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Family planning in refugee settings in Ethiopia: A mixed-methods study of utilization, barriers, and opportunities

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Abstract

Background: The consequences of inadequate access to contraception in humanitarian settings are significant, with elevated rates of unintended pregnancy, closely spaced births, unsafe abortion, and adverse maternal and neonatal outcomes. Understanding the level of contraceptive use and the contextual factors surrounding it are necessary for designing effective and appropriate interventions for refugee women.

Method: This study employed a mixed-methods design comprising household surveys with 2,184 sexually active women aged 15–45 years across four refugee camps, as well as qualitative focus group discussions with women aged 15–45 years and key informant interviews with healthcare providers at health facilities serving the camps. Descriptive quantitative analysis examined contraceptive knowledge, current use, method mix, future intentions, and reasons for non-use while qualitative data thematically explored user experiences, challenges and opportunities.

Results: Contraceptive knowledge was high, but only 16.2% (95% CI: 14.7–17.8) of women reported current contraceptive use, ranging from 6.9% (95% CI: 5.8–8.8) in Nguenyiel camp to 34.6% (95% CI: 30.9–38.5) in Tsore camp. Most users relied on modern methods, particularly injectables, implants, and pills. While 66.5% (95% CI: 64.5–68.4) expressed supportive attitudes toward contraception, only 33.4% (95% CI: 30.9–36.0) of non-users intended to use a method in the future. The main reasons for non-use were wanting another child (25.2%), infrequent sex or partner absence (11.8%), partner opposition, and concerns about side effects or health effects. Qualitative findings further highlighted concerns about side effects, shortages of trained family planning providers and preferred methods, and socio-cultural barriers, including husbands' opposition, norms favoring large families, and religious opposition.

Conclusion: Our findings highlight high unmet need for family planning and unintended pregnancies in refugee camps. Effective interventions should address multiple socio-ecological factors, including individual fertility intentions, community awareness, social norms, and cultural influences.

Keywords: Refugees, Ethiopia, Family Planning, Contraception, Refugee Women

Introduction

Access to family planning (FP) and contraception is a core component of sexual and reproductive health and rights (SRHR), and one of the most effective public health interventions (1, 2). Modern contraceptive methods allow individuals and couples to decide when and how many children to have, reducing unintended pregnancies, unsafe abortions, and maternal and newborn deaths. Beyond health outcomes, FP supports women's empowerment, education, and economic participation. At the broader population level, it contributes to poverty reduction, household economic stability, and sustainable development (3, 4).

Despite substantial global progress in expanding access to contraception, unmet need for FP remains a significant public health challenge (4-6). Specifically, the burden of unmet demand is disproportionately concentrated among women living in low-income, fragile, and humanitarian settings, where health systems are often weakened and access to essential health services is disrupted (7, 8). Over the past decade, humanitarian crises have increased in both frequency and magnitude (9). These crises frequently disrupt essential services and infrastructure, displace populations, and create conditions of insecurity that limit access to healthcare. Consequently, women and girls affected by humanitarian crises continue to experience some of the poorest reproductive health outcomes globally (9). They face heightened risks of gender-based violence, poor maternal health outcomes, unintended pregnancies, unsafe abortion and limited access to sexual and reproductive health (SRH) services (10-12). Yet, SRH services are frequently deprioritized during humanitarian response efforts, especially during the acute phases of crises when resources are directed toward other prioritized life-

saving interventions (13, 14). As a result, access to contraception and family planning services is often interrupted or unavailable, despite ongoing demand (7, 15).

The consequences of inadequate access to contraception in humanitarian settings are significant, with elevated rates of unintended pregnancy, closely spaced births, unsafe abortion, and adverse maternal and neonatal outcomes reported among displaced and conflict-affected populations (12, 16). Humanitarian settings are estimated to account for over half of all global maternal deaths, highlighting the critical need for accessible and effective reproductive health services within these contexts (17-19). Humanitarian crises may also exacerbate existing gender inequalities, reducing women's autonomy and decision-making power regarding fertility and contraceptive use (20). Consequently, ensuring access to FP services in crisis-affected settings is not only a public health priority but also a critical issue of human rights and gender equity.

Recognizing the importance of SRHR in emergencies, the Inter-Agency Working Group (IAWG) developed the Minimum Initial Service Package (MISP) for SRHR in Humanitarian Settings (21). The MISP identifies priority reproductive health interventions to be implemented at the onset of a humanitarian crisis, including measures to prevent unintended pregnancies through the provision of a range of modern contraceptive methods. Current MISP guidance recommends ensuring access to both short-acting and long-acting reversible contraceptive methods and integrating family planning services into broader humanitarian health responses to address unintended pregnancies. Despite this, evidence suggests that implementation remains inconsistent across humanitarian settings (9). Common documented barriers to FP provision and utilization in crisis-affected populations are similar to barriers reported elsewhere (12). On the supply side, health facilities face shortages of contraceptive options, a lack of trained staff, broken supply chains, and a lack of privacy (6). On the demand side, women face social barriers, including limited personal knowledge, fear of side effects, cultural or religious opposition, financial constraints and a lack of decision-making power due to unequal gender roles (22).

