ORIGINAL RESEARCH ARTICLE

Transactional sex in humanitarian settings: A comparative analysis of livelihood and demographic predictors

DOI: 10.29063/ajrh2024/v28i8s.7

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Abstract

Millions of people have been displaced within or outside their countries. Disruptions associated with displacement often lead to transactional sex with dire social, sexual and reproductive health implications. A common driver of transactional sex is food insecurity among refugees and internally displaced persons (IDPs), yet IDP/refugee settings offer an opportunity for females to challenge and renegotiate gender norms and exercise greater control over their lives and sexuality. We compared predictors of transactional sex across humanitarian settings and found them to be significantly different. Among IDPs, the likelihood of transactional sex reduces with having access to food ration and education, but increases with having 'other sources' of income. Among refugees, transactional sex likelihood reduces with having either/both parent(s) alive but increases with working for money. Hence, multiple factors drive transactional sex in different contexts. Protecting women in humanitarian situations from the risks of transactional sex requires an understanding of these differences. *(Afr J Reprod Health 2024; 28 [8s]: 62-73).*

Keywords: Sex-based exchange; refugee; internally displaced persons; Nigeria; Uganda

Résumé

Des millions de personnes ont été déplacées à l'intérieur ou à l'extérieur de leur pays. Les perturbations associées au déplacement conduisent souvent à des relations sexuelles transactionnelles avec des conséquences désastreuses sur la santé sociale, sexuelle et reproductive. L'insécurité alimentaire parmi les réfugiés et les personnes déplacées à l'intérieur de leur propre pays (PDI) est un facteur courant du sexe transactionnel. Pourtant, les contextes de PDI/réfugiés offrent aux femmes la possibilité de remettre en question et de renégocier les normes de genre et d'exercer un plus grand contrôle sur leur vie et leur sexualité. Nous avons comparé les prédicteurs du sexe transactionnel dans différents contextes humanitaires et nous avons constaté qu'ils étaient significativement différents. Parmi les personnes déplacées, la probabilité de relations sexuelles transactionnelles diminue avec l'accès à la ration alimentaire et à l'éducation, mais augmente avec « d'autres sources » de revenus. Parmi les réfugiés, la probabilité de relations sexuelles transactionnelles diminue lorsque l'un ou les deux parents sont en vie, mais augmente lorsque l'on travaille pour de l'argent. Par conséquent, de multiples facteurs déterminent le sexe transactionnel dans différents contextes. Protéger les femmes dans les situations humanitaires contre les risques liés aux relations sexuelles transactionnelles nécessite une compréhension de ces différences.. *(Afr J Reprod Health 2024; 28 [8s]: 62-73).*

Mots-clés: Échange basé sur le sexe ; réfugié; les personnes déplacées à l'intérieur du pays; Nigeria; Ouganda

Introduction

The world currently has more than 27 million refugees (who have crossed international borders) and 53 million internally displaced persons (still resident within their countries)[1], who have been forced to flee from their homes. Refugees and IDPs usually require humanitarian aid because they leave behind (almost) all of their possessions and are faced with disruptions to their livelihoods[2,3]. A major implication of loss of livelihood for refugees and IDPs is increased economic vulnerability and susceptibility to sexual exploitation[4–6]. Earlier studies have documented mixed results on the association between access to basic needs and involvement in transactional sex in resource scarce settings[7,8] suggesting that women and girls may exchange sex for food or other things when faced with deprivation. Depending on context, transactional sex may also be a major source of

livelihood for women and girls experiencing basic deprivation[8], and contrary to the popular framing of helplessness and victimization[9–11], it may be a marker of adolescent girls and young women's agency in a state of dire social and economic situation[12]. Yet transactional sex, the exchange of sex for materials, gifts, goods or commodities, or financial resources/cash, services or privileges gifts, in order to meet the needs and wants of the parties involved[12,13] comes with the risks of contracting sexually transmitted infections[5,14] and sexual violence with long-term negative health and social implications[11]. We set out to show what theory supports in the IDP/refugee contexts – Is transactional sex principally driven by survival or could it be a marker of agency in new social and economic contexts that give room for norms to be challenged? People within society interpret transactional sex variably, including as personal power that manifests in women's ability to withhold sex, negotiate value for it, and the swapping of the gender role of bread winner between men and women. In one study, young women considered their sexuality an advantage to be exploited for pleasure and material gain and parents considered sex-based exchange normative[15].

