

## Research article

# Transactional sex and HIV: understanding the gendered structural drivers of HIV in fishing communities in Southern Malawi

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### Abstract

**Background:** In Southern Malawi, the fishing industry is highly gendered, with men carrying out the fishing and women processing, drying and selling the fish. Research has shown that individuals living in fishing communities in low-income countries are particularly vulnerable to HIV infection. One of the key drivers of HIV in fishing communities is transactional sex. In the fishing industry this takes the form of “fish-for-sex” networks where female fish traders exchange sex with fishermen for access to or more favourable prices of fish. By controlling the means of production, the power dynamics in these exchanges favour men and can make it more difficult for women to negotiate safe sex.

**Methods:** Qualitative methods were used to collect data on gendered drivers of transactional sex in the fishing community and how different groups perceive HIV risk in these transactions. Observation, focus group discussions and semi-structured interviews were undertaken with members of the fishing communities, including men and women directly and indirectly involved in fishing.

**Results:** In fishing communities transactional sex was prevalent across a spectrum ranging from gift giving within relationships, to sex for fish exchanges, to sex worker encounters. Power differences between couples in transactional sexual encounters shape individual’s abilities to negotiate condom use (with women being at a particularly disadvantaged negotiating position). The context and motivations for transactional sex varied and was mediated by economic need and social position both of men and women. Female fish traders new to the industry and boat crew members who travelled for work and experienced difficult living conditions often engaged in transactional sex.

**Conclusions:** Transactional sex is common in Malawian fishing communities, with women particularly vulnerable in negotiations because of existing gendered power structures. Although knowledge and understanding of the HIV risk associated with transactional sex was common, this did not appear to result in the adoption of risk reduction strategies. This suggests that specially targeted strategies to increase women’s economic empowerment and tackle the structural drivers of women’s HIV risk could be important in fishing communities.

**Keywords:** transactional sex; gender power relations; fishing communities; HIV.

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### Background

Despite successes in the rollout of HIV treatment programmes, HIV prevention programmes have been less successful in lowering incidence rates [1]. Certain groups, even in countries with generalized HIV epidemics, have been found to have a significantly higher prevalence of HIV than the general population. Fishing communities have been recognized as a key population at higher risk particularly in sub-Saharan Africa [2].

In the past decade there has been increased focus on structural factors that influence behaviour and vulnerability to HIV in sexual interactions. These include socio-economic position, gender and age [3]. Gender differences are fundamentally underpinned by power inequalities in society and can result in the subordination of women and their interests in a manner that favours men. This paper explores

the gendered structural drivers of vulnerability to HIV in fishing communities in Southern Malawi. In particular, it is concerned with understanding how gender power relations, especially those in transactional sexual relationships, shape men and women’s vulnerability to HIV in this context. The data presented are from a qualitative research project based in fishing communities in Mangochi District, on the shores of Lake Malawi.

### Transactional sex

Transactional sex is defined as a relationship that involves the exchange of money or material goods for sex [4–9]. While this transaction has both an economic and sexual component, it is often differentiated from formal sex work. This is because women engaging in transactional sex do not always view themselves as sex workers [10]. Reflecting economic

and social roles within many high HIV prevalence countries, it is predominately men who provide the material benefits and women who receive these material benefits in transactional sexual encounters [9]. Although there has also been documentation of older women paying younger men for sex, often referred to as sugar mummies [11], this practice seems to be much less prevalent than men paying women for sex.

In sub-Saharan Africa, as in other parts of the world, strong evidence exists to show that sex in exchange for material benefit can occur in a wide range of relationships [6,9,10,12–16]. Where transactional sex does occur it can take a range of forms from gift giving in long-term relationships as a way of expressing affection, to survival sex where women regularly engage in transactional sex to ensure they are able to meet their daily needs or those of their family [14]. The context and motivation of engagement in transactional sex is important in understanding risk as well as risk perception in these engagements. The power dynamics in relationships where there is material benefit can mean women are less able to negotiate safer sex and are more likely to participate in riskier sexual encounters [4,5,10,14,16].

