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Barriers to safe abortion care among internally displaced persons in Ethiopia: A cross-sectional study

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Abstract

Internally Displaced Persons (IDPs) in Ethiopia face significant barriers to safe abortion care, influenced by socio-cultural, economic, and structural factors, alongside widespread sexual and gender-based violence (SGBV). A cross-sectional study was conducted in four IDP camps in the Amhara and Oromia regions from April to July 2024, involving 1,452 randomly selected women. SGBV was reported by 16.6%, with 36.9% of cases perpetrated by security forces. Of the participants, 5.8% had undergone abortion, and 1.7% had induced abortions in the camps. Fewer than half of women in IDP camps reported using a contraceptive method (41.7%), though 80.7% also reported that they had a history of discontinuing use due to access issues. Barriers to abortion care included religious beliefs (67.7%), cultural norms (63.8%), and the lack of service awareness (56.3%). Urgent Action is Needed. We recommend that the Ministry of Health of Ethiopia and stakeholders should prioritize appropriately tailored interventions to break down barriers, improve access to safe abortion care, and address the pressing needs of women in IDP camps. *(Afr J Reprod Health 2025; 29 [9s]: 107-120).*

Keywords: Abortion; Induced; Health Services Accessibility; Displaced Persons; Gender-based violence; Refugees; Ethiopia

Résumé

En Éthiopie, les personnes déplacées à l'intérieur du pays (PDI) sont confrontées à d'importants obstacles à l'accès aux soins d'avortement médicalisé, influencés par des facteurs socioculturels, économiques et structurels, ainsi que par des violences sexuelles et sexistes (VSS) généralisées. Une étude transversale a été menée dans quatre camps de PDI des régions d'Amhara et d'Oromia d'avril à juillet 2024, auprès de 1 452 femmes sélectionnées au hasard. Des VSS ont été signalées par 16,6 % des personnes, dont 36,9 % perpétrées par les forces de sécurité. Parmi les participantes, 5,8 % avaient subi un avortement et 1,7 % avaient subi un avortement provoqué dans les camps. Moins de la moitié des femmes dans les camps de PDI ont déclaré utiliser une méthode contraceptive (41,7 %), mais 80,7 % ont également déclaré avoir déjà cessé de l'utiliser en raison de problèmes d'accès. Les obstacles à l'avortement comprenaient les croyances religieuses (67,7 %), les normes culturelles (63,8 %) et le manque de sensibilisation aux services (56,3 %). Une action urgente est nécessaire. Nous recommandons au ministère de la Santé éthiopien et aux parties prenantes de privilégier des interventions adaptées pour éliminer les obstacles, améliorer l'accès à des soins d'avortement sécurisés et répondre aux besoins urgents des femmes dans les camps de personnes déplacées. *(Afr J Reprod Health 2025; 29 [9s]: 107-120).*

Mots-clés: Avortement, Avortement provoqué, Accessibilité aux services de santé, Personnes déplacées, Violences sexistes, Réfugiés, Éthiopie

Introduction

Internally displaced persons (IDPs) are individuals or groups forced to flee their homes due to conflict, violence, or natural disasters, yet remain within their country's borders.[1] Women and children, constituting 80% of displaced populations globally, are among the most vulnerable.[2] At the end of 2023, 75.9 million people were internally displaced worldwide, with Ethiopia ranking among the top five countries most affected, hosting 2.85 million conflict-related IDPs and 881,000 displaced by disasters.[3]

Ethiopia's abortion laws, despite 2005 reforms expanding legal grounds, still pose significant challenges to safe abortion access, particularly in rural and conflict-affected areas.[4] Within IDP camps, lack of infrastructure, social support, and reproductive health awareness further exacerbate barriers.[5] Furthermore, in contexts where

abortion is stigmatized or restricted by legal frameworks, women in IDP camps may face additional barriers due to prevailing cultural norms, religious beliefs, and limited knowledge about safe abortion practices.

Women seeking abortion in IDP camps face risks such as violence during travel for healthcare, stigma, limited education, and disrupted support networks.[5] The stigma around abortion, combined with hierarchical power dynamics and gender-based violence, compounds these challenges, leading to unsafe practices and reproductive health inequities.[4,5] Gender based violence is undoubtedly one of the most disconcerting aspects of a society that promotes hierarchical power relationships on the basis of class, race, ethnicity and gender. Undoubtedly, the conflict-ridden environments in which IDPs must navigate their lives often breed a culture of violence, disproportionately impacting the most vulnerable people, such as Women and children.[6]

Safe abortion care is a fundamental right, yet in humanitarian settings like IDP camps, access is hindered by socio-cultural, economic, and structural barriers, including stigma, inadequate healthcare facilities, and low prioritization of reproductive health services.[7] Using the Social Ecological Model (SEM), this study explores individual, interpersonal, community, institutional, and societal factors influencing abortion access in Ethiopian IDP camps.[8,9] By addressing these barriers holistically, the study aims to provide insights for targeted interventions that ensure equitable access to safe abortion care for displaced women.

Methods

Study area and design

The study was conducted concurrently in four purposively selected IDP sites in Amhara Northshoa Zone at Debrebrhan and Oromia special zone at Kemese. A total of 1,452 women participated in the quantitative survey. A cross-sectional study design was employed.

Sample size and sampling

We calculated a sample size of 1,452 women (**806 from Amhara and 792 for Oromia)** who were aged between 15 and 49 years and had been living in IDP camps for at least six months. We used a single population proportion formula for the four IDP sites in the two regions, consisting of: p=0.5; 95% Confidence level 0.05; margin of error 5% and design effect 2. Women were randomly selected using the lottery method from a list of eligible participants provided by NGOs working in the camps and the camp management, which served as the sampling frame. The list included all women aged 15–49 who had been residing in the camps for at least six months. To ensure randomness, unique identification numbers were assigned to each eligible woman on the list, and numbers were drawn using a lottery system. Given the versatility and evolving nature of the camp setting, local guides were engaged to help locate where the selected women had settled. This method minimized selection bias and ensured equal representation of participants from different sections of the camps. In cases where selected individuals were unavailable or declined participation, replacements were randomly drawn to maintain the intended sample size

Data collection

Data were collected electronically on tablets using an interviewer-administered structured questionnaire between April and July 2024. A team of trained data collectors mainly female, who are healthcare professionals with a BSc or higher degree primarily instructors from Debrebrhan and Wollo Universities having experiences of conducting similar studies before conducted the interviews. They underwent a five-day training on the tool, ethical considerations, interview techniques, and data confidentiality. The questionnaire included questions about demographic characteristics, knowledge and attitudes regarding abortion, access to healthcare services, including sexual and reproductive health and rights (SRHR) services, and perceived barriers to safe abortion care.

