

BMJ Open Sexual violence at each stage of human trafficking cycle and associated factors: a retrospective cohort study on Ethiopian female returnees via three major trafficking corridors

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To cite: Gezie LD, Worku A, Kebede Y, *et al.* Sexual violence at each stage of human trafficking cycle and associated factors: a retrospective cohort study on Ethiopian female returnees via three major trafficking corridors. *BMJ Open* 2019;**9**:e024515. doi:10.1136/bmjopen-2018-024515

► Prepublication history and additional material for this paper are available online. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2018-024515>).

Received 1 June 2018
Revised 13 May 2019
Accepted 25 June 2019



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ABSTRACT

Objectives Evidence showed that the prevalence of sexual violence during the whole human trafficking period was high. However, the distribution of sexual violence along the stages of the trafficking cycle is unclear. This study aimed to determine the prevalence of sexual violence at each stage of trafficking and factors associated with it among Ethiopian trafficked females.

Design A retrospective cohort study was conducted to study trafficking returnees regarding their previous experiences at each stage of trafficking.

Settings Data were collected at immigration offices in three border towns of Ethiopia located bordering Sudan, Kenya and Djibouti.

Participants Six hundred and seventy-one women who were trafficked from Ethiopia were recruited into the study consecutively. They were recruited when they came back home via the three border towns either by deportation or voluntary return.

Outcome measure The outcome variable was sexual violence.

Results The prevalence of sexual violence was estimated at 10% (95% CI 7.9 to 12.5) during predeparture, 35.0% (95% CI 31.5 to 38.7) travelling period, 58.1% (95% CI 54.2 to 61.8) at destination and 19.5% (95% CI 15.2 to 24.6) detention stages. The odds of sexual violence among returnees aged 14–17 years was about twofold when compared with that of women aged 26–49 years (adjusted OR (AOR)=1.97; 95% CI 1.11 to 3.52). Similarly, being smuggled initially (AOR=1.54; 95% CI 1.09 to 1.93), restricted freedom (AOR=1.45; 95% CI 1.13 to 1.86) and time spent at each stage of trafficking (AOR=1.028; 95% CI 1.024 to 1.033) were positively associated with sexual violence.

Conclusions The prevalence of sexual violence at each stage of trafficking after departure was high. This could imply that victims might be affected by subsequent negative sexual health outcomes. Young age, initially being smuggled and time spent at each stage of the trafficking process were positively associated with the events of sexual violence. Efforts must be made on modifiable factors such as ‘smuggling’ to minimise subsequent sexual violence during trafficking.

Strengths and limitations of this study

- To the best of our knowledge, this is the first study that examined sexual violence at each stage of human trafficked cycle.
- Some of the potential risk factors analysed here have not previously been addressed in the literature.
- Because the study participants were recruited at the border of Ethiopia while they were entering from abroad but not from specific groups, like from post-trafficking support services, it would represent a larger population of trafficking victims.
- The extent to which this study would represent trafficking victims who remain abroad for various reasons is however unclear.
- Due to the sensitive nature of sexual violence, women and girls might under-report sexual violence, especially forced sexual events, though we tried to minimise the problem by listing all questions about sexual violence once and requested them whether at least one of those questions was positive for them.

INTRODUCTION

Human trafficking has been recognised as a concern of health and human rights violations among men, women and children.^{1 2} It has been defined as the ‘recruitment, transportation, or harbouring of persons by means of threat or use of force or other forms of coercion for the purpose of exploitation’.³ Though it was difficult to determine the magnitude of human trafficking due to its clandestine nature, an earlier assessment conservatively estimated that about 600 000–800 000 people were trafficked across international borders each year. It also indicated that about 80% of those trafficking victims were women and girls.⁴ The trafficking of women and girls may be for the purpose of exploitations such as in sex trafficking, labour trafficking and organ removal.³ Human trafficking remains a challenging practice in Ethiopia that women

and girls are usually trafficked into the Middle East mainly for domestic servitude and sometimes for sexual exploitation.⁵

Women and girls who are subjected to extreme levels of exploitation are vulnerable to various health risks, including exposure to severe occupational hazards. This condition could often result in acute and long-term physical and psychological morbidities that may end up with deaths in extreme situations. Female victims of trafficking are highly vulnerable to psychological, physical and sexual violence. Studies showed that women experienced more frequent sexual but slightly less frequent physical violence than men did.⁶ Sexual violence may often result in severe sexual and reproductive health outcomes,⁷ including pelvic inflammatory disease, vaginal fistula, poor reproductive health, infertility, pregnancy⁸ and other gynaecological health problems.⁷ It can also result in HIV or sexually transmitted infection (STI),^{9 10} and mental health symptoms.^{11 12} Similar health outcomes were also common among Ethiopian women and girls who were trafficked for various types of exploitation.¹³