In the past decade there has been increased focus on transactional sex in the academic literature because of the associated risk of HIV infection [4,5,10,15–17]. Where women are motivated by economic vulnerability they are more likely to have more sexual partners or concurrent sexual partnerships, which place women and men at an increased risk of infection [18]. Although recent research has contested whether having multiple concurrent partnerships increases the risk of HIV infection [19], it is still clear that having more sexual partners (often linked to economic vulnerability) can place women and men at an increased risk [19].

Transactional sex often occurs between couples who belong to groups that are not traditionally defined as high-risk for HIV infection, but are in longer-term, more trusting relationships [20]. This level of trust in longer-term relationships can mean that condom use is not insisted upon and therefore can increase the risk of transmission.

### **Fishing industry and HIV risk**

Farmer *et al.* (2006) draw on the work of John Galtung and his concept of structural violence as a way of describing social relationships that place individuals and populations in harm's way [21]. These are described as "structural" because their arrangements are embedded in the political and economic organization of our social world and "violent" because they cause injury to people who are not typically those responsible for perpetrating the inequalities [21]. Gender power relations are an important driver of structural violence. They influence who has the power and authority to make decisions both within the household and within wider society. In fishing communities in Malawi social and economic arrangements take particular forms that can place men and women in harm's way.

Fishing communities in middle- and low-income countries have been identified as being one of the groups at highest risk for HIV transmission [22,23]. Kissling *et al.* (2005) found

that in fishing communities in 10 low- to middle-income countries in Africa, Asia and Latin America, prevalence rates were between 4 and 14 times higher than that of the national average of adults aged 15 to 49 years [2]. These findings have been corroborated by recent epidemiological research in Uganda [24] and Kenya [25].

There are a number of risk factors relating to the nature and dynamics of the fish trade and the fishing lifestyle that have been identified as contributing to HIV vulnerabilities. Young men and women between the ages of 15 and 35 make up the majority of people working in the fishing industry, and this group are at the highest risk of acquiring a sexually transmitted infection including HIV [2].

There is a high level of mobility and migration involved in fishing. In Malawi many fishers migrate from the Northern part of the country to fish in the Southern part of Lake Malawi and during the course of their work may travel large distances in search of fish catches, sometimes spending months away from their families. Malawian female and male fish traders also travel long distances to sell their fish at markets in large cities. This high level of mobility can mean that social constraints on sexual behaviour which apply at home, may not apply at fish landing sites and beaches in other areas [2]. Fish landing sites are often in remote areas and access to healthcare services may be difficult. Long and unpredictable absences away from home villages can create challenges in offering HIV prevention and treatment programmes [22].

There are risks involved in fishing, particularly when fishing is undertaken at night, as is common on Lake Malawi. Fisherman may face dangerous conditions such as sudden changes in the weather and risk drowning. These hazards can contribute to a culture of risk-taking and risk-confrontation [2]. Alcohol use is widespread among fishermen in many parts of the world, and can be used to help cope with the dangers or stresses of their occupation [2]. Alcohol use has also been linked to risk disinhibition making people more likely to take more risks in their sexual behaviour when they are drunk [26].

### **Gendered drivers of HIV in the Malawian fishing industry**

The fishing industry in Malawi, as in many other countries, is highly gendered. In Southern Malawi, men almost exclusively carry out the fishing. They also own the fishing boats and nets, which are the most profitable part of the fishing. Men dominate the selling of larger, fresher and more profitable fish because they have better access to capital. Women on the other hand are dominant in the drying and processing of smaller fish, which requires smaller capital but also provides smaller profits. In this gendered division of labour, men are able to make larger profits and dominate the means of production and women have to negotiate access to fish through men.

These power imbalances can increase both women and men's vulnerability to HIV. In two recent papers, Merten and colleagues in Zambia presented data on women accessing fish through sex-for-fish exchanges [23,27]. In exchanges, which involve sex-for-fish, female fish traders engage in transactional sexual networks with influential fishermen to

ensure access to fish. Although, it is important to note, not all female fish traders enter these exchanges. However, when they do enter them it can mean that women are either able to buy fish more easily or at a lower price [27]. By controlling the means of production, the power dynamics in these exchanges favour men and can make it more difficult for women to negotiate safer sex. If these exchanges take place over a period of time with the same partner men and women may not view themselves as at a high risk from HIV.