Variables

The **dependent variable** was the utilization of safe abortion services, measured as a binary outcome (Yes/No), indicating whether a woman had accessed safe abortion care while being in IDP.

Independent variables were categorized into:

Demographic Characteristics: Age, Gender, Marital status, educational level, Occupation, Religion,

Ethnicity, Region of origin, Duration of displacement, Family size

Knowledge and Awareness of Safe Abortion: Measured using a set of Yes/No and multiple-choice questions assessing whether participants knew about the legal provisions for abortion in Ethiopia, available services, and safe versus unsafe abortion methods.

Reproductive Health and Abortion-Related Variables: Previous pregnancies, Previous abortions (if any), Knowledge about abortion methods, Knowledge about abortion laws, Attitudes towards abortion, Access to information about safe abortion, Access to family planning services, Access to antenatal care, History of complications related to abortion, Use of contraceptives, Awareness of available healthcare services for abortion, Previous abortion attempts (if any), Source of information about abortion, Healthcare provider's attitude towards abortion, Knowledge of post-abortion care services

Healthcare Access Variables: Frequency of healthcare visits, Type of healthcare facility most frequently visited, Experience with healthcare providers, distance to healthcare centers, Transportation barriers and the quality of care received.

Data on barriers were collected using five-point Likert scale questions for most attitudinal and perception-based measures, while multiple-choice, Yes/No, and open-ended questions were used to assess knowledge, access, and experiences.

Operational definition

Safe abortion services, as provided by law, need to be available, provided by well-trained health personnel, supported by policies and a health systems infrastructure, including equipment and supplies, so that women can have rapid access to these services regardless of their socioeconomic status or geographic location.

Sexual attack or coercion: This refers to any non-consensual sexual activity or sexual advances made through force, threats, manipulation, or coercion. It can include acts such as rape, attempted rape, sexual harassment, or any other form of unwanted sexual contact imposed upon an individual against their will.

Domestic violence: Also known as intimate partner violence or domestic abuse, this refers to abusive behavior within a domestic or familial relationship where one partner seeks to gain power and control over the other. It can include physical violence, emotional abuse, psychological manipulation, financial control, and sexual coercion within the context of a domestic relationship.

Sexual assault: This term encompasses a range of non-consensual sexual acts, including rape, attempted rape, sexual battery, unwanted sexual touching, or any other form of sexual contact or behavior without explicit consent. It may encompass a wider array of behaviors beyond direct physical contact, such as verbal threats, intimidation, or manipulation.

Survival sex or forced prostitution: This refers to engaging in sexual activity or prostitution under pressure or coercion, often due to extreme circumstances such as poverty, homelessness, or the need to obtain basic necessities for survival. Individuals may engage in survival sex as a means of obtaining food, shelter, money, or protection.

Sexual exploitation in return for securing access to resources: This involves exploiting individuals' vulnerabilities, such as their displacement status or their need for resources or protection, in exchange for sexual favors. It can occur in the context of trafficking, forced labor, or other forms of exploitation, where individuals are coerced or manipulated into engaging in sexual activity in exchange for assistance with legal matters, access to resources, or the promise of asylum.

Physical assault: This refers to any intentional physical harm or violence inflicted upon an individual, including hitting, punching, kicking, slapping, or any other form of physical aggression.

Psychological, emotional assault: This encompasses non-physical forms of abuse aimed at causing emotional harm or distress, such as verbal abuse, intimidation, threats, humiliation, manipulation, or isolation. Psychological and emotional assault can have long-lasting effects on an individual's mental health and well-being.

Refused: This indicates that the respondent declined to answer the question or provide information regarding their experiences with sexual and gender-based violence.

Data quality assurance

We pretested the survey tool on a similar population outside the study area in Woineshet camp to ensure its reliability and validity. The questionnaire was

developed based on a theoretical framework grounded in the Social Ecological Model (SEM) and validated survey instruments from previous studies on reproductive health and abortion access. The SEM framework guided the selection of variables at individual, interpersonal, community, institutional, and societal levels, ensuring a comprehensive assessment of the multi-level factors influencing abortion access in IDP camps. The questionnaire was refined after the pretest to improve clarity, cultural appropriateness, and contextual relevance. It was then translated into local languages and administered using Open Data Kit (ODK) software for real-time data collection. Interviewers underwent comprehensive training on the study objectives, ethical considerations, and standardized data collection procedures. Regular supervision and on-site monitoring ensured adherence to protocols, and daily cross-checking of completed questionnaires and consistency checks were performed before data entry to maintain data quality.

Data analysis

Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize demographic characteristics and responses to closed-ended questions. Key variables such as age, marital status, education level, employment status, parity, and duration of stay in the IDP camp were presented in tabular format for clarity.

For inferential analysis, chi-square tests were employed to examine associations between independent variables (e.g., knowledge on safe abortion services & abortion laws, attitude, and healthcare accessibility, and sociodemographic variables) and the dependent variable (utilization of safe abortion services). Additionally, the relationship between experiencing sexual and gender-based violence (SGBV) and abortion history was analyzed using cross-tabulations and significance testing. Results from inferential analyses were presented in tables with p-values. Where applicable, bar charts and graphs were used to visually represent key findings.

