ORIGINAL RESEARCH

Understanding transactional sex among small-scale fisherfolks in Ghana

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ABSTRACT. Despite its detrimental effects, transactional sex-for-fish is becoming more and more common in many African fishing states. The main objective of this study was to assess the dynamics of transactional sex among small-scale marine fisherfolk in the Axim, Apam, Dixcove, and Tema fishing communities along the coast of Ghana. Data were collected from March to May 2024 with the aid of a local facilitator through face-to-face questionnaires. Data obtained from 49 respondents covered sources of motivation, perceptions, causes, and effects of sex-for-fish transactions, and were analyzed using SPSS v27. Results showed that the majority of respondents (95.9%) acknowledged the existence of sex-for-fish transactions in these fishing communities. The primary motivations for engaging in sex-for-fish were the lack of money (34%), sexual factors (30%) and greed (18%). Main causes identified were poverty (51%), the need to pay off debt (13%), school dropout (12%) and poor parenting (12%). Major effects included death (31%), sexually transmitted diseases (22%) and teenage pregnancy (20%). Results highlight the urgent need to create credit facilities, educate the public about the harms of sex-for-fish transactions, and create alternate sources of income.

Key words: Small scale fisheries, food security, poverty, sexually transmitted diseases (STDs).

Entendiendo el comercio sexual entre los pescadores artesanales de Ghana

RESUMEN. A pesar de sus implicaciones negativas, el intercambio de sexo por pescado se está extendiendo cada vez más en muchos estados pesqueros de África. El objetivo principal de este estudio fue evaluar la dinámica del comercio sexual a cambio de pescado entre los pescadores de pequeña escala en las comunidades pesqueras marinas de Axim, Apam, Dixcove y Tema a lo largo de la costa de Ghana. Los datos se recopilaron entre marzo y mayo de 2024 a través de cuestionarios cara a cara y la ayuda de un facilitador local. Los datos obtenidos de 49 encuestados cubrieron las fuentes de motivación, percepciones, causas y efectos de las transacciones de sexo por pescado, las cuales fueron analizadas utilizando el SPSS v27. Los resultados mostraron que la mayoría de los encuestados (95,9%) reconocieron la existencia de intercambio de sexo a cambio de pescado en estas comunidades pesqueras. Las principales motivaciones para participar en este comercio sexual fueron la falta de dinero (34%), factores sexuales (30%) y la codicia (18%). Las principales causas identificadas fueron la pobreza (51%), la necesidad de pagar deudas (13%), el abandono escolar (12%) y la mala crianza de los hijos (12%). Entre los principales efectos se encuentran la muerte (31%), las enfermedades de transmisión sexual (22%) y el embarazo adolescente (20%). Los resultados ponen de relieve la urgente necesidad de generar líneas de crédito, educar al público sobre los daños del intercambio de sexo por pescado y crear fuentes alternativas de ingresos.

Palabras clave: Pesquerías de pequeña escala, seguridad alimentaria, pobreza, enfermedades de transmisión sexual (ETS).

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INTRODUCTION

Small-scale fisheries (SSF) account for around 40% of the global fish catch and approximately 90% of fishing jobs globally (over 113 million of fishery workers along the value chain worldwide), with at least 45 million women involved (Schuhbauer and Sumaila 2016; FAO 2020). In developing countries, SSF are critical components of domestic fishery chains and coastal community economies, supporting livelihoods, nutrition needs, and social well-being (Ayilu et al. 2023). Moreover, contributions of SSF transcend their economic value to encompass social, relational, and historical networks (O'Neill and Crona 2017). Small-scale fisheries in Africa are vital to the food security of over 200 million people and for the employment of around 2.3 million fishers, contributing 44% of the total catch and 48% of the total landed value to the continent's fisheries production (TBTI 2018). In Ghana, SSF provide the majority of the national fisheries catch, with the marine sub-sector delivering more than 80% of the total catch, making it the most important source of local fish production in the country (Ankrah et al. 2024). Fish caught by SSF likely contribute to a quarter of the total protein intake, and small-scale fishing communities play a vital role in nutrition, trade, and economic activity (Pauly et al. 1998; Murawski 2000; Hutchings and Reynolds, 2004; Caddy and Seijo 2005).