A similar study documented the gender norm that women's material needs should be met by men with whom they are sexually involved[16]. Transactional sex is therefore considered normal and girls in sexual relationships that do not offer benefits in exchange are perceived to be acting contrary to the norm. Transactional sex can also be a means of accessing resources and an indication of sexual power structures in the refugee setting[17].To properly explore transactional sex within the IDP/refugee context, it is important to understand traditional gender norms. Men, traditionally are household heads, decision makers and sometimes own women and exercise enormous control over them[18]. If these typical patriarchal practices get carried over to the IDP/refugee setting, women become further disempowered. They become overburdened with the gender role of caring for their children and older relatives, sometimes in the absence of their husbands. They are also likely to be excluded from decision-making in the camps or settlements[18]. On the other hand, the IDP/refugee setting may empower women and girls, contrary to the assumption that gender roles in normal settings are transferred to IDP/refugee camps and settlements. The humanitarian setting may be a leveler, taking away conventional livelihoods from both men and women, and by implication, taking away the advantage men have over women, and offering an opportunity for gender roles to be deconstructed and renegotiated in ways that may empower women[18]. This is more so because the humanitarian setting is typically closely monitored, with humanitarian operational guidelines and standards, increased access to information and aid by women on equal footing with men. In these settings, women may become better informed about their sexual and reproductive health and rights, and empowered to challenge traditional gender roles, giving them greater autonomy over their lives[18]. Further, in the refugee setting, research has shown that there is greater room for entrepreneurial activities that can transform women's lives, although this is less the case in the camp setting[18]. Women in refugee/IDP contexts also take up household leadership roles and experience greater involvement in decision-making[19] opportunities that ordinarily may not offer themselves outside the IDP/refugee setting. A slight difference worthy of mention exists between camps and settlements, however. While camps are of a temporary nature with non-durable building materials like tarpaulin and iron sheets, refugee settlements are more permanent with more durable housing, and they are better designed for economic and social integration into the host country. For these reasons, settlements typically have more improved living conditions than camps[18]. By implication, people in settlements should be less dependent on aid in comparison with those in camps considering their livelihood advantage[18]. On the flip side, settlements are typically remote and rural, with limited employment opportunities[18]. People in camps may also have limited employment opportunities due to discrimination because of fear by host communities that displaced persons in camps may be radicalized and may be used to carry out attacks on them (the locals). These factors may affect the livelihoods of people in camps and settlements negatively and they may resort to unconventional livelihoods, including transactional sex. The seeming temporariness of camp life may also have implications for how women and girls perceive gender norms and their willingness to 'renegotiate' them to their own advantage. On the other hand, the thought that a settlement brings about a new normal may be

motivation for adolescent girls and young women to challenge traditional gender norms which may manifest in different ways, including transactional sex. Gender gaps exist in livelihood and gender-based violence etc. in the context of displacement, with women and girls being the more affected gender[20,21]. They are often disadvantaged and 'vulnerable' to transactional sex, and physical and sexual abuse[22]. A recent study shows that as high as 71% of adolescent refugee girls have had transactional sex[5]. As previous studies have documented, exposure to armed conflict breaks down family and community structures and exposes girls and young women directly to harsh economic conditions that leave them with transactional sex or early marriage as the only means of survival[9,23]. Even where food supplies exist, they may be irregular or inadequate in IDP/refugee settings[24]. The main reason why girls and women are involved in transactional sex is therefore to provide food and meet other basic needs for themselves and their children[12,25,26]. Further complicating the sexual and reproductive health of female refugees/IDPs are the twin factors of low SRH knowledge of adolescent girls and young women in humanitarian settings and poor access to SRH services[27]. The implications include the risk of contracting STIs, including HIV[14,28] since girls become exposed to sex with older, more sexually experienced adults; unwanted pregnancies and unsafe abortions[25]; and sexual and gender based violence with lifelong negative implications[10,11].