Ethiopia currently hosts over one million refugees and asylum seekers, roughly half of whom are women and girls with significant reproductive health needs (23). Despite these challenges, there is very little data on how refugees in Ethiopia use FP or the related bottlenecks. Understanding the level of current contraceptive use and the influencing contextual factors is essential for designing effective and culturally appropriate interventions. By examining patterns of contraceptive knowledge and use, sociocultural influences, gender dynamics, and health system factors affecting access to services among women living in refugee settings in Ethiopia, this study seeks to generate evidence that can inform the design and implementation of responsive FP programs in humanitarian settings.

Study design and methods

Methods

This study uses data from the baseline assessment of a prospective study titled: *'Addressing unintended pregnancy in refugee settings in Ethiopia'* conducted as part of the Baobab Research Programme Consortium (RPC) studies. We conducted a cross-sectional baseline survey and qualitative inquiry in four refugee camps in Ethiopia from December 2024 to May 2025. Participants were women aged 15-45 years living in the refugee camps, program staff of implementing partners and healthcare professionals that provide SRHR services in the refugee camps. The camps were purposively selected in consultation with the Ethiopia Refugees and Returnees Service (RRS), the Ethiopian government agency responsible for coordinating country-level refugee assistance, protection programs, and the integration of Ethiopian returnees. The camps were Tsore camp, Benishangul-Gumuz region, western Ethiopia, that hosts refugees from Sudan and South Sudan, Awbare and Shedder Camps, Somali region, eastern Ethiopia that hosts refugees from Somalia, and Nguenyiyiel Camp, Gambella region, southwestern Ethiopia which is the largest camp in Ethiopia hosting refugees from South Sudan (Figure 1).

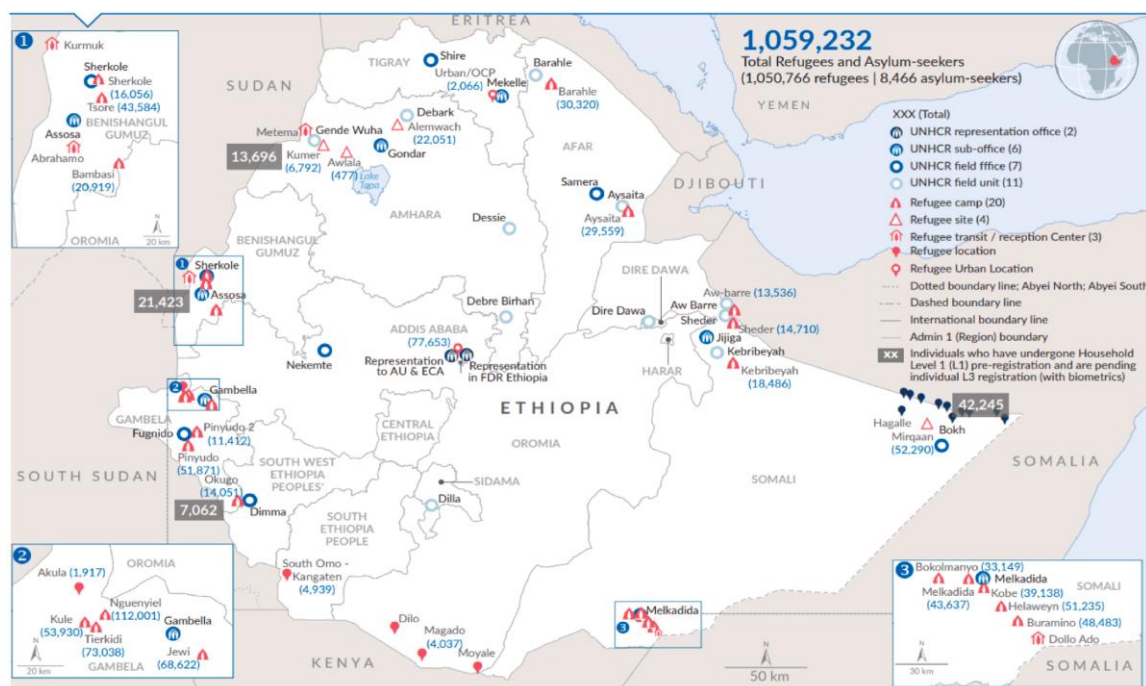


Figure 1. Map of Ethiopia with refugee camps and refugee population numbers (March 2024).