Common issues facing SSF include resource overexploitation, declining catches, complex and dynamic fleet interactions, competition and conflicts between small-scale and industrial fleets, poverty, and post-harvest problems such as lack of infrastructure (Salas et al. 2011). Poverty in artisanal fisheries has led to the emergence of transactional sex-for-fish in both developed and undeveloped fishing states (Béné and Merten 2008; Dunkle et al. 2010). In many developing fishing countries, including Ghana, women are the main victims of this practice, which has become a way of life for many impoverished women (Béné and Merten 2008; Idowu et al. 2012). People engage in transactional sex to satisfy their daily needs and those of their immediate or extended families exchange sex for money, goods or services (McMillan et al. 2018). During these transactional sexual interactions, men typically provide material benefits (Fiorella et al. 2015, 2019). When sex-for-fish occurs with a semi-regular partner, it may include care in the form of food or shelter, emotional assistance, or potentially courtship (Hunter 2002; Poulin 2007). The exchange of fish-for-sex has been recorded in many African fishing states, including both inland and marine systems, partly due to increasing population, lack of employment, crowded housing conditions, low education levels, and acute food insecurity (Merten and Haller 2007; MacPherson et al. 2012).

Women along the post-harvest chain of fisheries are the main participants in transactional sex because they often cannot afford the price of landed fish, leading them to exchange sex for fish (Camlin et al. 2013). Women in fisheries who focus on profit maximization are more likely to have multiple sexual partners or concurrent sexual relationships, increasing the risk of infection for both women and men (Idowu et al. 2012). The majority of women in the artisanal fishing business engage in sex-for-fish exchanges as a form of networking, especially with migrant fishers (Kissling et al. 2005; Béné and Merten 2008; Fiorella et al. 2015). Through transactional sex, women can secure regular access to fish throughout the fishing calendar with both full-time fishermen and seasonal migrant fishers (Béné and Merten 2008). By entering into these exchanges, women can obtain fish for free or at a more favorable price (Kwena et al. 2010; Mojola 2011).

In sub-Saharan Africa, the increasing attention paid to fish-for-sex is largely due to the high HIV prevalence in fishing communities (MacPherson et al. 2020). Women who engage in sexual relationships for fish with same male fishers over time often do not perceive that they are at increased risk of contracting HIV and therefore do not take

necessary precautions (Béné and Merten 2008; MacPherson et al. 2012). Several scholars, such as Mojola (2011) and Talman et al. (2013), have linked HIV prevalence to transactional sex. Despite the contribution of transactional sex-for-fish to the high HIV prevalence in fishing communities in Africa (Kwena et al. 2010, 2013; MacPherson et al. 2012), the only study carried out in Ghanaian coastal fishing communities is that of Kyei-Gyamfi (2022). This author concluded that paying off debts, low capital for fish trade, and wickedness of female fishers were reasons for engagement in fish for sex transactions in the fishing community of Elmina, Ghana. Lack of research on exchange of sex-for-fish may have detrimental effects for the well-being and productivity of fisherfolks living in fishing communities along the coast of Ghana. Therefore, this study sought to answer the following four research questions: 1) How do fisherfolk perceive sex-for-fish transactions? 2) What is the motivation for engaging in sex-for-fish activities? 3) What are the causes of practicing sex-for-fish activities? and 4) What are the effects of sex-for-fish activities in fishing communities? This paper contributed to the literature on transactional sex in SSF and its implications for sustainability by investigating the human dynamics of sex-for-fish activities in Ghanaian coastal communities.

MATERIALS AND METHODS

Study area

The study focused on four fishing communities, namely Tema, Apam, Axim and Dixcove (Figure 1). The Tema fishing community is located in Tema Newtown within the Tema Metropolitan Assembly, with a population of over 177,924 (GSS 2021). Tema has two artisanal landing beaches, Ashamang and Awudun, with over 5,167 fishermen (Dovlo