### Objectives of the study

The objectives of this study were to understand gender power relations and HIV transmission in fishing communities in Southern Malawi; to explore and document the key drivers and facilitators of participation in transactional sex in the study villages and to document individual and community perceptions of HIV risk in transactional sex.

## Methods

### Study site

The study was situated in two villages on the Southern arm of Lake Malawi in the Mangochi District, which is situated in the Southern Region of Malawi. Fishing is an important livelihood strategy in Malawi generally, and in Mangochi in particular due to the low social and barriers to entry into the industry for both men and women. The fishing industry provides more than 60% of animal protein consumed in the country and the sector supports approximately 350,000 people in fisheries-related industries [28]. In the Mangochi District HIV prevalence stands at 13.1% [29]. Data on poverty rates in Mangochi were difficult to identify. However, Malawi did rank 171 out of 187 countries in the Human Development Index making it one of the poorest countries in the world [30]. Mangochi also has the lowest rates of educational attainment for men and women in Malawi [31]. Livelihoods in the Mangochi District are heavily reliant on fishing activities and the two study villages were selected because of the presence of large-scale fishing activities including a large number of motor boats and fish drying racks. Both villages were considered rural and were governed by a traditional village chief.

The research was nested in a larger research study that was assessing the prevalence and transmission dynamics of HIV in fishing communities in 12 villages in Mangochi. The initial analysis carried out by the study team of the parent study highlighted transactional sex and gender based violence as two key potential drivers of HIV infection and this study was developed to explore these issues in more depth. The parent study ran from January 2009 to September 2011.

### Study design

This study ran from January 2011 to November 2011 and utilized qualitative research methods, including semi-structured interviews, participant observation and focus group discussions (FGDs). Qualitative research methods were selected because they offer the greatest opportunity to elicit concepts and perspectives of different groups, particularly poor and marginalized members of communities, by allowing them to express their lives in their own words [32]. Two local research assistants (one male and one female)

conducted the interviews and FGDs in Chichewa. The female research assistant conducted the interviews and focus groups with the female participants and the male research assistant conducted the interviews and focus groups with the male participants.

Interviews and focus groups covered key themes including: the motivations and expectations in sexual relationships by both men and women; position of men and women in the fishing industry; how fish is accessed by both men and women; mobility; the challenges of working in the fishing industries and how these have changed over time; violence, leisure time activities including alcohol use and sex work; and how people viewed risk in their lives as well as in the wider community.

A purposive sampling frame based on maximum variation was used [33]. Participants from different genders, ages and occupations were sampled to elicit viewpoints from a diverse population of people living and working in the two study villages. The study participants were identified both through participant observation and through snowballing (following up suggestions from other participants). To ensure maximum variation, interviews were conducted with four groups defined as: insider men; outsider men; insider women; and outsider women. Insider men included a wide spectrum of men working in the fishing industry including boat crew members, boat mangers, boat owners and male fish traders. Outsider men were those living in the fishing communities but not working directly in the fishing industry and included petty traders, bicycle taxis and pick up drivers and bar workers. Insider women were those women working in different types of bars. Outsider women were those working in the fishing industry including female fish traders, processors and those who travelled and did not travel to sell their fish. In addition, women who cooked and sold food on the beach when the boats landed as well as women who brewed local beer, petty traders and farmers were included.

### Data collection

Between January and October 2011 we conducted a total of 59 in-depth interviews (30 women and 29 men) and 18 FGDs (10 comprising of women only and 8 with men only). FGDs were held with participants of the same sex and a similar age. They were also held with participants who worked in the same profession. These included male fish traders, female fish traders, boat crew members, girls and boys of school age (but no younger than 15) and men and women working outside the fishing industry.

Observation took place over a 6-month period with the research team spending periods of time in both study villages observing all aspects of the fish trade including landing of fishing boats with catches, selling and processing of fish and spending periods of time in bars observing periods of both high and low fish catches.