Refugees and IDPs in sub-Saharan Africa are doubly challenged considering the general poor access to resources within the region[29] and the additional burden introduced by displacement. Nigeria currently has about three million IDPs in camps, resulting largely from the activities of Boko Haram in the North East, other non-state armed groups, especially in the North West, and herder-farmer conflict in the North Central zone[30]. Uganda, is notably the third largest host of refugees in the world with about 1.5 million settlement-based refugees from several African countries, including South Sudan, Democratic Republic of Congo, Somalia, Burundi, Rwanda, etc[31]. Addressing the sexual and reproductive health needs of women and girls in low-resource humanitarian settings requires a deeper understanding of factors implicated in refugees' and IDPs' involvement in transactional sex, and how these factors vary across contexts[9,26]. The refugee and IDP contexts are similar, yet the realities of refugees and IDPs may be different. Understanding and addressing the SRH challenges of IDPs and refugees requires understanding whether the drivers of sexual and reproductive health behavior are variable. For instance, it will be helpful to policymakers and SRH program designers and implementers in humanitarian contexts to understand how involvement in transactional sex varies across contexts and how the different contexts shape involvement in transactional sex. For the purpose of this study, we hypothesized that female refugees and IDPs who don't work, don't receive food ration, don't have sufficient food to eat every day and don't have any parent alive are more likely to be involved in transactional sex than those who have these factors present in their lives. The hypothesis is based on the assumption that transactional sex is survival sex, that is, it is primarily used as a means of survival[9,26].

The death of parents causes disruptions that expose girls directly to economic hardship and orphans may be more likely to exchange sex for their basic needs and those of the children[12,25]. Despite food supplies in refugee and IDP settings, food insecurity remains a major challenge and a reason for exchanging sex for food[24]. Previous research suggests the need for caution, however, as people already meeting their basic needs through sex-based exchange may report food sufficiency than those not involved in sex-based exchange[8]. This study explores how these factors and other demographic variables interplay with adolescent girls' and young women's involvement in transactional sex in similar but significantly different humanitarian contexts in Nigeria and Uganda.

Methods

The data used in this analysis come from the survey results of the formative research and service assessment phase of a project designed with the aim of re-designing sexual and reproductive health and rights (SRHR) service provision in humanitarian settings in Nigeria and Uganda. The survey was cross-sectional, and participants were adolescent girls and young women (15-24 years) in an IDP camp and a refugee settlement.

Study locations

The Muna El Badawe Internally Displaced Persons' (IDP) Camp, Maiduguri, Borno State, Northeast Nigeria, was opened in 2014 and was closed down in 2022. The IDP camp accommodated about 50,000 IDPs from more than ten thousand households. The camp was organized into five zones – A to E, which approximate communities within the camp. Each zone consisted of persons displaced from the same community or neighbouring communities or a cluster of culturally similar communities. The majority of the IDPs moved to the camp from rural parts of Borno State as a result of the activities of Boko Haram terrorists. Nakivale refugee settlement became recognized as a refugee settlement in 1960. It has a population of about 137,200 refugees from nearly 40,000 households. The settlement is divided into three major administrative zones – Base camp, Juru, and Rubondo, and smaller divisions like Rubaga, Kampala and Makindye. The three major zones are further subdivided into villages, 29 in Base camp, 23 in Juru and 22 in Rubondo. The majority of the refugees are nationals of the Democratic Republic of Congo, Burundi, Somalia, Rwanda, Ethiopia, Eritrea, and South Sudan[32].

Sample size and sampling techniques

We adopted a three-stage cluster sampling technique. We identified zones as sampling clusters within the camp/settlement and randomly selected enumeration areas and villages in the selected IDP camp and refugee settlement in Nigeria and Uganda respectively in the first stage; households within enumeration areas and villages in the second stage; and respondents within households in the third stage. We used the formula that follows to calculate the sample sizes.

$$n = d * \frac{4(1.96)\text{^}2 * p(1-p)}{\delta^2} \quad /.90$$

We calculated the sample sizes for both settings based on the modern contraceptive prevalence rates of 10% for young women (15-24 years) in Northern Nigeria[33] and 8.7% for a similar refugee setting (Palabek) in Uganda[34]. Using a 95% confidence interval, a 90% response rate, and a margin of error of 5%, we calculated sample sizes of 459 and 406 for Nigeria and Uganda respectively. The sample size in Nigeria was increased to 480 for ease of allocation of slots to the 5 zones (80 per zone); and 450 in Uganda for ease of allocation of slots to the three villages. A systematic sampling technique was adopted in the selection of households. Every nth household was selected (that is in each zone, the sampling interval was obtained by dividing the number of listed households by 80 in Nigeria, and 150 in Uganda). Only one participant was interviewed in each selected household.