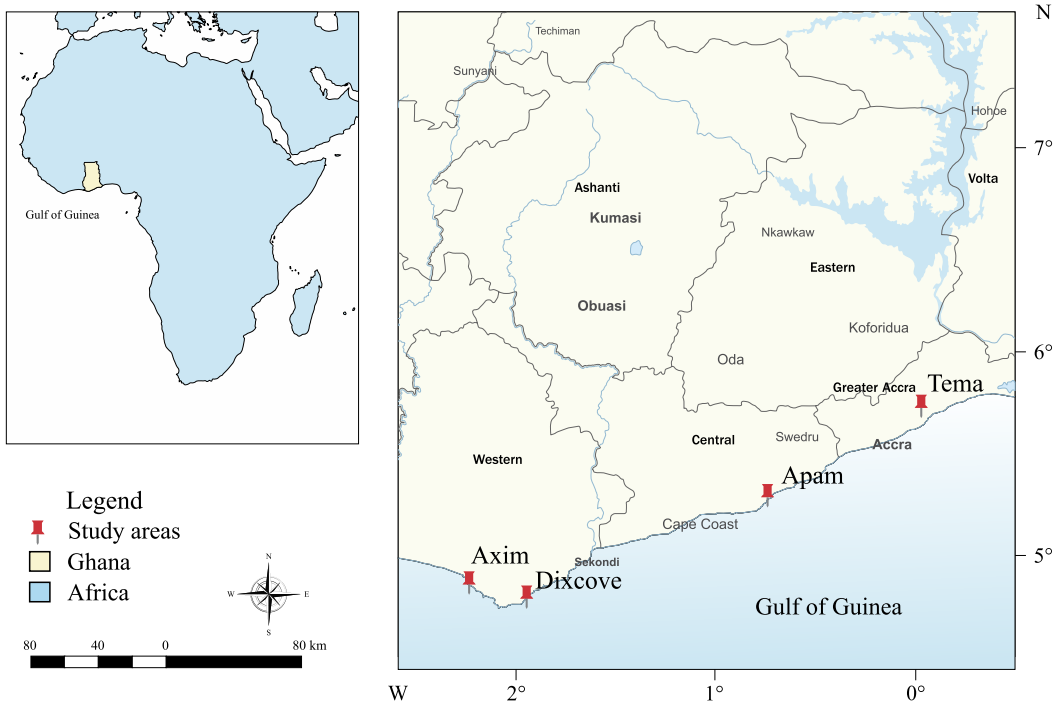

Figure 1. Map indicating the four study areas along the coast of Ghana.

2016). Axim, situated in the Nzema East district (04.8665° N, 04.2409° W), has 13,509 households and a population of 94,621 (GSS 2021). Axim has 12 landing beaches with more than 5,405 fishermen using purse nets (28%), lines (19%), set nets (36%), drift gill nets (11%), beach seines (2%), and Ali nets (4%) (Dovlo 2016). The community of Dixcove, located in Ahanta West, is home to the artisanal fishing port of Dixcove in the western region of Ghana (04.79368° N, 01.94612° W), with three landing beaches: Upper Dixcove, Lower Dixcove, and Eurom, with over 1,081 fishermen (Dovlo 2016). With a population of 129,512 (GSS 2021), Apam is a coastal town and capital of Gomoa West district in the Central Region of Ghana, is approximately 45 km east of the regional capital, Cape Coast (5° 17′ 38.8716″ N, 0° 44′ 20.49″ W). Fishermen in Apam use purse nets (28%), lines (19%), set nets (36%), drift nets (11%), beach seines (2%), and Ali nets (4%) (Dovlo 2016).

Research technique

Purposive sampling was used during the fieldwork to select fisherfolk from the four fishing communities. Purposive sampling, as defined by Palinkas et al. (2015), is a form of non-probability sampling used to select respondents most likely to yield appropriate and useful information. This method was chosen because it allowed data to be obtained from experts, saving both time and money. Data were collected from March to May 2024 with the aid of a local facilitator, whose assistance was essential during periods of language constraints. A semi-structured questionnaire was administered to respondents through face-to-face interactions upon receiving consent from respondents. The questionnaire included both open and closed-ended questions, and was segmented into five parts: i) demographics of the respondents, ii) perception about sex-for-fish transactions, iii) motivation for engaging in sex-for-fish transactions, iv) causes of sex-for-fish transactions, and v) effects of sex-for-fish transactions.

The validity of questionnaires was ensured by assessing face and content validity. Content validity involves a formal assessment by subject experts to determine the appropriateness of the content and to identify any misunderstandings or omissions. Face validity is an informal review of the questionnaire by non-experts who assess its clarity, comprehensibility, and appropriateness for the target group.

Twenty male fisherfolk, 26 female fisherfolk and 3 chief fishermen were interviewed. Fisherfolk between 20 and 40 years were selected and interviewed. Audio or video recording and photographing of participants were used to record responses. Respondents were interviewed in English, Fante, and Ga languages. The number respondents (49) were determined using the formula of (Cochran 1963): $N = Z^2 \times P \times (1\text{-}P)/D^2$, where Z is the normal deviate for two-tailed alternative hypothesis at a level of significance, P is the prevalence or proportion of event of interest for the study, and D is the precision with which a researcher wants to measure something.