### Data analysis

Data analysis was informed by the framework approach to qualitative research [34]. After each period of observation, interviews and FGDs the research team met to discuss the transcripts, noting all emerging themes. Following this, the discussion guides were updated to ensure that all emerging

themes were covered. All interviews and focus groups were recorded, transcribed and translated into English by the research assistants. All transcripts were imported into Nvivo 9 and the programme was used to aid data analysis by coding against the framework. The research team developed an initial thematic framework which was used to code the transcripts as new themes have emerged from the transcribed data the framework was updated. The framework was also used to compare views from different categories of participants and explanations were developed.

During the analysis the male outsider groups and women working outside the fishing and sex industry were included to explore the similarities and differences between their perspectives and insider groups. The main focus of our analysis was primary data sources from men and women working inside the fishing and sex industry, as these are the key participants needed to meet the study aim.

To ensure rigour in the analysis process, a field supervisor checked the transcription and translation of 5% of the transcripts for quality assurance purposes. Additionally, participant checking was used as a quality assurance mechanism [35].

#### **Ethical approval**

Ethical approval was obtained from the College of Medicine Research Ethics Committee, Malawi and Liverpool School of Tropical Medicine (LSTM) Research Ethics Committee. Further, permission to work in the district and villages was provided by the chiefs of both villages as well as district level representatives. Written informed consent was obtained from all individuals participating in the interviews and focus groups. Given the sensitive nature of the topic training was provided to the research team on how to pose sensitive questions. At the beginning of each interview and focus group the participants were briefed on what topics would be covered. The participants were told this would include their own sexual relationships as well as those within the village more widely. If participants were uncomfortable discussing their own relationships they were asked more broadly about other people's behaviour. Male and female participants were comfortable discussing their sexual behaviour with the interviewers. Maintaining confidentiality was also stressed during the training of the research team as well as to all participants of the focus groups.

#### **Results**

The results are presented against three key findings (1) the highly gendered context of transactional sex in fishing communities, (2) key motivations for engagement in transactional sex and (3) the understanding of HIV risk and transactional sex within the communities.

##### **Highly gendered context of transactional sex in fishing communities**

The highly gendered context of the fishing communities is important in understanding transactional sex. Within the fishing industry, the division of labour is divided along rigid gender lines with men undertaking the fishing and women processing and selling the fish. However, we also found that there were further divisions marked by age and socio-

economic position both of men and women. This highlights that gendered power relations do not just exist between men and women but also structure relationships between different groups of men and different groups of women. Through observation and discussions with key informants we identified different groups of men and women within the industry.

The key female groups included female fish traders and processors. These were women who buy and process fish at the Lake. They sold fish either within their home village or at markets that were up to 250 km away. They stayed away from home for a period of time between a few days and a few weeks. We also found that female fish traders were more likely to sell smaller fish than men. The profits from selling smaller fish were lower but required smaller amounts of capital to enter the trade. There were also female bar workers in the study sites. These were a highly mobile group of women who came to the communities following high fish catches and were paid to have sex with customers from the bars they worked. Their primary source of income was from these sexual exchanges and they received a very small wage for working in the bars. While others within the community identified members of this group, as sex workers, they identified themselves as bar workers.

The three key male groups included boat owners, boat managers and boat crew members. Boat owners were men of a high standing in the community. They were able to purchase a motor boat and all the equipment required to undertake fishing expeditions including nets, canoes and paraffin lamps. To be able to purchase this they were able to access a large amount of capital (approximately one million Malawi Kwacha or UK £4400). Boat owners usually accessed this capital through loans or through family members. Their position in the fishing industry meant that they gained the most profits from the fishing activities on the boat. However, they had the most financial risk particularly if there was a problem with the boat or if there were low fish catches. Boat owners rarely went onto the Lake to fish and instead employed younger less economically secure men to undertake the fishing.

Boat managers were men who ran the fishing activities for the boat owner; their key role was selling the fish catch. They often went onto the water to fish and managed the boat when it travelled away from home.