Survey tool and mode of administration

The survey questionnaire used for the study included questions on demographic background of participants, basic living conditions in the camp, contraception, pregnancy, abortion, gender-based violence, and access to and use of sexual and reproductive health services. The questionnaire was deployed through the KoboToolbox platform and data collection was done by trained female data collectors, who interviewed participants and documented their responses real-time. The survey tool was translated to local languages (Hausa in Nigeria, and Swahili in Uganda) and back-translated to English to ensure consistency. The average interview time was 43 minutes. The interviews were conducted in the languages respondents were most comfortable with, and during some interviews, languages were combined as needed, to ensure that respondents understood the questions and could clearly convey their responses to data collectors. The interviews were conducted in August 2021 in Nigeria and April 2022 in Uganda.

Data management and analysis

We used simple frequencies and percentages to describe the study participants and livelihood variables, and logistic regression analysis to determine predictors of sex-based exchange. In the first place, we used logistic regression models to determine the predictors of sex-based exchange for all the study participants, with humanitarian setting (IDP vs refugee) included in the model as a covariate in order to compare involvement in sex-based exchange across settings. In this first level of analysis, we presented unadjusted and adjusted odds ratios. We further analyzed sex-based exchange separately for Nigeria and Uganda, reporting adjusted odds ratios only, and marking significant predictors at 95% confidence intervals in each setting. We analyzed the data with STATA version 16.

Ethical approval

We obtained ethics review approval for the study protocol and tools from the National Health Research Ethics Committee of Nigeria's Federal Ministry of Health, in Nigeria, and the Makerere University School of Public Health Institutional Review Board in Uganda. We obtained verbal consent from all selected participants 18 years and older, before interviews were conducted. For selected participants below 18 years, we obtained consent from their parents or other legally authorized adult guardians in the absence of biological parents, and assent from the minors in addition. Interviews were conducted outside earshot of third parties and no identifying information were collected about respondents.

Results

Background characteristics of the participants are presented in Table 1. As presented in Table 1, about 61% of the participants were within the 15-19 years age bracket. The mean age is 18.58 years, with no significant difference between settings. In the Nigerian IDP setting, less than half (48%) of the participants were single/never married girls/women. In the Ugandan refugee setting, however, 71% were single/never married. Generally, participants with secondary or higher educational qualifications were few in both settings.

Table 1: Background characteristics of study participants

Age distribution	Location of study IDP Camp Nigeria N = 480	Refugee settlement Uganda N = 461	Total
15 to 19 years	279 (58.13)	294 (63.77)	573 (60.89)
20 to 24 years	201 (41.88)	167 (36.23)	368 (39.11)
Mean age (SD)	18.57 (0.129)	18.59 (0.14)	18.58 (0.095)
Marital status			
Single	230 (47.92)	325 (70.5)	555 (58.98)
Married/Ever married	250 (52.08)	136 (29.5)	386 (41.02)
Education			
Never been to school	284 (59.17)	97 (21.04)	381 (40.49)
Primary or elementary	109 (22.71)	275 (59.65)	384 (40.81
Junior/Secondary or higher education	87 (18.13)	89 (19.31)	176 (18.7)
Biological mother alive			
No	76 (15.83)	90 (19.52)	166 (17.64)
Yes	404 (84.17)	371 (80.48)	775 (82.36)
Biological father alive			
No	170 (35.42)	192 (41.65)	362 (38.47)
Yes	310 (64.58)	269 (58.35)	579 (61.53)
Orphan status			
Neither parent alive	50 (10.42)	60 (13.02)	110 (11.69)
Either parent alive	146 (30.42)	162 (35.14)	308 (32.73)
Both parents alive	284 (59.17)	239 (51.84)	523 (55.58)
Schooling status			
Not currently schooling	409 (85.21)	289 (62.69)	698 (74.18)
Currently schooling	71 (14.79)	172 (37.31)	243 (25.82)
Type of shelter			
Thatched house	256 (53.33)	88 (19.09)	344 (36.56)
Tarpaulin house	190 (39.58)	152 (32.97)	342 (36.34)
Iron sheet house	33 (6.88)	217 (47.07)	250 (26.57)
Others	1 (0.21)	4 (0.87)	5 (0.53)
Total	480 100.00	461 100.00	941 100.00