Data analysis

Qualitative data were converted into quantitative data by assigning numbers to thematic responses and placed into SPSS v 27 for analysis after data cleaning was performed. Frequency analysis was done to assess the percentages of factors accounting for the perception, motivation, causes and effects of transactional sex. *Chi*-square goodness of fit test was done to determine the significant relationship between sampling locations and perceptions, motivation, causes and effects of sex-for-fish transactions at a p-value of < 0.05 confidence interval.

RESULTS

Perception of transactional sex-for-fish

The majority of respondents (95.9%) indicated

the existence of transactional sex in the four sampling locations, whereas 4.1% reported having no idea about the presence of such transactions (Table 1). *Chi*-square analysis indicated that the affirmative response to the presence of transactional sex-for-fish in the three sampling locations of the study was significantly higher than those who were unaware of its existence ($\chi^2 = 41.327$, df = 1, N = 49, p-value < .001).

Results showed that 52% of respondents perceived transactional sex as negative behavior, 36% saw it as way of satisfying their sexual desires, 10% saw it as a means to financial gains, and 2% saw it as a means to cure hunger. Hunger implied the inability to have three square meals a day, whereas financial gains meant making more income and keeping customers (mostly fishermen). Negative behaviour portrayed sex-for-fish exchange as a socially acceptable practice, while sexual factors centered on high fertility, sexual libido or lust for the opposite sex. However, the *Chi*-square analysis ($\chi^2 = 44.08$, df = 9, $p < .001$) revealed that perceptions provided by respondents varied significantly.

Perceptions such as sexual factors, negative behavior, and financial gains were dominant among respondents in Apam and Axim sampling sites (Table 2). Respondents in Apam perceived transactional sex as activities that are part of the lifestyle. Nonetheless, transactional sex was viewed as a way to end hunger and as a negative accepted practice in the Dixcove fishing community. Respondents in Tema cited financial gains and sexual factors as main drivers of sex-for-fish transactions (Table 2).

Table 1. Respondents opinion on existence of sex-for-fish transaction in sampling locations, Ghana.

Location	Yes (%)	No (%)
Dixcove	10 (100)	0 (0)
Axim	9 (90)	1 (10)
Apam	9 (90)	1 (10)
Tema	19 (100)	0 (0)

Motivation for transactional sex-for-fish

Respondents outlined six main sources of motivation for engagement in transactional sex. Of these, lack of money (34%), sexual factors (30%), greed (18%), and bad influence (11%) were the main sources of motivation, followed by lack of money (5%) and unemployment (2%). *Chi*-square analysis ($\chi^2 = 8444$, df = 15, $p < 0.001$) revealed significant differences among these perceptions. Motivations such as greed, sexual factors, and lack of money were dominant among respondents in Axim (Table 3). Respondents in Apam indicated that transactional sex was a consequence of the lack of money, bad influence, and sexual factors. Similarly, transactional sex-for-fish was identified in the Dixcove fishing community as a consequence of negative influences, greed, and lack of money. In all four sampling locations, respondents

Table 2. Site-specific perception of transactional sex-for-fish in Ghana.

Perception	Dixcove N (%)	Axim N (%)	Apam N (%)	Tema N (%)
Bad	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)
Hunger	0 (0.0)	2 (33.3)	2 (33.3)	2 (33.3)
Negative behaviour normalized	10 (33.3)	10 (33.3)	10 (33.3)	0 (0.0)
Deception	0 (0.0)	3 (14.3)	1 (4.8)	17 (81.0)

told that transactional sex was mainly due to the lack of money (Table 3).

Causes of transactional sex-for-fish

Respondents in the four sampling locations provided six causes of transactional sex. Among these reasons, the most important were poverty (51%), paying off debt (13%), school dropout (12%), and poor parenting (12%) (Figure 2). In Tema, poverty and poor parenting were the dominant causes of transactional sex (Table 4). Poverty, poor parenting, and paying off debt were the main causes of transactional sex for respondents in Apam. In Axim, respondents reported that paying off debts and poverty were the main causes of transactional sex. In the Dixcove fishing community, respondents reported that transactional sex was mainly caused by poverty, broken homes, unemployment, and school dropouts. Poverty was the only common cause of transactional sex among respondents from all four sampling sites (Table 4). However, *Chi*-square analysis (χ^2 = 29.943, df = 15, p = 0.012) indicated that causes of transactional sex varied significantly among sampling locations.