To better understand the health conditions of victims and take relevant interventions, it was recommended that human trafficking should be examined at each stage of the trafficking process: predeparture, travelling, destination, detention and integration/reintegration stages.¹⁴ In this regard, the magnitude of sexual violence and its risk factors can be examined at each stage of the trafficking process so that proper policies can be formulated and interventions may be effective. However, previous studies on female survivors of human trafficking focused on the prevalence of sexual violence and its risk factors during the whole trafficking period,^{6 11} not at each stage of trafficking. It is also unfortunate that many of the studies were based on convenience sampling of trafficking victims from various parts of the world and were with small sample sizes.¹⁵⁻¹⁷ They were also mainly based on samples taken from specific groups such as post-trafficking support services¹⁸ or from sex workers group^{19 20} that could limit the generalisability of the findings.¹⁴

Evidence show that even though sexual violence and its health consequences are more common among females who are sex trafficked, it also happens to victims engaged in other forms of exploitation. For instance, according to a study done on trafficking survivors in England, about 95% of women trafficked for sexual exploitation, 54% for domestic servitude and 21% for other forms of labour exploitation were sexually violated.²¹ A study done on women who entered post-trafficking services in Europe reported that about 90% of them experienced sexual violence.¹⁸ Considering women who were engaged in sex work, it was found that women who initially entered the profession via trafficking were more likely to report sexual violence than non-trafficked sex workers.^{19 20}

To assess a wider population of victims in Ethiopia, the current study identified women and girls who were trafficked abroad for the purpose of any type of exploitation and recruited them at the border towns when they were

returning. This strategy was believed to be helpful to get a sample of returnees with fairly sufficient size who were from any corner of the country that could join any type of job on their return or might be even re-trafficked. Therefore, data related to sexual violence experienced at each stage of the trafficking period (travelling, destination and detention) together with its potential predictors were collected from female trafficking returnees and examined accordingly.

METHODS

Study setting and participants

The study was conducted in three border towns located in three major human trafficking corridors in Ethiopia, namely Mettema-Yohannes, Moyale and Galafi from May to October 2016. Mettema-Yohannes, Moyale and Galafi towns are geographically located bordering Sudan, Kenya and Djibouti, respectively. These study sites are situated on the most important gates through which many Ethiopians are being trafficked to major destination countries. The study sites may be helpful to get a representative sample to study the trafficking experiences of victims in the country. The study participants were Ethiopian women who were trafficked mainly to the Middle East, South Africa and Europe or were in transit countries and came back either by deportation or voluntary return. They were recruited at the waiting rooms of immigration offices in the border towns to which returnees were expected to report or in hotels they booked in those towns.

The trafficking status of returnees was ascertained by the UN 2000 definition of human trafficking. Thus, if a returnee was either younger than 18 years at the time of departure or recruited by deception, fraud, cheating or coercion with subsequent exploitation, then she would be considered as trafficked. Exploitation could be apparent in several forms, like working for extra hours per day, not paying their wage, transferring and selling them to traffickers or smugglers. The detail of the definition we implemented was presented in the other part of this work, and it was found that about half of the returnees were trafficked.²²

Study design

A retrospective cohort study was designed to examine sexual violence among female returnees. Data related to sexual violence experienced at travelling, destination and detention stages were collected separately and retrospectively. It was performed by encouraging participants to recall events of sexual violence within those stages of trafficking. A pilot study conducted on 196 returnees had already informed us that they could recall episodes of violence they experienced up to the past 2 years. We also understood that returnees who were trafficked for at least 3 months were exposed to most of the stages of the human trafficking process. Thus, returnees who were in trafficking condition for the preceding 3–24 months were recruited and gave the necessary data from their

experience. However, only a few migrants were excluded from the study due to this criterion.

Sample size and sampling procedure

The sample size of this particular study was 671 women and girls who participated in our other larger study that involved both male and female participants. In the larger study, there were two stages of sampling. The primary sampling units were border towns situated in the major trafficking corridors in the country, and the secondary sampling units were victims of trafficking who were returning home via those border towns. Three border towns were selected with simple random sampling method out of four border towns situated in the major trafficking corridors in the country. As a secondary sampling unit, all Ethiopian returnees via the three border towns who met the UN 2000 definition of human trafficking were recruited consecutively and concurrently until a sufficient sample size was secured starting from May 2016. Of all participants approached in the larger study, about 90.95% of them complied with it giving a total of 1387 male and female participants.²³ Thus, all the 671 women and girls who were a part of the larger study were taken as study participants for the current study.