Source: UNHCR Operational Data Portal.

Sample size and Sampling procedures

We conducted a representative household survey of females ages 15-45 years living in the four refugee camps. This included women with the age limit of 45 years based on the desire to conduct follow-up interviews when the women were still within the reproductive age. A minimum sample size of 3019 was calculated using assumptions for differences in two proportions (24), assuming 15% difference in outcome, 95% confidence level, 80% power, and a design effect of 1.2 considering clustering effects given that a two-stage cluster sampling approach used to sample eligible women for the study. The baseline survey succeeded in interviewing 2768 women with 91.7% response rate.

Four refugee camps were selected purposely in consultation with the refugee stakeholders, followed by a two-stage process to identify and recruit respondents for the interview. The first stage entailed a random sample of households within each selected refugee camp. To ensure representation of households across each camp, the sampling was stratified by zones. The number of households to be sampled from each zone within a camp was proportional to the population size in the zone. Household

listing was conducted in the selected zones to generate the sampling frame for the second stage of sample selection. The second stage involved randomly selecting one female aged 15–45 years from each sampled household for an individual interview. In households with more than one eligible female, the ODK Collect platform, which was used in data collection, randomly selected one using the Kish Method (25). For participants aged 15–17 years, only emancipated minors (those who had assumed adult responsibilities, such as marriage or parenthood) were eligible for inclusion in the study.

Data Collection

Quantitative survey

We recruited and trained experienced female field research assistants who could speak the local language (Juba Arabic Tsore, Nuer in Nguenyiel and Somali in Shedder and Awbare camps) to conduct the survey using a structured questionnaire. The questionnaire included sections on women’s socio-demographic characteristics; reproductive history; measures of pregnancy intentions; knowledge and use of contraception, method-specific attitudes and experiences with contraceptives. Women who were not pregnant at the time of data collection were asked about their future pregnancy intentions and their contraceptive use dynamics. Those who were currently pregnant were asked to report retrospectively on the planning status of their current pregnancy and prospectively on future pregnancy intentions. Interviewers were recruited based on their qualifications, experience, and language speaking proficiency in one of the local languages used for data collection (Arabic, Nuer, or Somali). All interviewers held at least a college diploma and had prior experience conducting household surveys on SRH topics. They received comprehensive training covering the study design, participant recruitment procedures, research ethics, questionnaire administration, and data collection processes. To promote community representation and facilitate engagement with participants, interviewers and team leaders were recruited from both the refugee and host communities.

Qualitative inquiries

We conducted focus group discussions (FGDs) with community women and key Informant Interviews (KIIs) with health workers and implementing partners. Participants for the FGDs were selected from the quantitative survey participants. From the list of those who expressed willingness to participate in the FGDs, the study investigators randomly selected four groups of women from each camp, with the participants disaggregated into age groups of 15-24 and 25-45 years.

The KIIs with healthcare providers, Reproductive Health Focal Persons, and program managers from implementing partners working in refugee camps explored their experiences implementing SRH interventions and providing basic health information and services to women and girls in refugee settings. The interviews examined the services offered and their uptake, strategies for delivering interventions and services, and gaps and opportunities for improvement.

The interviews were facilitated by two research assistants (one facilitator and one note-taker) with training in qualitative data collection. The discussions sought to understand contextual community- and individual-level factors affecting the SRHR of women and girls in refugee settings and possible approaches to addressing challenges. We conducted a total of 12 FGDs across the three camps, with each FGD involving 8-12 participants.

Data analysis

Descriptive analysis of the data collected was conducted. Prevalence estimates are presented as proportions with associated 95% confidence intervals (CIs). Qualitative interviews were transcribed verbatim and read iteratively together with field notes by two independent coders. Coding was done employing a hybrid inductive–deductive thematic approach. Data were open coded and organized into sub-themes and broader themes. Codes were then aggregated in emergent themes reflecting perspectives of community women, programmatic staff and healthcare providers. Quantitative data

were analyzed using Stata version 17 and the qualitative data were analysed using Dedoose version 9.0.

Ethical considerations

The study was approved by the Ethiopian Public Health Association (EPHA) Institutional Review Board (EPHA/OG/789/23) and the Population Council Institutional Review Board (Protocol 986). The Refugees and Returnees Service (RRS) also provided administrative authorization to enter the camps. Consent was obtained from all participants, and parental consent was waived by the IRB for emancipated minors. They include adolescents under 18 who are married, currently pregnant or are parenting and are independent from their parents or guardians. Data were collected by trained female interviewers, with strict measures implemented throughout the research process to ensure participants' privacy, confidentiality, and anonymity.