The boat crew members were employed to physically conduct the fishing. Within the villages the fishing expeditions usually took place at night and boat crew members faced physical danger from drowning, particularly if there was unexpectedly hostile winds. The boat crews normally had 10 members of eight to nine young men aged between 15 and 20 who often migrated to the site and one or two older more experienced men who lead the fishing expedition. The boat crew members slept on the beach or in shared living quarters. Physical violence from other boat crew members, fuelled by high levels of alcohol intake, was a commonly reported consequence of these living conditions.

Different types of transactional sex reported included female fish traders exchanging sex for access to fish from fishing boats, sex for capital, sex for accommodation or food during visits to markets, female bar workers exchanging sex

for money in different types of bars and local women exchanging sex for money. The transactional sex, which was reported within the fishing industry, was highly gendered. Men were the ones paying for sex in the exchange and women were the ones providing the sex to receive the material benefit.

#### **Motivations for engagement in transactional sex**

Motivations for engagement in transactional sexual were mediated by economic need, social positions and gender roles and relations of both men and women working within the fishing industry. How transactional sex was discussed in the communities depended on the groups who were describing it. Female fish traders discussed transactional sex in the third person describing what other women did (often women in older or younger age groups) highlighting how many women wanted to distance themselves from the practice. Only female bar workers talked about transactional sex in the first person.

#### **Motivations for female fish traders**

The economic vulnerability of female fish traders within the fishing industry was often seen as a driver for participation in transactional sex. This economic vulnerability stemmed from their inability to access fish particularly in the lean season when fish stocks were low and demand for fish was high. This often led female fish traders into competing for fish from the boats that were able to secure fish in the lean season.

There was a clear division between those who were able to buy fish from the fishing boats. The wives, girlfriends and family members of the boat owner came first, then existing customers who often lent money to the boat manager or owner to fund the expedition and finally new customers. Therefore, women without familial connections starting out in the industry often found it difficult to access fish.

The challenge of accessing fish in the lean seasons, which was further compounded by newness in the industry, was seen as a driver of transactional sex. This quote from a 54-year-old female fish trader highlights this and the way male boat crew members can exploit this position:

So the following day you will see a boat crew member asking you your whereabouts and proposing love to you. So when you refuse they tell you 'where are you going to buy fish?' They will see if you can be shaken up with what they have said. You force yourself to have a relationship so that you can buy fish easily.

There was also discussion of the changing nature of the fishing industry with both male and female participants perceiving that more and more men and women were entering the industry. This was seen as affecting both the competition for buying fish, but also the quantity of fish which was being caught.

A further factor that influenced female fish traders' economic vulnerability and made them more likely to engage in transactional sex was their access to capital. All female participants interviewed discussed gaining and maintaining their economic capital as a daily struggle. This challenge was

discussed by a 30-year-old female fish trader in an in-depth interview:

The only problem that I experience is lack of capital. You can do anything without problem [in the fish trade]. For us who are living in extended families we need to support the whole family from the little capital so we experience a lot of problems.

The fluctuation of prices of fish was seen to contribute to this. The price that female fish traders paid at the Lake for fish would sometimes be more than they were able to sell at the market, which could seriously reduce their available capital.

Female fish traders described other traders engaging in transactional sex as a way of recovering capital or saving costs. They would meet someone at the market who was prepared to pay for their food and accommodation in return for sex.

#### **Female bar workers**

All female bar workers who were interviewed reported selling sex to male customers. The bar workers reported that the majority of their customers were fishermen or boat crew members. We interviewed women working in two types of bars; those that sold bottled beer and those that sold Chibuku (a home-fermented beer which is cheaper than bottled beer). There was a noticeable difference in the socio-economic position of women working in the two types of bars. Women working in the Chibuku bars tended to be poorer and came from within the district. Women working in the bottled beer bars tended to be better off and tended to come from outside the district. This group of women was highly mobile, using their mobile phones as a way of finding out when fish catches were high and travelling often from Blantyre and Lilongwe, and leaving when fish catches were lower.