Table 2: Livelihood factors and sex-based exchange by setting

	Location of study		
	IDP Camp (Nigeria)	Refugee settlement (Uganda)	Total
Participant works for money			
No	352(73.33)	324 (70.28)	676 (71.84)
Yes	128 (26.67)	137 (29.72)	265 (28.16)
Participant has other sources of income			
No	411 (85.63)	55 (11.93)	466 (49.52)
Yes	69 (14.37)	406 (88.07)	475 (50.48)
Participant receives food ration			
No	187 (38.96)	242 (52.49)	429 (45.59)
Yes	293 (61.04)	219 (47.51)	512 (54.41)
Participant has enough food to eat each day			
No	39 (8.13)	182 (39.48)	221 (23.49)
Yes, everyday	43 (8.96)	39 (8.46)	82 (8.71)
Yes, more than half the days	127 (26.46)	53 (11.5)	180 (19.13)
Yes, less than half the days	271 (56.46)	187 (40.56)	458 (48.67)
Ever obtained food, shelter, money, favor or services for sex			
No	430 (89.58)	380 (82.43)	810 (86.08)
Yes	50 (10.42)	81 (17.57)	131 (13.92)
Exchanged food for sex (Nigeria: n=50; Uganda: n=81)	30 (60.0)	59 (72.84)	89 (67.94)
Exchanged shelter for sex (Nigeria: n=50; Uganda: n=81)	1 (2.0)	6 (7.41)	7 (5.34)
Exchanged money for sex (Nigeria: n=50; Uganda: n=81)	26 (52.0)	57 (70.37)	83 (63.36)
Exchanged other things for sex (Nigeria: n=50; Uganda: n=81)	1 (2.0)	4 (4.94)	5 (3.82)

The settings contrast significantly, however, in educational qualifications, with more than half (59%) of the IDP setting participants having never been to school, compared to 21% in the refugee setting. In both settings, more than 80% of the participants' biological mothers were alive. Lower proportions were recorded for participants whose father were alive in both settings – 65% and 58% in the IDP and refugee settings respectively. More than half (56%) of the participants had both biological parents alive, 59% in the Nigeria and 52% in Uganda. In Nigeria barely 15% of the women and girls were schooling at the time of the study, compared to 37% in Uganda's refugee setting. The commonest types of shelter in the IDP setting were the thatched house (mentioned by 53%) and tarpaulin house (mentioned by 40%). In the refugee setting, the iron sheet house type was the commonest shelter type, mentioned by 47%. A third of the participants in the refugee setting lived in shelters made of tarpaulin. Generally, the housing conditions were poor with almost all the study participants (99%) across setting mentioning pit latrine as the type of toilet facility in their homes and more than half (58%) said they 'don't feel safe' to use the toilet at night, slightly higher in Nigeria (61%) than Uganda (55%).

Table 2 Generally, a little more than a quarter (28%) of the respondents said they worked for money, slightly lower in Nigeria (27%) than Uganda (30%). The majority of the participants in the refugee setting (88%) had other sources of income. In Nigeria, the proportion was 14%. A greater proportion of IDP participants received food ration (61%) than refugee participants (48%). Across settings, less than 10% had sufficient food every day.

Generally, 14% of the respondents said they had exchanged food, shelter, money, favor or services for sex. Sex-based exchange was slightly lower in the IDP setting (10%) than the refugee setting (18%). Among those involved in sex-based exchange, 60% had obtained food, and 52% had obtained money in exchange for sex in Nigeria.