Table 3. Site-specific motivations for transactional sex-for-fish (TSFF) in Ghana.

Motivation of TSFF	Dixcove N (%)	Axim N (%)	Apam N (%)	Tema N (%)
Lack of money	5 (23.8)	2 (9.5)	5 (23.8)	9 (42.9)
Unemployment	1 (33.3)	1 (33.3)	1 (33.3)	0 (0.0)
Greed	2 (18.2)	8 (72.7)	1 (9.1)	0 (0.0)
Bad influence	2 (28.6)	0 (0.0)	5 (71.4)	0 (0.0)
High fertility	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)
Sexual factors	0 (0.0)	2 (11.0)	5 (27.8)	11 (61.1)

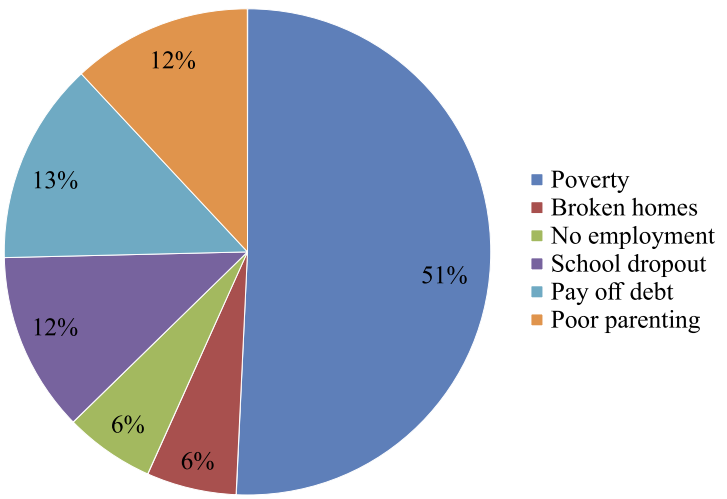

Figure 2. Causes of transactional sex among respondents in sampling areas in Ghana.

Table 4. Site-specific causes of transactional sex in Ghana.

Causes	Dixcove N (%)	Axim N (%)	Apam N (%)	Tema N (%)
Poor parenting	0 (0.0)	2 (25.0)	4 (50.0)	2 (25.0)
Poverty	2 (5.9)	6 (17.6)	9 (26.5)	17 (50.0)
Broken homes	2 (50.0)	0 (0.0)	2 (50.0)	0 (0.0)
Unemployment	2 (50.0)	1 (25.0)	0 (0.0)	1 (25.0)
Pay off debt	1 (11.1)	4 (44.4)	4 (44.4)	0 (0.0)
School dropout	3 (37.5)	2 (25.0)	3 (37.5)	0 (0.0)

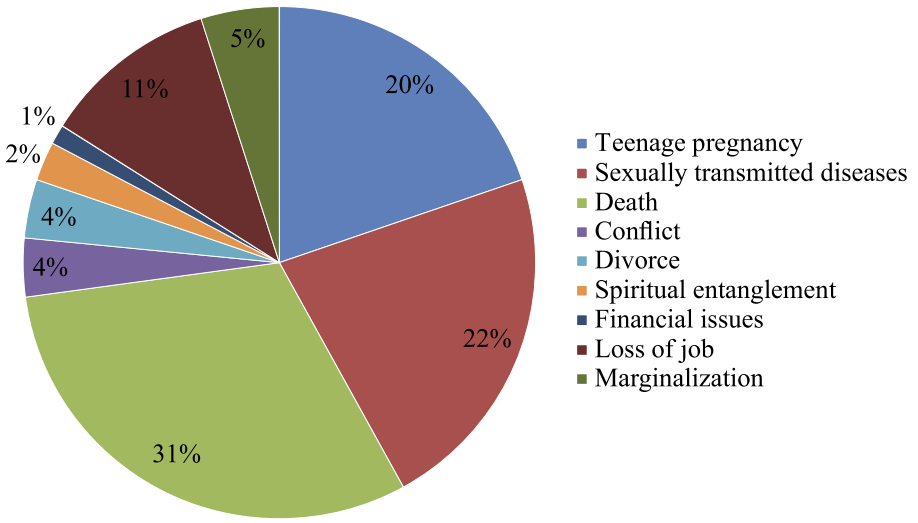

Figure 3. Effects of transactional sex among respondents in the four sampling areas in Ghana.