Female bar workers gave economic need as the motivation for participation in sex work. This included both their own basic needs, as well those of their families. Some of the bar workers talked about going hungry if they did not engage in sex work. The tipping point for selling sex for all the women interviewed was either marital breakup or the death of a close family member. Reasons for the marital breakup included men leaving their wives to work in South Africa and not returning, as well as episodes of intimate partner violence from their husbands. The quote below was a typical response by a bar worker who had experienced violence within their relationship:

My husband was violent, as you can see me, I don't have two teeth [her front teeth]. My husband beat me to the extent of removing my teeth. (Female bar worker, divorced, 20 years old)

All bar workers interviewed reported experiencing violence while working. These incidents ranged from being verbally abused for not opening Chibuku beer packets quickly enough, to being gang raped.

### Boat crew members

Boat crew members talked openly about paying for sex. They made clear distinctions between paying local women for sex and procuring sex from female bar workers. This is highlighted in the following quote by a 23-year-old married boat crew member:

Respondent: We find hule [sex workers] . . . (laughing) sometimes we hook a casual intimate relationship, but most people, like me I don't go for hule, when I have sexual desires I find village ladies to sleep with.

Interviewer: Is there any gift giving after the meeting with these ladies?

Respondent: Yes, it is money that we give them of course to those who demand, while others who are in serious love do not give ladies money. But I give them money because the relationship does not continue.

The boat crew members mentioned their long absences from home and their primary sexual partners as being the driving factors for this behaviour. They also cited peer pressure particularly from other members of the boat crews and the culture of alcohol use as motivations for sexual engagement.

### Boat managers

Like boat crew members, boat managers talked about long absences from home and their primary sexual partners as driving them to pay for sex. The boat managers were responsible for selling the fish catches, which made them desirable sexual partners for female fish traders and women living in the village who wanted access to fish.

### Boat owners

The boat owners who were interviewed were often seen as respected members of the fishing communities. They did not openly discuss engaging in transactional sex and they travelled less for fishing expeditions. However, younger men in the community discussed acting as intermediaries between boat owners and sex workers because boat owners could not be seen as openly approaching sex workers. The quote below is from one of these younger men and highlights this dynamic:

OK, when these people [boat owners] want to sleep with mahule [sex workers] they find people like me, 'Hey do you see that lady?' Then I say 'don't worry I will play the game for you as long as you are going to pay me.' Sometimes they buy us three packets of Chibuku beer. (Boat crew member, single 22 years old)

### Participation in transactional sex and HIV risk

Both male and female participants talked openly about the risk of contracting HIV in fishing communities. In particular people linked having multiple sexual partners to the risk of contracting HIV:

That is the life that everyone is doing here [engaging in transactional sex]. Since it is a remote area, far from town, it is small [geographically] with a large population you see, that is why you can see that

there is rampant spread of HIV because we are having multiple sex partners in our community. (Male boat manager, engaged, 21 years old)

In the female and male interviews, women's behaviour, both in the villages and when they travelled to other markets, was often blamed for the spread of HIV. Women having sex with other men when their husbands were away on fishing expeditions was viewed as driving infection rates. Travelling away from the village – particularly if it involved an overnight stay – was seen as risky for both male and female participants.

In the interviews, few women working directly in the fishing industry viewed themselves as at risk from HIV. However they did view others as being at risk especially if they had "no self-control" and engaged in sexual relationships with men other than their husbands.

Bar workers viewed themselves as at risk of contracting HIV. They all discussed their efforts to make every customer use a condom as a way of preventing HIV. However, they also made the distinction between regular boyfriends, with whom they had "plain sex" with [without a condom], and customers with whom they insisted on using condoms.

The place where I work everyone has her own boyfriend and these ones we have plain sex with, but those short time ones we do it for business. It's not a matter of wanting to feel good, but we want the money. But when I am having plain sex with my boyfriend, its when I enjoy it. (bar worker, divorced, 19 years old)

### Discussion

Engagement in transactional sex was shaped by the highly gendered context of the fishing industry. Women's position and access to fish was mediated by both their economic position (i.e. their ability to access capital) as well as their sexual relationships. Female fish traders improved their access to fish through having sexual relationships with men within the fishing industry. Gradations of power within the male groups working in the fishing industry also shaped their engagement in transactional sex. Boat managers were seen as desirable sexual partners by both women living in the fishing communities and female fish traders hoping to access fish. Younger boat crew members who undertook the fishing faced physical danger and less economic reward than boat owners. Their engagement in transactional sex was seen as normal within the villages, particularly when they travelled away from home.