Ethical considerations

Ethical approval was granted by St. Paul's hospital millennium medical college institutional review board with reference number Pm23/347 dated on 11/12/23 and regional health bureau ethical review boards reference no 423/2016 dated on 16/5/2016 on Ethiopian Calendar. Informed consent was obtained from all participants prior to data collection. Anonymity and confidentiality of participants' personal information were strictly maintained throughout data collection, analysis, and reporting. Interviews and surveys were conducted in private locations within the IDP camps to ensure participants could speak freely without fear of stigma or repercussions. No personally identifiable information (e.g., names, specific locations) was recorded to protect anonymity. Data were collected using password-protected tablets via Open Data Kit (ODK) software, ensuring secure digital storage. Only authorized research team members had access to the encrypted data, and all data files were stored on secured, access-controlled servers. Confidentiality agreements were signed by all data collectors and analysts, reinforcing ethical handling of information. Finally, study findings were reported in aggregated form, preventing the identification of individual participants. For those study participants who were under the legal age of consent, informed written consent was obtained from their parents in addition to the young people's assent to participate.

Results

Sociodemographic characteristics

A total of 1,454 women participated in the survey, surpassing the required sample size of 1,452. The participants represented diverse age groups, educational levels, and marital statuses across the four IDP sites. Senkelia of the Oromia special zone has the largest share, with 30% of the participants where as 25% of the participants were from the Amhara region Bakelo and China camp each and the remaining 20% of the participants were from Senbete again from Oromia special zone. The median age of participants was 30 years, with the largest group, 23.7%, falling within the 25-29 years' age range. The next largest groups were the 35-39 years group at 21.6%. Regarding education, a significant majority, 65.5%, reported having no formal schooling, while 18.8% could read and write but had no further formal education. Ethnically, the participants were nearly equally divided, with 50.6% identifying as Amhara and 49.4% as Oromo. In terms of marital status, 69.4% were currently married, and in terms of employment, the majority, 66.2%, were homemakers. (Table 1)

Table 6: Socio- demographic profile of women aged 15-49 who were displaced and currently live in four IDP camps of Amhara and Oromia special zone in Bakelo, China camp, Senkelila and Senbete, January 2025

	Category	Frequency	Percent
Age in category	15-19	135	9.3
	20-24	194	13.3
	25-29	344	23.7
	30-34	305	21
	35-39	314	21.6
	40-44	108	7.4
	45-49	54	3.7
Highest level of education	No formal schooling	952	65.5
	Read only	139	9.6
	Read and write	274	18.8
	Primary school completed	79	5.4
	Secondary school completed	8	
	Refused	2	
Ethnic group	Amhara	735	50.6
	Oromo	718	49.4
	Tigray	1	
Marital Status	Never married	127	8.7
	Currently married	1009	69.4
	Separated	96	6.6
	Divorced	67	4.6
	Widowed	153	10.5
	Cohabitating	2	
Main work Status	Government employee	2	
	Self-employed	323	22.2
	Non-paid	4	
	Student	118	8.1
	Homemaker	963	66.2
	Retired	2	
	Unemployed (able to work)	21	
	Unemployed (unable to work)	21	
Religion	Orthodox	331	22.8
	Muslim	1121	77.1
	Protestant	1	
	Refused	1	
Total		1454	100

The median number of years spent at school was 0. The median duration of stay in the IDP camps was 36 months (3 years). Additionally, the median number of years spent in their original place of residence was 27 years, with the range spanning from 2 to 47 years, reflecting that most participants had lived in their original communities for a substantial portion of their lives before displacement.

Individual level SRHR history

The individual-level sexual and reproductive health and rights (SRHR) history of participants reveals key patterns in reproductive experiences and abortion history. A large majority, 88.3%, of participants had ever given birth, 64.6% of whom reported having 1 to 4 children. Eighty-four participants (5.8%) reported having had an abortion in their lifetime, the majority of whom (95.2%) reported having had only one abortion. Twenty-four participants (1.7%) reported having had an induced abortion while in the IDP camps, with 91.7% of these individuals having one abortion in the camp and 8.3% having two. Of those who had an induced abortion in the IDP camps, 18 participants had the procedure in a health facility, while 6 sought the procedure in traditional settings. (Table 2)

Among participants who had had an abortion in a health facility, unwanted pregnancy

Table 7: Individual SRHR history among participant women aged 15-49 who were displaced and are in four IDP camps of Amhara and Oromia special zone in Bakelo, China camp, Senkelila and Senbete, January 2025, (N=1454)

Variables	Categories	Frequency	Percent
Ever given birth (N=1454)	Yes	1284	88.3
	No	170	11.7
Number of Children (N=1284)	1-4	829	64.6
	5-8	403	31.4
	9-12	51	4
	>13	1	
Number of Pregnancies (N=1284)	0	165	11.3
	1-4	797	54.8
	5-8	436	30
	9-12	55	3.8
	>13	1	
Ever had an abortion (N=1454)	**Yes**	**84**	**5.8**
	No	1369	94.2
	Refused	1	
Number of abortions in lifetime (N=84)	1	80	95.2
	2	4	
Prevalence of induced abortions in IDP camps (N=1454)	Yes	24	1.7
	No	1430	98.3
Number of abortions in the IDP camps (N=24)	1	22	
	2	2	
Prevalence of induced abortions in a IDP camp health facility (N=24)	Yes	18	75
	No	6	
Lifetime Prevalence of contraception use (N=1454)	Yes	664	45.7
	No	790	54.3
Prevalence of contraception use among participants in the IDP camps (N=1454)	Yes	607	41.7
	No	847	58.3
History of contraception discontinuation in IDP camps (n=607)	Yes	109	18
	No	497	81.9
	Refused	1	

was the most common reason, cited by 9 out of 18 participants (not shown). Being a minor who was physically or psychologically unprepared for child-rearing due to financial issues (six participants) was also cited as a reason for abortion. Pregnancy resulting from rape accounted for two cases, while incest was mentioned by one participant. Factors influencing the decision to seek induced abortion outside of a health facility setting, based on responses from six participants included financial reasons,reported by all 6 participants, followed by parental influence and concerns about privacy and confidentiality (four participants each). Cultural or religious beliefs, partner's influence, lack of awareness about other options, and the combination of privacy and confidentiality with cultural or religious beliefs were each cited by three participants. Accessibility was reported by only one participant.