The adequacy of the sample size in estimating the proportion²⁴ of sexual violence among female returnees was checked by assuming a prevalence of sexual violence as 50%, a confidence level of 95% and a design effect of 1.5 (because we had two stage sampling: the trafficking corridors and participants) that gave us 577 trafficked women. To increase the precision of the estimate, we included all the available 671 female returnees.

Data collection tools and procedures

A structured questionnaire was developed after reviewing available literature^{1 6 13 14 18 25 26} and supplementing it with contextual understandings of study settings and participants from our qualitative study.²⁷ Four data collectors were assigned to Metemma-Yohannes and two each to Moyale and Galafi towns. The data collectors, half of whom were women, were given training for 2 days. The training also included how to approach victims of trafficking and how to ask them sensitive questions. Each victim of trafficking was interviewed separately by a data collector of the same sex. The data collectors chose suitable places to conduct the interviews where participants would be encouraged to respond freely, including near the waiting rooms of each immigration office or the hotels they booked. Thus, returnees were contacted only once and gave their experiences retrospectively. In situations where respondents and interviewers could not speak a common language, interpreters were employed. In addition to all these efforts made to maintain the validity and reliability of the tool, the principal investigator and field supervisors closely supervised the data collection at the time of the survey. No incentive was given for participation.

Variables and measurement

The outcome variable of the current study is sexual violence. Items used to determine the status of sexual violence were based on the WHO international study of domestic violence.²⁸ Thus, the three items of sexual acts include forced to have sex, had sexual intercourse because of fear if she was not compliant to it or being forced to do something sexual that she found humiliating. One or two of the items in sexual violence assessment tool were very sensitive. Therefore, after reading all the three items to each respondent, we asked whether she had experienced at least one of them; a positive response meant the respondent was a victim of sexual violence.

The status of sexual violence, labelled as 'yes' or 'no', was determined for each woman or girl at each stage of the trafficking process: predeparture, travelling, destination, detention and integration/reintegration. However, because all returnees were interviewed when they were just entering Ethiopia from abroad, data related to sexual violence experienced during integration/reintegration was not found to be complete and thus not considered in any analysis. However, predeparture stage mainly included the time before the start of the actual trafficking process. Therefore, sexual violence at predeparture stage was not considered as an outcome variable during the regression analyses; instead, it was analysed only descriptively.

The potential predictor variables for sexual violence were sociodemographic characteristics (age, marital status, educational level, residence, social support, type of job at destination and family wealth quintile), trafficking-related exposure variables (restricted freedom of movement, smuggling status at departure or initially smuggled, trafficking corridor, history of detention by foreign security, time spent at each stage of trafficking and postdeparture physical violence) and behavioural and other characteristics (predeparture violence, predeparture substance use, and postdeparture substance use). There are also other variables that were used for descriptive purpose.

Age was grouped in a very similar way to those of two studies conducted across seven European countries where the study participants came from most continents.^{12 18} The time spent at each stage of the trafficking process was measured in weeks and considered as a continuous variable; other variables such as marital status,^{12 18 29} educational status,^{6 30} residence, region and religion³⁰ were treated by referring to literature or considering the context of the current study setting or participants. Moyale town, which was one of the labels of the variable named as 'Exit corridor', was found to have a very small number of females. Therefore, it was merged with other exit gates and labelled as 'Others'.

To assess participants' perception about the level of care they were receiving from others before departure, the Oslo social support scale with three items was employed.³¹ The first question has four alternative responses, while the second and the third items each has five options. The sum of scores for each participant would range from 3 to

14. A sum score between 3 and 8 was classified as 'poor support', 9 and 11 as 'intermediate support' and 12 and 14 as 'strong support'.