However, it was not seen as acceptable for boat owners to engage in transactional sex. Pathways to HIV transmission were well understood by all members of the communities, highlighting that knowledge was not changing behaviour. These gradations of power show that not all members of the fishing industry were equally at risk from HIV.

Recent research in fishing communities in sub-Saharan Africa has highlighted that women enter transactional sexual relationships in the fishing industry to ensure they are able to secure fish to sell [23,27]. However, the literature to date has made a key distinction between "sex-for-fish exchanges" and

what is defined as more traditional sex work involving exchange of money [27]. Béné and Merten (2008) argue that female fish traders are economically productive agents within the fishing industry, whereas female sex workers are not and therefore sex work and fish for sex should be seen as separate phenomenon. In the academic literature on sex work there has also been attention paid to how it is distinguished from other social and sexual relationships [10,36]. Yet, within the fishing communities we observed, there was a wide range of types of transactional sex occurring including sex for fish, sex for capital and sex for accommodation. We suggest that there is considerable degree of blurring in the definition of “economically productive agents”, and as such, there is a less clear-cut divide between “sex-work” and “fish-for-sex exchanges” than has previously been suggested.

At the fish landing sites there were a high number of mobile sex workers who come to the sites when fish catches are high and leave when fish catches are lower. Having sex with sex workers was widely reported and viewed as a common occurrence in the fishing industry by key informants living in the sites. Therefore, rather than viewing sex for fish exchanges as a separate phenomenon in fishing communities it should be viewed as part of the prevalent spectrum of transactional sex. At one end of the spectrum there is gift giving by a primary partner and at the other end sex work. Figure 1 is adapted from Dunkle *et al.* (2004) and conceptualises the spectrum of transactional sex we observed in the fishing communities [14].

Different women may be placed at different points on this spectrum at different times and depending on a number of external factors. For instance, if a female fish trader wants to buy fish she might engage in a transactional sexual network with a male boat owner to secure access to the fish and therefore would fall onto the spectrum closer to gift giving.

However, if the female fish trader then visits the market and is unable to sell her fish for the price she initially bought the fish for, she may exchange sex with a man at the market in a one off trade to ensure her food and accommodation for that time she is away and would therefore fall closer to sex work on the spectrum.

A key motivation for women engaging in all these exchanges was economic vulnerability. In the case of female fish traders their need for an economic good and their exclusion in accessing this economic good, except through men, drove their engagement. Men in this situation were reported to exploit women’s economic need by pressuring them into having sex with them. Further, female sex workers reported in engaging in sex work as a way of ensuring they meet their basic needs. We observed that men in key positions within the fishing industry reported women pursuing them for sexual relationships to ensure access to fish.

Improving women’s social and economic position is therefore an important component in changing women’s behaviour in these exchanges. In fishing communities, increasing women’s ability to access capital and savings – in the form of microfinance or village banking – could improve their economic position [37]. However, the high risks involved in fish trading and selling means that access to more capital must come with more flexible repayment programmes to ensure women are able to repay more when profits are higher and less when profits are lower.

The research on transactional sex in fishing communities has tended to focus on women’s motivation for involvement in sexual activity and there has been less discussion of men’s motivation for involvement in these exchanges, in particular how their age and socio-economic position can influence their involvement in these exchanges [23,27]. These data highlight that men’s professional positions within the fishing industry played a role in when and why they participated in