The data on contraceptive history revealed that over half of the participants (54.3%) had never used contraception. 41.7% of participants reported using contraception while living in an IDP camp. Among them, 18% discontinued its use while 82% continued using contraception. (Table 2) The most common reason cited for discontinuing contraception was limited access to contraceptive services, reported by 80.7% of participants. Health concerns or side effects were cited by 12.8% of women, while 10.1% discontinued due to changes in relationship status. The desire to have children despite the circumstances and inconvenience were each mentioned by 6.4% of respondents. (Figure 1) Injectable contraceptives were the most popular method, used by 69.4% of participants, followed by implants (31.5%) and birth control pills (16.0%). Intrauterine devices (IUDs) were used by 1.6%, and condoms and emergency contraception were the

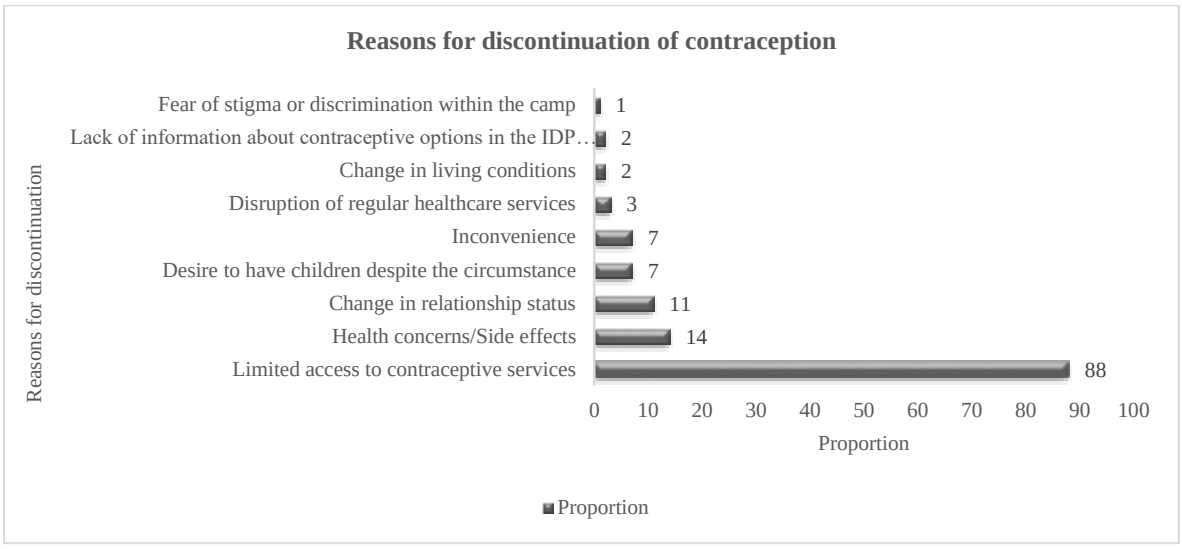

Figure 2: Reasons for discontinuation of contraception among participant women aged 15-49 who were displaced and are in four IDP camps of Amhara and Oromia special zone in Bakelo, China camp, Senkelila and Senbete, January 2025

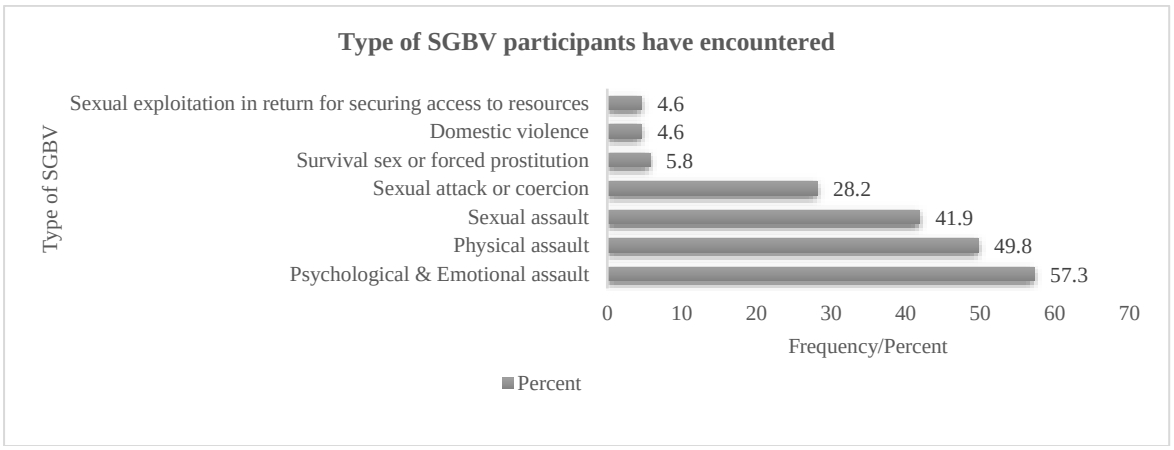

Figure 3: Types of SGBV among participant women aged 15-49 who were displaced and are in four IDP camps of Amhara and Oromia special zone in Bakelo, China camp, Senkelila and Senbete, January 2025