A composite wealth index was determined at household level using principal component analysis. Indexes generated from urban and rural specific items were weighted to determine the composite wealth index (online supplementary file). Three of the 11 items in the scale ask about household size, whether all children aged 6–12 years were attending school, and construction material of the walls of dwelling unit. It was adopted from the Ethiopian demographic and health survey.³² Moreover, the presence of 'restricted freedom of movement' was checked by interviewing whether each participant had been locked in a house or a building or never be free to go anywhere she wanted or do what she wanted by warning or terrifying her.⁶ A returnee would be considered as 'smuggled at departure' (or 'initially smuggled') if she took a contractual agreement with a person that would take her illegally starting from Ethiopian border to any other destination. To minimise the temporal dilemma with human trafficking, a smuggling process that was started in other transit countries was not considered as positive for 'initially smuggled' as far as she crossed legally the border between Ethiopia and a neighbouring country.

Statistical analysis

Descriptive statistics were reported using tables. In determining factors associated with sexual violence among women and girls, a logit family generalised linear mixed effect model was employed to account for the dependency of repeated measurements at each stage of trafficking. The models included both the fixed effect of each covariate and the random effects associated with each participant from whom repeated data were taken. The first mixed model considered the fixed effects and random intercepts. However, it was not better in fit than the ordinary logistic regression model when tested using the likelihood ratio test (p value=0.913). The second model that added a random slope on the first mixed model did not have any significant gain in fit when compared with either of the two models using the same test. As a result, emphasis was given only to fixed effect interpretations for a model containing both the fixed effects and random intercept.

The association between each variable and sexual violence was measured by OR, and when it was controlled for other variables, adjusted ORs (AOR) was reported. We conducted univariable analyses containing both a fixed effect for each independent variable and random intercepts. Independent variables with a p value of <0.20 were carried forward for inclusion in the multivariable analysis.³³ However, in the multivariable analysis, only independent variables with p values of 0.05 or less were considered statistically significant.

During the analyses, we assumed that the missing mechanism of data was non-informative; that is, it is unlikely to get systematic differences in regards of sexual violence and other key variables between those who agreed to and

declined to participate. The rationale behind this assumption was related to circumstances prevailed at the time of data collection that persuade returnees not to participate in the study. There was no reason to assume that the missingness of data was related to the values of observed or unobserved study variables including the outcome variable. Few of the reasons for non-response that encountered during the interview were the following: sometimes, returnees may go to their origin without being interviewed simply because of some personal reasons such as when interviewers were not available on time to collect data at the immigration offices; occasionally a large number of returnees arrive at the immigration offices, and as a result, it could be difficult to interview all of them within a time period before they leave to go home; and sometimes, respondents may not speak the language of interviewers or translators assigned and thus may not be involved in the study.

Patient and public involvement

This study did not involve patients and the public.

Ethics and confidentiality

We followed the WHO ethics protocol recommended to interview trafficked women and attempted to ensure that all the field workers were sensitive to the needs, privacy and fears of participants and not to retraumatise them during the interviews.³⁴ Ethics approval statement was obtained from the Institutional Review Board of the University of Gondar. We also first obtained permission from Ethiopian Immigration Office Headquarter and then from all the three Immigration centres located in the three border towns that were selected for the study. A written consent form describing the aims, benefits and potential risks of participation in the study as well as that containing information about their right to withdraw was given or read for each adult participant, and the willingness of each returnee was asked before they sign it. For children whose age were 17 years or less, assent form was prepared and consent was obtained from the organisation that took care of them. We also implemented the International Organisation for Migration data protection principles to maintain its confidentiality and anonymity.³⁵

RESULTS

Background characteristics

The study included 671 female returnees of human trafficking. The mean (SD) age of the victims at the time of departure was 20.94 (3.48), and the youngest and oldest ages were 14 and 49 years, respectively. Participants were in trafficking conditions for 3–24 months with a mean (SD) of 15.37 (5.76) months. Of all participants, 61 (9.1%) were either illiterate and/or attended informal (eg, religious) education only, 236 (35.2%) completed elementary school and 202 (30.1%) completed high school or above (table 1). The majority or 480 (71.5%) of the participants returned through Metemma-Yohannes,

Table 1 Predeparture characteristics of sampled female returnees from trafficking, Ethiopia, 2016 (n=671)