Table 3: Logistic regression model for predictors of sex-based exchange

Predictor variables	Unadjusted Odds ratio (95% CI)	p-value	Adjusted Odds ratio (95% CI)	p-value
Age in years	1.217 (1.141-1.298)	0.000	1.113 (1.022-1.211)	.013
Education				
No formal education (RC)	1	.	1	.
Primary/Elementary	0.642 (0.43-0.96)	0.031	.678 (0.415-1.109)	.121
Higher	0.460 (0.259-0.82)	0.008	.503 (0.265-0.958)	.037
Current schooling status				
Not in school (RC)	1	.	1	.
Currently schooling	0.228 (0.121-0.431)	0.000	.353 (0.171-0.726)	.005
Marital status				
Single (never married)	1	.	1	.
Ever married	1.86 (1.282-2.7)	0.001	1.03 (0.637-1.664)	.905
Orphan status				
Neither parent alive (RC)	1	.	1	.
Either parent alive	0.328 (0.193-0.558)	0.000	.411 (0.233-0.727)	.002
Both parents alive	0.302 (0.186-0.493)	0.000	.477 (0.279-0.817)	.007
Work for money				
Does not work for money (RC)	1	.	1	.
Works for money	1.845 (1.257-2.707)	0.002	1.411 (0.93-2.14)	.106
Other sources of income				
Has no other source of income (RC)	1	.	1	.
Has other sources	1.588 (1.09-2.314)	0.016	1.159 (0.656-2.046)	.611
Food ration				
No food ration (RC)	1	.	1	.
Gets food ration	0.646 (1.446-0.936)	0.021	.704 (0.472-1.048)	.084
Food sufficiency				
No (RC)	1	.	1	.
Yes, everyday	1.318 (0.13-0.777)	0.012	.532 (0.206-1.374)	.192
Yes, more than half the days	0.503 (0.284-0.889)	0.018	.648 (0.34-1.233)	.186
Yes, less than half the days	0.618 (0.404-0.947)	0.027	.799 (0.492-1.298)	.364
Setting				
IDP camp (Nigeria) (RC)	1	.	1	.
Refugee settlement (Uganda)	1.833 (1.255-2.677)	0.002	1.905 (1.003-3.619)	.049
Constant			.054	.001

In Uganda, 73% obtained food, and 70% obtained money in exchange for sex. Obtaining shelter and other items for sex were less common than food and money, especially in Nigeria.

The results in Table 3 show that schooling status, orphan status, education and age are predictors of sex-based exchange when adjusted for other variables in the model. The adjusted odds of sex-based exchange increase with age (OR = 1.1; p-value=0.013). Participants with secondary and higher education also had lower odds of sex-based exchange in comparison with those who never attended school (OR = 0.5; p-value=0.037); and those currently schooling had lower odds of sex-based exchange in comparison with those not in school (OR = 0.4; p-value=0.005). The likelihood of sex-based exchange was lower for women and girls with either parent alive (OR = 0.4; p-value=0.002) and those with both parents alive (OR = 0.5; p-value=0.007) when compared with girls/women with neither parent alive.

Table 4 In the IDP setting, accessing food ration was the most significant predictor of sex-based exchange, with those who got food ration being only 30% as likely to be involved in sex-based exchange as those without access to food ration. Education also significantly predicts sex-based exchange with the likelihood of sex-based exchange declining as education increases. Those who said they had 'other sources' of income were 2.3 times more likely to have been involved in sex-based exchange (p-value<0.05).

Table 4: Logistic regression models for demographic predictors of sex-based exchange by setting

Predictor variables	IDP camp (Nigeria) Adjusted Odds ratio (95% CI)	Refugee settlement (Uganda) Adjusted Odds ratio (95% CI)
Age in years	1.000 (0.88-1.14)	1.2** (1.06-1.35)
Education		
No formal education (RC)	1	1
Primary/Elementary	0.169** (0.44-0.65)	1.53 (0.77-3.03)
Higher	0.122** (0.03-0.56)	1.27 (0.52-3.09)
Current schooling status		
Not in school (RC)	1	1
Currently schooling	1.278 (0.30-5.38)	0.35* (0.14-0.84)
Marital status		
Single (never married)	1	1
Ever married	1.11 (0.53-2.32)	1.06 (0.55-2.05)
Orphan status		
Neither parent alive (RC)	1	1
Either parent alive	1.14 (0.35-3.68)	0.25*** (0.12-0.52)
Both parents alive	1.21 (0.4-3.67)	0.25*** (0.12-0.52)
Work for money		
Does not work for money (RC)	1	1
Works for money	1.63 (0.28-1.4)	2.22** (1.26-3.92)
Other sources of income		
Has no other source of income (RC)	1	1
Has other sources	2.29* (1.03-5.1)	0.87 (0.40-1.93)
Food ration		
No food ration (RC)	1	1
Gets food ration	0.29*** (0.15-0.58)	1.07 (0.62-1.86)
Food sufficiency		
No (RC)	1	1
Yes, everyday	5.37 (0.84-34.32)	0.15 (0.02-1.18)
Yes, more than half the days	1.79 (0.35-9.18)	0.67 (0.27-1.65)
Yes, less than half the days	3.04 (0.65-14.27)	.67 (0.37-1.22)
Constant	0.10 (0.01-1.78)	0.02 (0.37-1.22)
	LR chi^2=48.3***; Pseudo R^2 = 0.15	LR chi^2=93.52***; Pseudo R^2 = 0.22