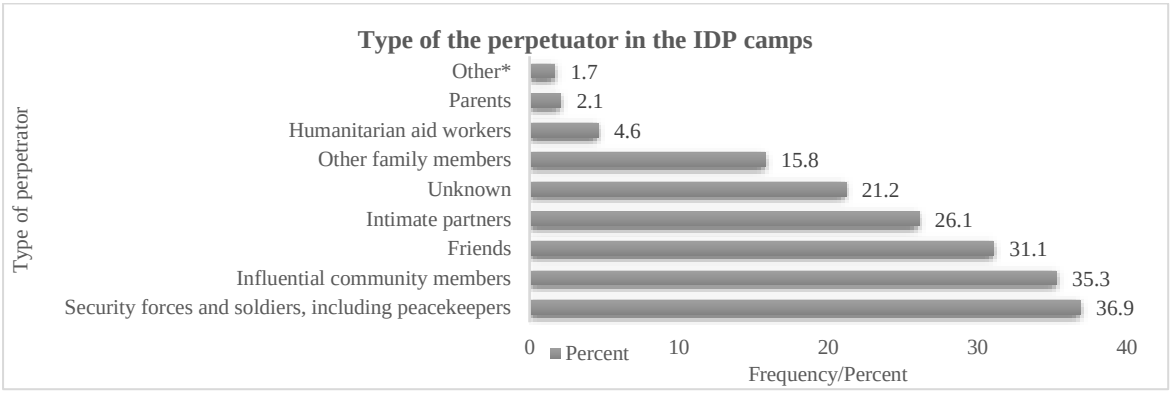

Figure 4: Types of perpetrators of SGBV reported by participant women who experienced SGBV in four IDP camps of Amhara and Oromia special zone in Bakelo, China camp, Senkelila and Senbete, January 2025

least favored methods, with only 0.3% and 0.2% usage, respectively.

Sexual and gender-based violence (SGBV)

Two hundred forty one women (16.6%) in the sample reported experiencing sexual and gender-based violence (SGBV) in IDP camps. Additionally, 24 respondents chose not to disclose or refused to answer the question. Figure 2 reveals that the most common form of SGBV participants reported experiencing was psychological and emotional assault, affecting 57.3% of participants (138 women), followed by physical assault (49.8%, 120 women), and sexual assault (41.9%, 101 women). Sexual attacks or coercion affects 28.2% (68 women), while 5.8% (14 women) reported survival sex or forced prostitution, and 4.6% (11 women) reported sexual exploitation in exchange for resources. Domestic violence was also cited by 4.6% of participants (11 women). (figure 2) Security forces and soldiers were the most frequently reported perpetrators of violence, reported by 36.9% of the women who had ever experienced SGBV in an IDP camp. (Figure 3) Influential community members were reported by 35.3% (85 women), 31.1% reported experiencing violence perpetrated by “friends.”. Over one-quarter (26.1% of women reporting SGBV) reported experiencing intimate partner violence. Other family members and humanitarian aid workers were cited by 15.8% and 4.6% of women who reported experiencing violence, respectively. Notably, 21.2% of the respondents (51 women) reported that the perpetrators were unknown, and 1.7% (4 women) identified perpetrators as "other," including paramilitary groups and committee members of IDP camps. These data highlight the severe issue of SGBV and the broad range of perpetrators involved.

Barriers to accessing safe abortion care service in IDP camps

Eighty six percent of respondents reported that they were unaware of the legal status of abortion. Among those who reported having some knowledge, 57% understood abortion to be legal under specific conditions, while 33.3% believed it to be legal on request under all circumstances. Regarding whether women in IDP camps believe that they have sufficient knowledge about safe abortion methods, 88% stating they were unaware, and only 5.7% affirming knowledge primarily sourced from healthcare providers (98.8%). Awareness of safe abortion methods was similarly limited, with 77.2% of participants lacking awareness. Attitudes towards abortion care were slightly unfavorable, with 55 % of participants holding negative views based on computed mean scores from 11 attitude-related questions.

Barriers to accessing safe abortion care in the IDP camps are pervasive, with personal religious beliefs (67.7%) and cultural norms (63.8%) standing out as the most significant obstacles. (Figure 4) Other notable barriers include a lack of information about available services (56.3%), parental influence (40.1%), denial of services at health facilities (33.7%), and social stigma (31.4%). Economic factors (24.5%), limited access to healthcare facilities (20.4%), and a shortage of trained providers (17.5%) further exacerbate the issue. Fear of judgment (12.7%) and legal restrictions (8.5%) were less commonly cited but still relevant, while partner influence and other unspecified barriers were minimal.

Access to SRHR

The data reveal significant challenges and disparities in accessing SRHR services including safe abortion within IDP camps. While the majority of respondents (95.7%) reported visiting healthcare facilities at all during their stay and 81.4% were sought for SRHR services, only 1.7%, accessed abortion services.

Among the 24 women who accessed abortion services, seven reported facing substantial challenges. The most frequently cited barrier was the limited number of healthcare facilities (85.7%), reflecting infrastructural inadequacies within the camps. Financial constraints were also significant, with 71.4% of respondents unable to afford abortion services. Additionally, 57.1% highlighted the lack of trained healthcare providers as a major challenge, further exacerbating access issues. The same proportion of participants (57.1%) identified insufficient information about available services as a barrier. Cultural and religious beliefs also played a significant role, with 57.1% of women reporting societal norms as a barrier to accessing safe abortion care.

When assessing satisfaction with the quality of SRHR services received, responses varied widely. Nearly half of the respondents (49.7%) were satisfied with the services, while 12.5% expressed a high level of satisfaction. However, dissatisfaction