Effects of transactional sex-for-fish

Nine effects of sex-for-fish transactions were provided by respondents across the three sampling sites (Figure 3). Respondents across the four sampling locations reported that transactional sex led to death (31%), sexually transmitted diseases (STDs) (22%), teenage pregnancy (20%), and loss of job (11%) (Table 5). *Chi*-square analysis (χ^2 = 45.01, df = 24, p = 0.006) showed a significant relationship between sampling sites and the effects of sex-for-fish.

DISCUSSION

Results from the study align with findings from other fishing communities regarding sex-for-fish transactions. The gender dynamics within the fishing business play a significant role in influencing the practice of sex-for-fish (Nunan 2021). Such transactions are prevalent among women due to the economic vulnerabilities associated with the fish trade (Akobi et al. 2022; Mangubhai et al. 2022).

Table 5. Site-specific responses on the effects of transactional sex in Ghana.

Effects	Dixcove N (%)	Axim N (%)	Apam N (%)	Tema N (%
Teenage pregnancy	4 (25)	3 (18.8)	9(56.3)	0 (0)
Sexually transmitted diseases	7 (38.9)	3 (16.7)	2 (11.1)	6 (33.3)
Death	2 (8.0)	10 (40.0)	2 (20.0)	8 (32.0)
Conflict	1 (50.0)	1 (50.0)	0 (0.0)	0 (0.0)
Divorce	0 (0.0)	0 (0.0)	0 (0.0)	3 (100.0)
Spiritual entanglement	1 (50.0)	1 (50.0)	0 (0.0)	0 (0.0)
Financial issues	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)
Loss of job	0 (0.0)	5 (55.6)	0 (0.0)	4 (44.4)
Marginalization	0 (0.0)	2 (50.0)	1 (25.0)	1 (25.0)

The exchange of sex-for-fish tends to occur more frequently when fish supply is low and competition among fish buyers is high (Kwena et al. 2012; Torell et al. 2021; Magni et al. 2024; Oswald 2024). Traditionally, women are the primary participants in these transactions, operating within a context of highly unequal gender power dynamics to sustain their basic needs (Rosenbrock et al. 2000; Machel 2001; De Vogli and Birbeck 2005).

Although most respondents in the study disapproved of sex-for-fish behavior, this practice has become normalized in many fishing communities, as indicated by several other studies (Seemungal 2003; Kwena et al. 2017). In many fishing communities, elders and authorities at places of worship have failed to instill moral values among young adults, contributing to the acceptance of such negative behavior (Oduor and Kithuka 2020). Peer pressure and negative influences among both adults and youth facilitate sex-for-fish behaviors. Poulin (2007) reported that fish traders and processors are often influenced by their peers to engage in sex-for-fish as a means of maximizing profits in the fishing business. Similarly, young adults are coerced to participate in sex-for-fish activities in order to be competitive with their peers, more selective, or conform to social norms (Seeley and Allison 2005; Masvawure 2010; Oduor and Kithuka 2020; Owino et al. 2024). Poverty or financial instability is typically the primary reason for some fish traders engage in sex-for-fish transactions (Longfield et al. 2004; Béné and Merten 2008; Masvawure 2010). Driven by greed, many fish traders are in constant competition to secure a steady supply of fish by establishing and maintaining sexual partnerships with as many fishermen as possible to succeed in their business (Kwena et al. 2012). Poor parenting, often exemplified by the absence of one or both parents, can leave young girls in fishing communities struggling to support for their siblings, making the exchange of sex-for-fish supplies seem like the only viable option to escape their harsh realities (MacPherson et al. 2012; Ssetaala et al. 2024). Additionally, inability of parents to provide appropriate guidance to both young adult males and females is another aspect of poor parenting driving these young adults into sex-for-fish (Owino et al. 2024). According to Panga et al. (2022), uneducated individuals are more vulnerable to STDs, possibly due to a lack of knowledge regarding various HIV preventive measures.