*** p<.001, ** p<.01, * p<.05

In the refugee setting, having either parent alive or both parents alive reduced the likelihood of sex-based exchange in comparison with respondents who had neither parent alive (β = 0.3; p-value<0.001 for both categories). Participants who worked for money were twice as likely to be involved in sex-based exchange in comparison with those who did not work for money (p-value < 0.01). Those currently schooling were also less likely to be involved in sex-based exchange than those not in school (β = 0.4; p-value<0.05); and the odds of sex-based exchange increase with age (β = 1.2; p-value<0.01).

Discussion

As this study has shown, many refugees and IDPs do not work for money, often because of detachment from their usual residence. People whose traditional livelihood activities depend on land lose their source of livelihood when they are displaced and can no longer access their land. There may also be mistrust between refugees/IDPs and host communities and this may affect community members' willingness to hire them, similar to earlier findings[35]. The study also shows that camp dwellers are less likely to report other sources of income than those in settlements. Generally, a large proportion of IDPs and refugees in this study depend on food rations provided by different organizations, including state agencies, UN agencies, and local and international NGOs. Dependence on food ration is more common in IDP setting, however, with the refugee setting bearing greater signs of permanent settlement and livelihood advantage[18]. In the IDP

setting there is greater sense of temporariness, including in the forms of accommodation provided, and the type of jobs for which people may be hired. Where people are not likely to hold decent and permanent jobs, transactional sex becomes a viable alternative. Our findings partly align with previous studies that posit that economic conditions are the primary drivers of transactional sex[9,26], but only in the camp setting Adolescent girls and young women who receive food aid in camps are less involved in transactional sex. A major implication of this finding is that the social and economic conditions foisted on displaced populations by COVID-19 would have further created situations perfect for a surge in transactional sex in the camps, in line with previous findings[28].

The prevalence of transactional sex does not vary significantly across settings, only marginally higher in the refugee setting; but the plausible drivers are different across settings. In the camp setting, the two major predictors – having other sources or income and receiving food ration – are survival variables essentially. The association between having 'other sources of income' and transactional sex appears somewhat counterintuitive. We argue that young women and girls in the IDP setting report transactional sex as 'other source of income' similar to the argument about transactional sex could be considered a normative means of livelihood, and signaling the agency of women and girls[7,12,36]. Conversely, those getting food ration have lower odds of involvement in transactional sex in the IDP setting, further providing evidence in support of the survival sex theory. Our results show further that involvement in transactional sex declines with education, in line with the findings of Okigbo *et al*[37], presumably because education, through sexuality and reproductive health education, which is often school-based, exposes people to the negative implications of transactional sex[38].

In the refugee setting, however, having either or both parents alive reduces the likelihood of transactional sex considerably. Being an orphan strips girls of the social and economic support that may be provided by parents and exposes them directly to hardship, thus increasing their likelihood of engaging in transactional sex. This explanation reinforces the social disruption theory[23]. The absence of both parents can also take away parental inhibitions to adolescent girls' and young women's capacity to challenge traditional gender norms. This makes room for women's greater control over their bodies and greater likelihood to explore opportunities for getting benefits from sexual relationships. Another key predictor of transactional sex in this setting is working for money, with young women and girls who 'work for money' being more likely to have exchanged sex for food, money or other items. This shows that women and girls involved in transactional sex are not less likely to earn money, an argument that would have reinforced the survival sex theory. In comparison with the camp setting, there is no evidence of greater economic hardship or greater need for sex to survive, yet we found slightly higher involvement in transactional sex in the refugee settlement. In addition, having some form of financial empowerment in the form of income earning, and being currently in school, (another form of empowerment) are predictors of transactional sex. These findings suggests that the greater sense of permanence (not having to return to their initial setting) may be driving women's greater willingness to exercise greater control over their bodies in the refugee setting. Yet there is need for further studies to explore how perceptions of permanence versus temporariness in IDP/refugee settings influence willingness to deconstruct and renegotiate traditional norms in general and gender norms in particular.