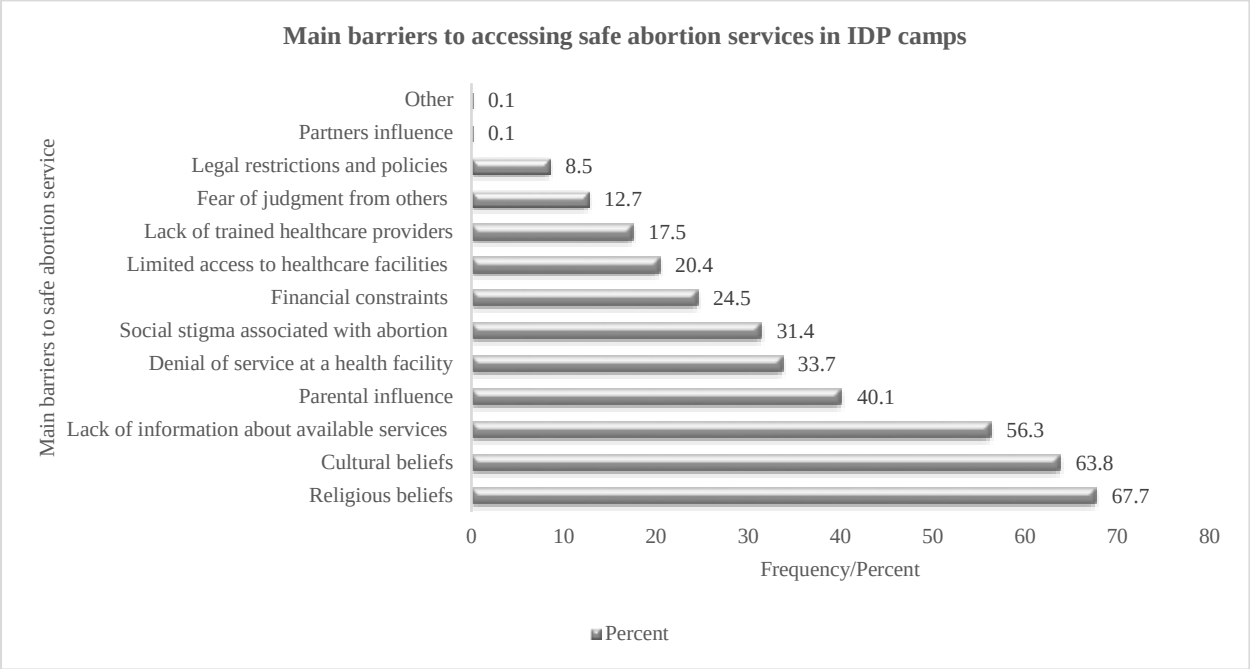

Figure 5: Barriers to accessing safe abortion services among participant women aged 15-49 who were displaced and are in four IDP camps of Amhara and Oromia special zone in Bakelo, China camp, Senkelila and Senbete, January 2025

Table 8: Factors associated with history of abortion

		Do you encounter any sexual and gender-based violence while being in the IDP?			Total	P value
		Yes	No	Refused		
Did you ever have abortion?	Yes	7	70	7	84	<.001
	No	234	1118	17	1369	
	Refused	0	1	0	1	
Total		241	1189	24	1454	
		Did you have an abortion while you were in the IDP camp?			**Total**	**P value**
		Yes	No			
Attitude towards abortion	Favorable	20	36		56	0.027(chi-square)
	Unfavorable	4	26		30	0.042(Fisher's exact)
Total		**24**	**62**		**86**	
		Did you have an abortion while you were in the IDP camp?			Total	P value
		Yes	No			
Education in category	No formal schooling	11	46		57	0.003
	Read only or read and write	7	15		22	
	Primary or secondary school	5	1		6	
Total		23	62		85	

was also notable, with 30.2% of participants reporting dissatisfaction, 7% remaining neutral and 0.6% were very dissatisfied.

Factors associated with history of abortion

Table 3 shows that the probability of the observed association between encountering SGBV in the IDP camps & having ever had an abortion is due to chance is less than 0.1%. Given the P-value of less than 0.001, it is highly unlikely that this association is due to random chance, implying a meaningful link between these experiences in this population.

The Chi-Square test result between attitude towards abortion and the incidence of abortion in the IDP camps is statistically significant ($p = 0.027$), indicating a significant association between the two. This suggests that the attitude of the individuals influences the likelihood of having an abortion. The Linear-by-Linear Association test is statistically significant ($p = 0.028$), meaning that individuals with a favorable attitude are more likely to have had an abortion compared to those with an unfavorable attitude. However, due to the small number of women reporting abortions, these findings should be interpreted with caution, as they may not be generalizable to the broader population. The significant linear trend suggests that as attitudes shift from favorable to unfavorable, the likelihood of having an abortion may decrease.

The Chi-Square test result between education and the incidence of abortion in the IDP camps is statistically significant ($p = 0.003$), indicating a significant association between the categorized education levels and the likelihood of having an abortion. The significant linear-by-linear association ($p = 0.002$) suggests a linear relationship between education level and the likelihood of abortion. Higher levels of education (primary or secondary school) seem to correlate with a higher likelihood of having an abortion, as indicated by the significant linear-by-linear association.

Initially, we planned to conduct logistic regression and multilevel modeling to control for confounders. However, due to the very small number of individuals reporting having had a safe abortion in IDP camps, we decided to rely on bivariate analysis instead. Given the limited sample size, more complex modeling would not have provided reliable estimates.

Discussion

The study, conducted across four IDP camps in Ethiopia, surveyed 1,454 women aged 15-49, with a median age of 30 and 65.5% having no formal education. The median duration of displacement was 36 months. Reproductive health data showed that 88.3% of participants had given birth, with 64.6% having 1-4 children, and 5.8% had experienced abortions, including 1.7% induced in the camps. Contraceptive use was reported by 45.7%, primarily injectables, but 18% overall discontinued using any method due to access issues. SGBV was prevalent, with 26.7% of respondents reporting having experienced violence, including sexual and physical abuse. Barriers to accessing SRHR services included a lack of healthcare facilities (85.7%) and financial constraints (71.4%). Religious beliefs (67.7%) and cultural norms (63.8%) were significant barriers to accessing safe abortion care. The study found associations between experiencing SGBV and having a history of abortion, as well as favorable attitude towards abortion and higher education levels being more likely to have had an abortion. However, given the very small number of women who reported having abortions, these findings should be interpreted with caution and may not be generalizable to other settings.

Our findings align with and extend the existing body of literature, which highlights the multifaceted challenges women in humanitarian settings face when seeking reproductive health services, particularly abortion care. At the individual level, our results revealed a significant relationship between encountering sexual and gender-based violence (SGBV) and the likelihood of having had an abortion. Women who experienced SGBV were more likely to report having had an abortion, a finding consistent with the literature highlighting the role of violence in reproductive decision-making.[10] This association underscores the compounding vulnerabilities women face in conflict settings, where violence and coercion significantly shape their reproductive choices.