Characteristics*	Number (%)
Age	
14–17	74 (11.0)
18–20	272 (40.5)
21–25	275(41)
26–49	50 (7.5)
Marital status	
Never married	498 (74.2)
Married	141 (21.0)
Separated/widowed	32 (4.77)
Educational level	
Illiterate and/or informal education	61 (9.1)
Elementary	236 (35.2)
Junior	202 (30.1)
High school and above	172 (25.6)
Religion	
Muslim	416 (62.0)
Orthodox	139 (20.7)
Protestant	109 (16.2)
Others	7 (1.05)
Region	
Oromyia	216 (32.2)
Amhara	209 (31.2)
SNNPRS†	167 (24.9)
Others	79 (11.8)
Ethnicity	
Oromo	267 (39.8)
Amhara	192 (28.6)
SNNP‡	180 (26.8)
Others	32 (4.77)
Residence	
Rural	410 (61.1)
Urban	261 (38.9)
Parents alive	
Both alive	486 (72.4)
Only mother	112 (16.7)
Only father	43 (6.4)
Both not alive	30 (4.5)
Occupation	
Student	481 (71.7)
Unemployed	51 (7.6)
Trade or service (family)	31 (4.6)
Agriculture (family)	30 (4.5)
Daily labourer	30 (4.5)
Other	48 (7.2)

*Variables in the first column represent the background characteristics of victims before the departure time.

†SNNPRS represents Southern Nations and Nationalities and Peoples Regional State.

‡SNNP comprises more than 40 ethnic groups in SNNPRS, and most victims of trafficking from the region were mainly from Hadiya, Kembata, Woyita and Sidama groups.

while 180 (26.8%), 2(0.3%) and 9 (1.3%) came via Galafi, Moyale and other gates, respectively.

Sexual violence among trafficked females

Over two-third (prevalence=71.1%; 95% CI 67.5 to 74.4) of female victims of human trafficking were sexually violated during the whole trafficking period. The prevalence of sexual violence was 10% (95% CI 7.9 to 12.5) during predeparture, 35.0% (95% CI 31.5 to 38.7) travelling period, 58.1% (95% CI 54.2 to 61.8) at destination and 19.5% (95% CI 15.2 to 24.6) at detention stage. Considering the time spent at each stages of trafficking of women and girls, ‘travel stage’ had a mean (SD) of about 2.22 (1.35), ‘destination’ 56.73 (24.04) and ‘detention’ 1.23 (1.95) weeks (table 2).

Regarding the incidence rate of sexual violence during the whole trafficking period, it was estimated that about 11.81 females experienced the events of sexual violence per 1000 person-weeks. During the travel, destination and detention stages, about 157.64, 9.90 and 65.62 women experienced the event of sexual violence per 1000 person-weeks, respectively.

Sexual violence by various characteristics along the stages of trafficking

Among female returnees who were teenagers at the time of departure, 48 (64.9%) were sexually violated during the whole trafficking period. Considering the travel stage characteristics, 331 (69.0%) of the female victims of trafficking who left their origin via Metemma Yohannes and 123 (68.3) through Galafi corridor were sexually violated while they were in the trafficking situation. For the characteristic named as ‘initially smuggled’, 372 (70.9%) of the initially smuggled and 91 (62.3%) of the initially non-smuggled females were sexually violated during the whole trafficking period (table 3).

Risk factors of sexual violence

Of the 16 potential predictor variables, seven of them were excluded from the multivariable analysis because they were insignificant contributors in the univariable analysis as their p values were more than 0.20. Therefore, the remaining nine variables were examined in the multivariable analysis out of which four variables, namely marital status, residence before departure, exit corridor and history of detention abroad, did not contribute significantly to the model. Thus, the odds of experiencing sexual violence for teenagers aged 14–17 years was two times higher than that for the oldest groups aged 26–49 years (AOR=1.97, 95% CI 1.11 to 3.52). Similarly, women in the 18–20 and 21–25 age groups had each almost twofold odds of experiencing sexual violence than women aged 26–49 years.

After adjusting for other variables, the odds of being sexually violated for initially smuggled women was about one and half times higher than for their non-smuggled counterparts (AOR=1.45, 95% CI 1.09 to 1.93). Similarly, postdeparture physical violence (AOR=2.94, 95% CI 2.24

Table 2 Prevalence of sexual violence among women and girls along the stages of human trafficking process, Ethiopia, 2016

Stages of human trafficking process	Time (SD)*	Sexual violence		
		Denominator	Number (%)	95% CI for percentage
Whole trafficking period†	60.18 (23.41)	671	477 (71.1)	67.5 to 74.4
Predeparture	–	671	67 (10.0)	7.9 to 12.5
Travel	2.22 (1.35)	671	235 (35.0)	31.5 to 38.7
Destination/exploitation	56.73 (24.04)	649	377 (58.1)	54.2 to 61.8
Detention	1.23 (1.95)	277	54 (19.5)	15.2 to 24.6

*The mean time in weeks lapsed at each stage of the trafficking process and its SD.