The major item of sex-based exchange in both contexts is food, supporting the survival sex theory – the assertion that women and young girls get involved in transactional sex to meet their basic needs and those of their immediate households members, especially their children[9,26]. Of interest, however, is that while there is considerable gap between the proportion of adolescent girls and young women who had exchanged sex for food and money in the IDP setting (60% vs 52%), almost an equal proportion of those involved in transactional sex in the refugee setting mentioned money as the item of exchange (70%) as those who mentioned food (73%). A large proportion of those involved in transactional sex exchanging money for sex suggests that 'survival' or basic needs may not be the sole motivation. In addition, the documented livelihood advantage of the settlement over the camp in this study does not translate to lower involvement in transactional sex in the refugee setting. The findings of the study have implications

for programs and policies. Programs need to be built on evidence about what drives transactional sex in refugee and IDP settings, which are not necessarily the same or similar, despite the similarities in the settings.

A common approach to address the problem of transactional sex is empowerment, yet, stand-alone empowerment programs may not prevent transactional sex among girls and young women in humanitarian settings[6], especially in the refugee setting. As our study has shown, empowerment may further increase adolescent girls' and young women's willingness to challenge norms and exercise greater control over their bodies. Interventions need to be situated within contexts and designed to address the problem from multiple fronts, including the social and economic empowerment of girls, provision of health-promoting sexuality education to improve SRH knowledge, provision of SRH services, and addressing contextual barriers to use of SRH services in refugee and IDP settings. Future research needs to explore the SRH of adolescent boys who may also be vulnerable to sexual abuse, an area that is poorly documented and not adequately addressed by policies and programs[4].

Study strengths and limitations

The strength of this work lies in its exploration of the often-taken-for-granted social realities that play out in diverse humanitarian contexts. Rather than assume sameness of experiences and the implications of disruption for refugees and IDPs, the study has provided evidence to the contrary. Another major strength is the use of statistical analyses with multiple independent variables. We, however, acknowledge that it is difficult to obtain reliable responses on a subject matter that may be stigmatizing – transactional sex. Involvement may have been underreported and we may not be able to fully explain the reasons behind transactional sex in quantitative terms, without explaining the effect of the ever-present contextual factors in all social settings. The logistic regression analysis that was adopted cannot address this issue. A question that a curious reader may ask is whether a mixed-method study design that includes some qualitative data may not have been more appropriate for this study. We posit that future studies may benefit from study designs that acknowledge this limitation and seek to address it by further exploring the contextual issues around transactional sex in humanitarian settings using qualitative methods.

Conclusion

The refugee and IDP settings differ in the predictors of transactional sex in two sub-Saharan Africa settings. The study provides evidence that transactional sex may be perceived as a viable source of income or a way of meeting basic needs in the IDP setting. In the refugee setting on the other hand, transactional sex appears to be more of an indicator of agency, or women's greater capacity for renegotiating gender norms and exercising greater control over their lives. It also provides evidence that educational qualification or being currently in school may moderate involvement in transactional sex. We conclude that transactional sex is largely a natural response to social and economic disruptions and a means of survival in the IDP settings, but less so in the refugee setting as livelihood advantage does not translate to reduced involvement in transactional sex. Social and political factors such as discrimination and exclusion, that keep IDPs unemployed and unemployable are remote drivers of transactional sex. Education curricula and other empowerment interventions in the IDP and refugee contexts need to be strengthened to ensure the protection of adolescent girls and young women from the risks associated with transactional sex.

Acknowledgements

This study was done with the aid of a grant from the International Development Research Centre, Ottawa, Canada. The authors are grateful to the internally displaced persons, refugees and persons providing services in humanitarian settings who took part in the study.

Authors' contributions

CI, HM, AE, and BK conceived the study. CI, HM, AE, BK and MK designed the study. MK, AE, SA, FB, BK, and DA supervised all data collection and data quality. MK, CR, ES, SA, and HM analyzed the data. MK prepared the manuscript with support from HM, CI, ES, and CR. All the authors critically reviewed the draft

manuscript and approved the final version for publication.

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