The prevalence of sexual and gender-based violence (SGBV) in internally displaced persons (IDP) camps is a critical concern, with various studies highlighting the severity of this issue. In our

study, 16.6% of women reported experiencing SGBV, with psychological and emotional assault being the most common form among them (57.3%), followed by physical assault (49.8%) and sexual assault (41.9%). Perpetrators included security forces (36.9%), influential community members (35.3%), and intimate partners (26.1%). Comparatively, a study conducted in Mogadishu's Deynile area found a high prevalence of gender-based violence, with physical abuse being the most prevalent type, primarily committed by intimate partners, parents, and other family members.[11] Another study in northwest Ethiopia, reported an overall GBV prevalence of 37.9%, with physical violence at 15.8% and forced sex at 6.3%.[12] These findings underscore the critical need for comprehensive interventions to address SGBV in IDP camps, focusing on prevention, support services, and legal measures to protect vulnerable populations.

In the study conducted by Gebremedhin et al., 64% of women in IDP camps lacked knowledge of where to access sexual and reproductive health (SRH) services, with only a small proportion aware of abortion services.[13] Similarly, our data suggest that a considerable number of women lacked accurate information or faced significant barriers to accessing services.

A similar study suggested that majority of the respondents approved the use of family planning; however, most had not previously used and were not currently using any family planning method (85.1% and 91.3%, respectively). The primary reasons for not using family planning included a desire to conceive, active breastfeeding, or a current pregnancy.[13] These findings are in line with our study findings where over half of the participants have never used contraception and among those who used contraception, 18% discontinued its use due most commonly to limited access to contraceptive services, health concerns or side effects, or because of changes in relationship status and a desire to have children.

While interpersonal factors, particularly male partner involvement, have been highlighted in the literature as crucial in shaping women's abortion decisions[10], our findings identified other more prominent barriers to accessing safe abortion care. These include religious beliefs, cultural norms, parental influence, denial of services at health facilities, and the pervasive social stigma surrounding abortion, which emerged as more significant barriers to accessing abortion services than partner influence in our study.

A systematic review article published in 2021 and a scoping Review of Abortion Care in Humanitarian Conflict-Affected Settings showed stigma surrounding abortion remains a profound barrier at a community level.[14,15] Our findings also revealed that social stigma and fear of social repercussions were key obstacles for women, especially in public or community-based healthcare settings. This reflects the broader findings of studies in conflict-affected settings, where abortion is often viewed as a "sinful" act or culturally taboo, leading many women to resort to unsafe methods. This stigma often results in underreporting of abortions, both legal and unsafe, as women attempt to conceal their actions to avoid judgment from family, peers, and health providers.[14,15]

The institutional level factors, including availability, quality, and access to safe abortion services, also emerged as significant barriers. Our results align with findings from previous studies that report a lack of adequate healthcare infrastructure and trained providers in humanitarian settings. [10,14] In many IDP camps in Ethiopia, healthcare facilities struggle with inadequate supplies, destroyed infrastructure, and a lack of skilled personnel, which significantly impedes the delivery of safe abortion services. Our study found that the most frequently cited barrier to access SRHR services was a limited number of healthcare facilities and infrastructural inadequacies within the camps. Additionally, the lack of trained healthcare providers was also highlighted as a major challenge, further exacerbating access issues.

While some women were aware of abortion services, they reported a lack of trust in healthcare providers due to negative experiences such as judgmental attitudes or even outright refusals to provide services based on personal or religious convictions. These findings resonate with the literature highlighting healthcare providers' reluctance to offer abortion services in contexts where there are legal and moral restrictions [10].

From a societal perspective, legal restrictions on abortion and the politicization of reproductive health services were identified as critical barriers. Although Ethiopia's law allows abortion under certain circumstances, cultural and legal factors continue to limit women's access to safe abortion care. This is consistent with studies from other conflict-affected regions, such as South

Sudan and Jordan, were restrictive laws and policies, combined with cultural stigma, hinder access to abortion services. [14] Our findings indicate that while some women are aware of the legal framework surrounding abortion, societal attitudes still largely prevent them from seeking care. This barrier is compounded by a lack of community-based education and misinformation, which continues to circulate within these vulnerable populations.

This study has few limitations although the sample size was large and the design effect was considered to ensure representativeness, the small number of individuals reporting having had a safe abortion in IDP camps limited our ability to perform advanced statistical analyses, such as logistic regression and multilevel modeling. To address this, we relied on bivariate analysis to explore associations while acknowledging that potential confounders were not controlled. Additionally, self-reporting bias may be present, as participants might have underreported abortion experiences due to stigma or fear of disclosure. To mitigate this, data collection was conducted by trained interviewers in a confidential setting to encourage honest responses. Future studies with more robust statistical approaches are needed to further explore these associations.

Strengths and limitations

This study employed the Social Ecological Model (SEM), enabling a comprehensive analysis of multilevel barriers to safe abortion care among internally displaced women in Ethiopia. The use of a representative sample of 1,454 women across four diverse IDP camps enhances generalizability within conflict-affected settings. Rigorous data collection using trained female data collectors, Open Data Kit (ODK), pretested tools, and adherence to ethical protocols ensured cultural sensitivity and data reliability. Nonetheless, the study faced limitations including potential underreporting of sensitive issues like abortion, a cross-sectional design limiting causal inference, and restricted multivariable analysis due to low reported abortion cases. The purposive camp selection and reliance on self-report data may also introduce bias.

Implications for policy and practice

The findings underscore the urgent need for comprehensive, context-sensitive sexual and reproductive health and rights (SRHR) interventions in humanitarian settings. Tailored programs must reflect the cultural, religious, and social realities of internally displaced populations, including mobile SRHR clinics and the integration of mental health services to address both service access and trauma. Given that over 86% of participants were unaware of the legal status of abortion in Ethiopia, widespread community-based legal literacy and SRHR education campaigns are imperative, utilizing trusted health professionals, peer educators, and where appropriate religious leaders. The association between sexual and gender-based violence (SGBV) and abortion history calls for institutionalized GBV response services, including counseling, legal aid, protection mechanisms, and robust accountability systems. Improved access to contraceptive services is also critical, as nearly half of respondents had never used contraception and many cited access challenges; expanding the availability of preferred methods such as injectables and implants could significantly reduce unintended pregnancies. Capacity-building efforts should target healthcare providers in IDP settings, addressing not only technical skills but also attitudes toward abortion and SRHR. Investments in task-shifting models and community health workers may extend service coverage in low-resource contexts. Moreover, establishing routine, displacement-disaggregated data systems to monitor SRHR indicators is essential for timely response and effective resource allocation. Finally, SRHR must be systematically integrated into national humanitarian and disaster response frameworks, with earmarked budgets and coordinated action different stakeholders to ensure displaced women and girls are not left behind.