†The whole trafficking period included all stages other than 'predeparture' and 'reintegration'.

to 3.86) and restricted freedom of movement (AOR=1.45; 95% CI 1.13 to 1.86) were positively associated with sexual violence. Time spent at each of the three middle stages of human trafficking, namely travelling, destination and detention, were positively associated with the odds of sexual violence (table 4).

DISCUSSION

To the best of our knowledge, this is the first study that has examined the patterns of sexual violence at each stage of the human trafficking process. The relationship between various factors and the event of sexual violence were also examined by considering the clustering nature of the repeatedly and retrospectively measured events of sexual violence taken from each female participant. Thus, in the course of the trafficking process, the highest and lowest proportions of sexual violence were observed at destination (three-fifth) and detention (one-fifth) stages, respectively. The event of sexual violence along the stages of human trafficking process was influenced by younger age, smuggling status, postdeparture physical violence, restricted freedom of movement and time spent at each stage of trafficking.

In the current study, more than two-thirds of the women and girls were sexually abused during the whole trafficking period. This finding is comparable with that of a study done in England²¹ but far greater than that of studies done in Greater Mekong subregion,¹¹ Cambodia, Thailand and Vietnam,⁶ while it is less than the finding from a study done in Europe.¹⁸ However, an attempt to direct comparison of the findings of the current study with that of other studies could be misleading because the studies could differ in various aspects, including the definition of sexual violence, study populations and duration of exposure in trafficking situation. For instance, the overall exposure time of the current study ranged from 3 months to 24 months with an average stay in trafficking situation for about 14 months. However, the Greater Mekong subregion study was conducted on children and adolescents who were in trafficking conditions from 9 days to 9 years.¹¹ Similarly, the study in Europe was conducted on sexually exploited women who were in trafficking situations from 1 day to more than 1 year. Moreover, the

participants in the current study were female returnees who were not limited to a specific group, like sex workers or women who were not accessed from post-trafficking support services, whereas all the other studies mentioned were accessed from post-trafficking support service organisations.

The two-third prevalence of sexual violence in the current study during the whole trafficking period can be considered as a high magnitude as it is much higher than lifetime sexual violence experienced by the general Ethiopian female population of reproductive age group, which was reported as 10%.³⁶ Interestingly, the current study showed that the prevalence of sexual violence among female returnees before their departure was also 10%. Probably, this might imply that before their departure, participants experienced a similar risk of sexual violence as that of the general female population in the country, and it is after their departure that the risk of violence escalated to two-third. However, when we take into account the exposure time or examine it using the parameter of prevalence rate, 10% predeparture rates could be fairly high for returnees given that many are not particularly old. However, for instance, a study done in England reported a prevalence of predeparture sexual violence as 30.6%, which was three times of higher magnitude than that of the current study.²¹ Though there could be different justifications for the observed large difference, one possible reason could be the fact that women and girls in developing countries might not take some events of mistreatment as sexual violence; instead, they could consider it as justified³⁶ and tend to under-report. However, this might not be the case in developed countries where there is better awareness about women's rights with better legal enforcement that could encourage them to report sexual violence more often, although under-reporting remains a problem there too.

In the current study, the prevalence of sexual violence was 35.0% during travel, 58.1% at destination and 19.5% at detention stages of the trafficking process. Though the magnitude of sexual violence among women seemed low during the travel and detention stages, they were high when seen in relation to the short exposure times during those stages. In this regard, the incidence rate of

Table 3 Prevalence of sexual violence during the whole trafficking period among female returnees by characteristics related to each stage of human trafficking process, Ethiopia, 2016

Characteristics	Denominator	Sexual violence Number (%)
Predeparture stage characteristics		
Age (just at departure) (years)		
14–17	74	48 (64.9)
18–20	272	188 (69.1)
21–25	275	204 (74.2)
26–49	50	21 (44.7)
Marital status (predeparture)		
Married	141	85 (60.3)
Never married	498	352 (70.7)
Separated/widowed	32	26 (81.3)
Educational level (predeparture)		
Illiterate and/or informal education	61	43 (70.5)
Elementary	236	175 (74.2)
Junior	202	135 (66.9)
High school	153	97 (63.4)
Preparatory school and above	19	13 (68.4)
Residence (predeparture)		
Rural	410	278 (67.8)
Urban	261	185 (70.9)
Travelling stage		
Trafficking corridor		
Metemma Yohannes	480	331 (69.0)
Moyale	2	2/2
Galafi	180	123 (68.3)
Others*	9	7 (77.8)
Initially smuggled		
No	146	91 (62.3)
Yes	525	372 (70.9)
Destination/exploitation stage		
Planned destination		
Sudan†	282	204 (72.3)
Other Arab countries	293	200 (68.3)
South Africa	0	-
Europe	88	56 (63.6)
Others (mainly Kenya and Djibouti)	8	3/8
Type of job at destination		
Did not start working	10	8/10
Housemaid	480	333 (69.4)
Agriculture	132	104 (78.8)
Manufacturing and services	37	23 (62.2)