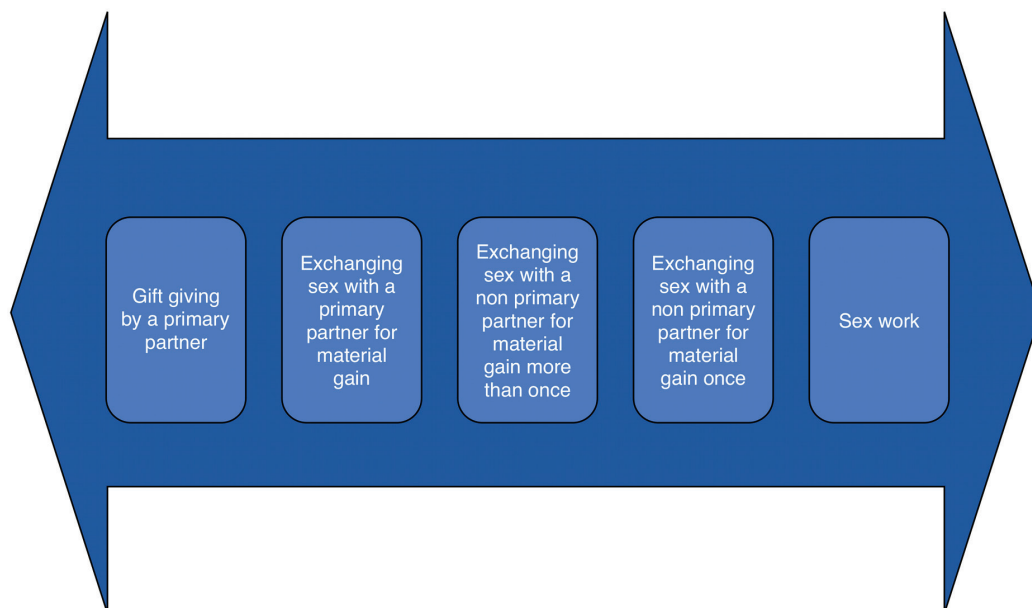


Figure 1. Spectrum of transactional sex.

transactional sexual networks. Not all men within the fishing community are equally powerful and the power dynamics between different groups such as boat crews and boat owners influenced men's position both within the fishing industry and within the wider community. Therefore, rather than viewing fishermen as a homogenous group who are all equally at risk of HIV, it is important to design HIV prevention strategies which consider how men's different socio-economic position may influence their sexual behaviour.

Finally, both female and male participants showed a good understanding of the HIV risk and the ways fishing communities were at risk from HIV, highlighting that HIV prevention messages were being accessed and understood in the community. However, despite this understanding both men and women are still engaging in high-risk behaviour highlighting the importance of changing the broader structural environment is important in changing sexual behaviour.

### Limitations

One of the limitations of the study is the lack of discussion by women engaging in transactional sex (apart from sex work). Men and female sex workers discussed their participation in transactional sex whereas women outside sex work only discussed this in regard to other women's behaviour not their own. Given that women's open involvement in transactional sexual networks was viewed in negative terms it is unsurprising this was the case.

### Conclusions

In conclusion, we observed considerable heterogeneity in the patterns of transactional sex occurring in fishing communities in southern Malawi. These appeared to be driven by socio-economic position and prevalent gender power relations. Knowledge and understanding of HIV risk was common, suggesting that prevention strategies that address the structural economic drivers of risk are required.

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### Competing interests

The authors declare that they have no competing interests.

### Authors' contributions

EM was lead researcher, designing and coordinating all aspects of the data collection and analysis as well as writing the first draft of the paper. JS was project manager of the parent project and helped coordinate data collection and analysis of the data he reviewed and provided useful comments on the manuscript. MN helped coordinate data collection reviewed transcripts checking quality of translation, he reviewed and provided useful comments on the manuscript. VN and LN conducted all the interviews, focus groups and transcribed and translated the data, they also contributed extensively to the analysis. VM was PI of the parent project and contributed to the coordinating of data collection. DL provided input and support throughout the design, collection and analysis of the data he reviewed the transcript providing helpful comments. ND provided input and support throughout the design, collection and analysis of the data she reviewed the transcript providing helpful comments. JS helped with the study design and reviewed the transcript providing extremely helpful comments. ST provided extensive support during the design of the study as well as during the data collection, analysis and providing extensive review of the final manuscript.

### Abbreviations

FGDs focus group discussions

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