Recommendations

To improve reproductive health outcomes for women in IDP camps, a multi-level approach should be implemented that combines addressing SGBV, enhancing healthcare infrastructure, providing community education, advocating for legal reforms, and fostering collaboration among stakeholders. The Ministry of Health, along with relevant stakeholders, must urgently prioritize addressing the reproductive health needs of women in IDP camps, including prevention of sexual and gender-based violence (SGBV) by implementing robust prevention strategies, providing survivor-centered

care, and ensuring safe spaces for women to access reproductive health services. ensuring improved access to safe abortion care, strengthening healthcare infrastructure, and tackling the socio-cultural barriers they face.

Conclusion

There is an urgent need to address the multifaceted barriers that women in IDP camps face in accessing sexual and reproductive health services, especially safe abortion care and family planning. The study highlights the importance of tackling cultural and religious barriers, enhancing healthcare access, and addressing the social stigma surrounding reproductive health. Interventions should focus on increasing awareness, improving service delivery, and fostering acceptance of family planning methods. Additionally, the high prevalence of sexual and gender-based violence (SGBV) calls for immediate actions to combat violence, including holistic interventions that not only address individual perpetrators but also challenge the broader systemic issues of power imbalances and lack of accountability in displacement settings. This will ultimately contribute to improving women's reproductive health and safety in these vulnerable environments.

Contribution of authors

Samrawit S. Ethiopia conceived and designed the study, secured funding, provided data collectors training, supervised data collection and quality checks, led the analysis, and drafted the manuscript.
Andamlak G. Alamdo[1] participated in study design, provided data collectors training, conducted supervision and quality checks, contributed to data analysis, and reviewed the manuscript. Fanna A. Debele[1] Provided data collectors training, supported data collection, conducted data quality check, and assisted in manuscript preparation. Ferid A. Abubeker[2] contributed to study design, tool preparation and validation, provided data collectors training, data interpretation and reviewed the manuscript for intellectual content. Mitikie M. Sisay[3] provided methodological guidance, supervised the analysis, and contributed to manuscript revision. All authors read and approved the final version of the manuscript.

References

1. Brookings Institution. Project on Internal Displacement: Annual Report 2008. 2008;1–32. Available from: https://www.brookings.edu/wpcontent/uploads/2016/06/0605_internal_displacement.pdf - Google Search. Accessed July 17, 2023.
2. Forced displacement. Accessed July 17, 2023. https://civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/forced-displacement_en
3. 2024 Global Report on Internal Displacement (GRID) | IDMC - Internal Displacement Monitoring Centre. Accessed January 23, 2025. https://www.internal-displacement.org/global-report/grid2024/
4. Abortion Law and Policy Around the World: In Search of Decriminalization – Health and Human Rights Journal. Accessed October 20, 2023. https://www.hhrjournal.org/2017/06/abortion-law-and-policy-around-the-world-in-search-of-decriminalization/
5. Fatemi F and Moslehi S. Challenges of Reproductive Health Management in the Camps of Internally Displaced Persons: A Systematic Review. *Ethiop J Health Sci*. 2021;31(1):179. doi:10.4314/EJHS.V31I1.20
6. Environmental conflicts and women's vulnerability in Africa – ACCORD. Accessed October 20, 2023. https://www.accord.org.za/ajcr-issues/environmental-conflicts-and-womens-vulnerability-in-africa/
7. Jayaweera R, Powell B, Gerdts C, et al. The Potential of Self-Managed Abortion to Expand Abortion Access in Humanitarian Contexts. *Front Glob Womens Health*. 2021;2:681039. doi:10.3389/FGWH.2021.681039/BIBTEX
8. More than 4.38 Million People Displaced in Ethiopia, More than... | IOM Ethiopia. Accessed October 20, 2023. https://ethiopia.iom.int/news/more-438-million-people-displaced-ethiopia-more-half-due-conflict-new-iom-report
9. (16) Addressing barriers to safe abortion. Accessed October 20, 2023. https://www.researchgate.net/publication/235904683_Addressing_barriers_to_safe_abortion
10. Lokubal P, Corcuera I, Balil JM, et al. Abortion decision-making process trajectories and determinants in low- and middle-income countries: A mixed-methods systematic review and meta-analysis. *EClinicalMedicine*. 2022;54:101694. doi:10.1016/J.ECLINM.2022.101694
11. Dahie HA, Dakane MM and Hassan BS. Prevalence, patterns, and determinants of gender-based violence among women and girls in IDP camps, Mogadishu-Somalia. *J Migr Health*. 2023;8. doi:10.1016/J.JMH.2023.100193
12. Workie K, Tinsae T, Salelew E and Asrat B. Gender-based violence and its associated factors among internally displaced women in Northwest Ethiopia: a cross-sectional study. *BMC Womens Health*. 2023;23(1):166. doi:10.1186/S12905-023-02306-2
13. Titiyos A, Hailegebriel T, Habte M, et al. *Sexual and Reproductive Health Knowledge, Attitudes, and*

Practices among Internally Displaced Persons in the Somalia Region of Ethiopia.; 2020.
14. Dias Amaral B and Sakellariou D. Maternal Health in Crisis: A Scoping Review of Barriers and Facilitators to Safe Abortion Care in Humanitarian Crises. *Front Glob Womens Health*. 2021;2:699121. doi:10.3389/FGWH.2021.699121/BIBTEX
15. Pabalan C. Running Head: ABORTION CARE IN HUMANITARIAN CONFLICTS Abortion Care in Humanitarian Conflict-Affected Settings: A Scoping Review. Published online 2019. Accessed November 12, 2023. http://ruor.uottawa.ca/handle/10393/40224.