Continued

Table 3 Continued

Characteristics	Denominator	Sexual violence Number (%)
Other (mining, guard, driver, sex work and so on)	12	9/12
Restricted freedom of movement		
Absent	201	118 (58.7)
Present	470	359 (76.4)
Detention stage		
Detained abroad		
Yes	277	257 (65.2)
No	394	206 (74.4)
Length of detention by securities (n=810)		
2 or less weeks	124	95 (76.6)
3–4 weeks	103	83 (80.6)
5–13 weeks	48	42 (87.5)
14 or more weeks	2	0/2

*Other corridors include Bole Airport, as well as Humera, Bosasso and Gambella travelling corridors.

†Though their immediate destination was Sudan, a considerable number of them had plan to extend their journey to the Middle East and Europe.

sexual violence during the travel and detention periods were about 158 and 66 females who experienced sexual violence per 1000 person-weeks, respectively, while it was only about 10 per 1000 person-weeks for the destination/exploitation period. These findings imply that the risk of sexual violence at any time point is so high during travel, and this might be due to the fact that the fate of migrants is usually in the hands of traffickers/smugglers during travel, which is usually through deserts, forest, water bodies and so on.³⁷ In such conditions, victims usually obey any request of traffickers/smugglers, including unwanted sexual practice, which could otherwise be committed forcibly. Similar situations could happen during detention stage, especially at times of arrests²⁷ though the history of detention was not a significant predictor for sexual violence in this study.

Thus, the high prevalence of sexual violence could suggest that negative sexual or reproductive health outcomes such as unwanted pregnancy, abortion and HIV/STIs could be more prevalent among participants in addition to other health consequences. In turn, the poor sexual or subsequent physical health outcomes could result in mental health consequences. If they do not get proper healthcare services, their future quality of life may deteriorate that could again have health implications to their origin up on return as it may facilitate the spread of communicable diseases. This condition could imply the need for healthcare services to victims of trafficking at any time starting from the date of departure whenever they get free of offenders control or come to healthcare services by any means.

Table 4 Factors associated with events of sexual violence among migrants returned/deported via the three major human trafficking corridors in Ethiopia, 2016

Characteristics	COR (95% CI)	AOR (95% CI)	P values for adjusted estimates
Age (before departure) (years)			
14–17	1.52 (0.93 to 2.49)	1.97 (1.11 to 3.52)	0.020
18–20	1.64 (1.08 to 2.48)	1.80 (1.11 to 2.91)	0.016
21–25	1.67 (1.11 to 2.52)	1.81 (1.14 to 2.89)	0.012
26–49	Referent	Referent	
Marital status			
Married	Referent	Referent	
Never married	1.37 (1.06 to 1.78)	1.25 (0.92 to 1.68)	0.152
Divorced/widowed	1.83 (1.14 to 2.95)	1.65 (0.96 to 2.83)	0.067
Residence before departure			
Rural	Referent	Referent	
Urban	1.12 (0.91 to 1.37)	1.20 (0.95 to 1.52)	0.120
Initially smuggled			
No	Referent	Referent	
Yes	1.54 (1.20 to 1.97)	1.45 (1.09 to 1.93)	0.010
Exit corridor			
Metemma Yohannes	Referent	Referent	
Galafi	1.41 (1.13 to 1.74)	0.98 (0.71 to 1.37)	0.412
Others*	1.24 (0.56 to 2.75)	0.72 (0.29 to 1.83)	0.911
Restricted freedom of movement			
No	Referent	Referent	
Yes	1.29 (1.04 to 1.61)	1.45 (1.13 to 1.86)	0.004
Postdeparture physical violence			
No	Referent	Referent	
Yes	2.43 (1.98 to 2.98)	2.94 (2.24 to 3.86)	<0.001
History of detention abroad			
No	Referent	Referent	
Yes	1.26 (1.03 to 1.54)	1.11 (0.82 to 1.50)	0.610
Time spent at each stage of trafficking	1.03 (1.02 to 1.03)	1.03 (1.02 to 1.03)	<0.001

*Other exit gates includes Bole airport as well as Bossaso, Humera and Moyale travelling corridors.

