for understanding the phenomenon and its implications for the local HIV epidemic. Not all women in the fishing communities participate in the sex-for-fish economy within the fisheries sector; it is precisely those who were once outsiders and newcomers to these communities, i.e. migrants, who are more likely to do so. Women whose sole adult migration was for the purpose of marriage were excluded from this study, so we did not speak with women who migrated to join a husband in his beach community, nor with women who migrated with their husbands to the beaches, unless they had undertaken prior independent migrations. Via interviews with women in the latter circumstances, and in

interviews with men, we learned that those who were married to fishermen in these settings were less likely than others to engage in *jaboya* relationships, simply because they were given access to fish by their husbands. Yet even some women with family connections to a beach community, e.g. a sister-in-law or cousin to a fisherman, also reported *jaboya* relationships. The migrant and highly mobile women in our study fit the marital profile of most female migrants in the region: they were more often widowed, separated or divorced rather than currently married.

The circumstances that drove their migration was not a primary focus of this paper, and has been described elsewhere (26), but relevant to this discussion, these were largely associated with household shocks due to changes in marital status: widowhood, especially, but also separations due to gender-based violence or the politically-instigated post-election violence of 2007-08, due to conflicts with co-wives or in-laws, resulted in losses of income, property or livelihoods. The death of a husband especially precipitated women's migration, for economic as well as cultural reasons. In Luo culture, forms of widow inheritance (or ritual sex with a hired inheritor or with a male relative of the deceased, permitting the widow and her children to remain within his family's patrilineage and homestead), are controversial locally due to their associations with the spread of HIV, but continue to be practiced. Narratives of the practices and its relation to women's migration were complex: while many women reported migrating in order to avoid widow inheritance, others migrated after humiliating or abusive experiences with inheritors. Many women migrated because the in-laws stripped them of household, property and assets. Thus this population of migrant and highly-mobile women often arrived at the beach having already experienced circumstances that may have placed them at high risk of HIV even before they migrated. Once at the beach,

as newcomers, they may be particularly vulnerable to seeking out *jaboya* relationships in order gain a foothold in the fish trade.

The mobility of fishermen on Lake Victoria has received a great deal of attention in the literature on HIV in the region, as it is known that they engage in transactional sexual relationships with the female traders at these beaches in exchange for the fish. What is less well-known, and what this study has revealed, is that the female traders involved in these transactions are highly mobile as well. They follow the fishermen who follow the fish, and then process and transport the fish to markets in rural villages, regional towns, and cities, where many maintain second homes, and many maintain sexual relationships at these homes. (The use of condoms within relationships of almost any kind was virtually unheard of among participants in this study. In our larger study, commercial sex workers reported that they came to Kisumu to "rest", as the city was less stressful than Nairobi, but complained that condom use was virtually taboo in the area.) Thus the migrant and highly mobile women in this study were at high risk of HIV transmission AND acquisition: the circumstances that drove their migration were also likely to have placed them at high risk of HIV infection at the point of origin; and the social contexts at their migration destination facilitated having multiple sexual partners and engaging in an exchange of sex-for-fish, often with multiple *jaboya* fishermen.

The stigma surrounding the sex-for-fish economy described in this study, reported in prior literature in similar settings (e.g. 23), cannot be over-emphasized. Many women were very reticent to discuss their own participation in the *jaboya* system, although discussions about the phenomenon among others at the beach were readily elicited. In some instances the triangulation of multiple qualitative data sources, combining analysis of field notes from participant observation and in-depth interviews, revealed inconsistencies in reporting (i.e. the

under-report of stigmatized behaviors such as *jaboya* relations) that were resolved only through repeated visits to settings, and informal follow-up conversations with participants in the settings. The research team encountered fierce denial of the occurrence of the *jaboya* economy among participants in settings in which other participants were quite open about the benefits of involvement in such relationships. As HIV prevention and treatment programs and services continue to develop in the region, we can expect that the discourses of blame and moral approbation within the fishing communities may continue to be aimed at *jaboya* practices. Whether the *jaboya* economy subsides as a result, or becomes yet more clandestine to the outsiders to these communities, is a topic under discussion in these communities today. At a workshop to disseminate the results of this study to local communities involved in the research held in Kisumu in January 2012, representatives of Beach Management Units in attendance expressed concern that the *jaboya* economy persists despite HIV prevention messaging, because of the ever-declining fish stocks, but it is 'going underground'.

Clearly the populations living in beach villages on Lake Victoria are in urgent need of accelerated access to HIV testing, anti-retroviral therapy (ARV) treatment and prevention services. To date, models for such services have been explored for fishermen (e.g. male microbicide and circumcision trials), and such efforts should continue to be rolled out; but to adequately respond to the epidemic, women in the fishing industry need to be reached as well. Identifying, sampling, and sustaining contact with highly mobile men *and* women will require innovative strategies for systematic sampling and tracking, e.g. time-location sampling strategies (27-29) in key migration destinations, and utilization of cell phone technologies to track and communicate with clinic populations (30, 31). Close attention to the gender dimensions of mobility will be needed: women's shorter-distance, shorter-term mobility may

be less easily measured or predicted than men's (12, 26), with important implications for service planning and delivery.

Efforts to engage women in microenterprise projects to empower them in their relationships with men and reduce their dependence on the *jaboya* economy are underway in a small number of communities on the Lake (e.g. a local non-governmental organization, Women in the Fishing Industry Programme, carries out a promising project: http://www.wifip.org/), but such efforts must be broadened, rigorously evaluated, and met by a multi-sector response appropriate to the scale of the epidemic. Moreover, the findings of this study suggest that a dialogue about gender between men and women– i.e. within entire communities– will be needed to fully engage communities in finding solutions to the problem of HIV as it has converged with an emerging sex-for-fish economy. At present, dueling discourses of blame and victimization may serve only to stigmatize and blame *jaboya* or *jakambi*, while offering few solutions to the problems of an HIV epidemic that continues to place a heavy burden on these communities. Women's position within gendered opportunity structures of the local economy and in sexual relations within the culture undoubtedly constrains their choices and places their health at risk, yet those same unequal power relations place men in these communities at high HIV risk as well. For various complex reasons, both men and women have a stake in the perpetuation of the sex-for-fish economy. Interventions to expand testing, treatment and prevention in fishing communities may not be successful unless they also engage communities in grappling with the issue of the *jaboya* economy, in ways that critically appraise its connection to the lake ecology as well as to gendered power relations.

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