Issues of divorce are more prevalent and less stigmatized because marriages in fishing communities are less formal. Divorce was affirmed by re-

spondents as another negative outcome of sex-for-fish in many fishing communities. This arises when fisherfolk become aware of the involvement of their partners in the exchange of sex-for-fish supplies. Divorce becomes the only option because fishermen believe that engaging in such negative sexual transactions violates the definition of a 'real' or 'good' woman (Yodanis 2000). On the part of women, many fishwives sometimes declare themselves divorced upon knowing the engagement of their fish husbands in a series of sex-for-fish activities (Retired and Mbezi 2010). Respondents indicated that the exchange of sex-for-fish predominantly contributes to the spread of STDs. This is likely due to the nature of these sexual encounters, which often occur quickly, leaving little time for physical preparation. Consequently, contraceptives, such as condoms, are seldom used (MacPherson et al. 2020). Furthermore, many fisherfolk involved in these transactions believe that condom use is only necessary for prostitutes and that using condoms diminishes sexual pleasure (Kyei-Gyamfi 2022). In some instances, fishmongers feel they have no choice but to engage in sexual intercourse without condoms as a means to secure fish supplies (Nakamanya et al. 2023). These circumstances leave fisherfolk particularly vulnerable to contracting STDs and facilitate their spread (Panga et al. 2022). Overall, the present study did not explore the strong association that has been found by studies like Kwena et al. (2020) between mobility, sexually transmitted diseases, and sex-for-fish behaviors among fishing communities.

This study also found that teenage pregnancy is a significant consequence of transactional sex in these communities. Teenage pregnancy is defined as pregnancy occurring before a girl turns 20, especially between the ages of 13 and 19, often as a means to fulfill basic needs among young girls (Kwena et al. 2013; Oduor and Kithuka 2020). In fishing communities, teenage pregnancy often results from sex-for-fish relationships among young adults, partly because parents may use their daughters to settle debts with fishermen and offer little education on sexual health, mostly limited to messages on abstinence (Masvawure 2010; Isaacs et al. 2020; Oduor and Kithuka 2020; Amoadu et al. 2022). This lack of education can prompt young adults to seek knowledge independently, leading them to engage in sexual activities with fishermen, increasing the risk of teenage pregnancy (Oduor and Kithuka 2020). Without positive role models, these young girls lack guidance to help shape their morals and avoid premarital sexual activities that can lead to teenage pregnancy. Furthermore, the prevalence of teenage pregnancy among young girls in fishing communities can negatively affect their education, increase the number of children growing up without fathers, and raise the likelihood of birth defects. These effects could have long-term repercussions on the productivity of fishing communities.

To escape marginalization due to teenage pregnancy and involvement in sex-for-fish activities, many young girls resort to terminating their pregnancies using unprescribed and potentially lethal drugs, leading to deaths (Seeley and Allison 2005). Hunter (2002) noted that untreated STDs resulting from risky sexual behavior, such as sex-for-fish, can ultimately lead to death among fisherfolk. The potential rise in death rates linked to the high prevalence of HIV may further deteriorate the reproductive health of fisherfolk in the community. Additionally, an increased death rate could diminish the workforce available to sustain fishing activities in these communities. In the absence of education and other beneficial interventions, sex-for-fish activities are likely to exacerbate the prevalence of STDs in fishing communities.

The study has certain limitations. For instance, the data collected from the field did not encompass all areas along the coast of Ghana where transactional sex is well-documented. Furthermore, focus group discussions were not organized, which could have enriched the findings from conducted interviews. Future research could focus on examining the perspectives of practitioners, migrant fishermen, and policymakers, which were not covered in this study.

Based on the findings, several recommendations can be made. First, credit facilities should be established in fishing communities to provide financial assistance to fisherfolk, which may help alleviate poverty, a primary driver of transactional sex. Additionally, it is crucial to offer educational opportunities and skill-building programs specifically targeted at girls and young women. Such programs can empower them to pursue sustainable livelihoods and resist the pressures to engage in transactional sex. Introducing alternative income-generating activities that decrease dependency on fishing is also important. This could include training in small business management and vocational skills. Finally, community engagement is necessary to raise awareness about the negative impacts of transactional sex, including the risks of STDs and teenage pregnancy.

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Author contributions

Samuel K. K. Amponsah: conceptualization; formal analysis; funding acquisition; investigation; methodology; visualization; writing-original draft and editing. Henry T. Apochie: data acquisition; writing-original draft and editing. Rachael Ackah: data acquisition and review.

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