In this study, initially smuggled women and girls were statistically significantly at a higher risk of experiencing sexual violence than non-smuggled counterparts. This may be justifiable because though there could be contractual agreements between the smuggled and the smugglers, the latter could change their mind at least during the smuggling process in the interest of continually exploiting smuggled persons^{23 27 38}; to have control over these migrants, smugglers could use various forms of violence, including beating, kicking and sexual abuse. Moreover, smuggled persons usually move underground. Therefore, once they fall in the hands of border security forces, they might not be treated professionally; instead they could be abused sexually, physically or financially.²⁷ On the contrary, migrants who are not smuggled usually

move publicly using formal transportation services; thus, abusing them might not be common as they move legally. If there are attempts to severe exploitation, non-smuggled persons could handover themselves to governments in the transit countries to be deported.²⁷

Our findings showed that physical violence experienced during trafficking was significantly associated with sexual violence in the same period, showing that women and girls might have faced forcible abuse that could involve physical violence to keep them under control for sexual abuse. The odds of sexual violence were positively associated with the time spent at each stage of human trafficking. This may not be surprising because as the stay at each stage of human trafficking process is prolonged, the exposure time would also be extended obviously resulting

in increased odds of sexual violence. Similar findings were reported by other authors.¹²

Furthermore, these findings imply that the risk of experiencing sexual violence could be reduced by intervening on modifiable factors, such as being initially smuggled. For those who were traumatised during trafficking, its current and long-term effects should be well understood through rigorous research methods. This can be helpful to design and implement healthcare interventions during the reintegration and possibly at the prior stages of the trafficking process. Otherwise, the mere economic assistance of returnees by the government or stakeholders may not be sufficient for the rehabilitation of their health. It may not be also helpful to add them into the productive group of the country. Finally, though it is difficult to get trafficking victims who have left abroad and not returning, maybe for better or worse, research is needed to explore their experiences and health conditions in contrast to that of the returnees.

Limitations of the study

The current study could represent a wide range of the population of trafficked persons who were under various forms of exploitation. However, the extent to which it could represent victims who would not return home for various reasons is unclear. Moreover, though both female and male victims are vulnerable to sexual violence during trafficking, this work couldn't involve males in the sexual violence study because of the unreliable data obtained from this group in the pilot study. Due to the sensitive nature of sexual violence, even women and girls might under-report it, especially forced sexual events. Of course, though women and girls might under-report the severe forms of sexual violence, like rape, they usually report them in less severe terms that are included in the definition of violence.

The number of female returnees who were trafficked for commercial sexual exploitation were very few, and this is unclear whether the occupation was under-reported due to its sensitive nature or not. On top of that, because the design we employed was retrospective, under-reporting due to recall bias might not be ruled out. Of course, some of the events and experiences they encounter during the difficult times could minimise recall bias as they are ever unforgettable. Besides, we made thorough efforts to help women and girls remember their experiences.

CONCLUSION

The prevalence of sexual violence at each stage of the trafficking process after departure was high. This could imply that victims might be affected by subsequent negative sexual health outcomes such as abortion, reproductive health outcomes and HIV/STIs. Young age, being initially smuggled, postdeparture physical violence, restricted freedom of movement and time spent at each stage of trafficking were positively associated with the event of sexual violence. Efforts must be made on modifiable factors such

as smuggling to minimise subsequent sexual violence during trafficking. Moreover, further research should be conducted to examine whether the high magnitude of sexual violence was followed by reproductive health problems and complications so that relevant measure would be taken during reintegration.

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Acknowledgements We would like to acknowledge staff of Central Statistical Agency of Ethiopia especially Mr Yeshambel Workie, a senior statistician at Gondar branch, Mr Berhanu Tezera, head of Hawassa branch and Mr Lake Endaylalu, head of Asaeta branch for their facilitation and assistance in the provision of experienced data collectors for Metemma Yohannes, Moyale and Galafi cites, respectively.

Contributors The research was conceptualised by all authors. Methods were written by all authors. The original draft was produced by LD and reviewed and edited by all authors.

Funding University of Gondar funded the data collection of the current study, and German Academic Exchange Service (DAAD) funded the analysis of data and writing of the manuscript. The grant numbers for University of Gondar and DAAD were JV-45145 and 57220758, respectively.

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; externally peer reviewed.

Data sharing statement The data on which these findings were developed can be available on request.

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