Results

The baseline survey succeeded in interviewing 2768 women and girls, achieving a response rate of 91.7%. Of these, 2,184 sexually active married and unmarried women were included in this analysis. The majority (54.6%) of the participants were 30-45 years, across all camps except for the Tsore camp where the majority were aged 20-29 years. The mean age of respondents was 30.6 years (SD 7.3). Most of the study participants were refugees from South Sudan (54.9%) and Somalia (30.7%). The average duration of stay for respondents as refugees in Ethiopia was 9.4 years although this was significantly higher in Awbare (15.6 years) and Shedder camps (11.6 years). Approximately half (50.4%) of the participants had no or pre-primary education, and less than a tenth (8.4%) of women had secondary and higher education. About 81.0% of the participants were married or living with a partner, and in most cases whose first marriage happened during childhood, before they turned age 18. Table 1 presents the socio-demographic characteristics of women at baseline.

Table 1: Socio-demographic characteristics of study participants by refugee camp, Ethiopia, 2025

Characteristics	Refugee camps				
	Awbare Camp (N ^a =310)	Nguenyiel Camp (N=901)	Tsore Camp (N=604)	Shedder (N=369)	Total (N=2,184)
Age M ^b (SD) *	32.4(7.1)	30.3(7.3)	28.89(7.1)	32.41(7.2)	30.6(7.3)
Age					
15-19	3 (1.0)	73 (8.1)	46 (7.6)	7 (1.9)	129 (5.9)
20-29	112 (36.1)	319 (35.4)	303 (50.2)	129 (35.0)	863 (39.5)
30-45	195 (62.9)	509 (56.5)	255 (42.2)	233 (63.1)	1,192 (54.6)
Country of origin					
South Sudan	0 (0.0)	892 (99.0)	304 (50.4)	0 (0.0)	1,196 (54.9)
Somalia	303 (99.3)	0 (0.0)	0 (0.0)	366 (99.2)	669 (30.7)
Sudan	1 (0.3)	9 (1.0)	267 (44.3)	0 (0.0)	277 (12.7)
Other	1 (0.3)	0 (0.0)	32 (5.3)	3 (0.8)	36 (1.7)
Duration of stay in the camp M ^b (SD) *)	15.6(3.4)	7.9(1.7)	7.0(4.0)	11.6(4.4)	9.4(4.4)
1-4 years	4 (1.3)	17 (1.9)	214 (35.4)	21 (5.7)	256 (11.7)
5-9 years	10 (3.3)	878 (97.4)	207 (34.3)	81 (22.0)	1,176 (54.0)
10 + years	291 (95.4)	6 (0.7)	183 (30.3)	267 (72.4)	747 (34.3)
Highest level of education					
No schooling/Pre- primary	50 (33.6)	124 (35.6)	291 (77.0)	58 (35.8)	523 (50.4)
Primary	70 (47.0)	197 (56.6)	81 (21.4)	79 (48.8)	427 (41.2)
Secondary and above	29 (19.5)	27 (7.8)	6 (1.6)	25 (15.4)	87 (8.4)
Marital status					
Married/living with a man	245 (79.0)	712 (79.0)	538 (89.1)	273 (74.0)	1,768 (81.0)
Not in union	65 (21.0)	189 (21.0)	66 (10.9)	96 (26.0)	416 (19.0)

Age at first marriage M ^b (SD) *	19.1(3.7)	17.9(7.2)	16.8(3.0)	18.8(3.5)	17.9(5.3)
<15 years	18 (6.1)	29 (3.6)	40 (6.8)	10 (2.7)	97 (4.7)
15-17 years	88 (29.6)	373 (46.7)	356 (60.2)	127 (34.6)	944 (46.0)
18-19 years	65 (21.9)	316 (39.6)	127 (21.5)	89 (24.3)	597 (29.1)
20+ years	126 (42.4)	80 (10.0)	68 (11.5)	141 (38.4)	415 (20.2)

Note: ^a N, sample size; ^bM, mean

Table 2 presents data on current pregnancy, pregnancy intention, and women's knowledge, attitudes, and current contraceptive use. Among women who were currently pregnant (N=413), a notable share — 43.1% (95% CI: 38.4% - 47.9%) — reported their current pregnancy as unintended at the time of the pregnancy. Knowledge of at least one contraceptive method among all women was widespread in three of the four locations, reaching 99.7% in Awbare, 99.5% in Shedder, and 97.7% in Tsore, though Nguenyyiel stood out with markedly lower knowledge at 39.7%. Despite this generally high knowledge, actual contraceptive use among non-pregnant women remained low across the camps, averaging just 16.2% (95% CI: 14.7% - 17.8%). Contraceptive prevalence varied considerably across sites, ranging from only 6.9% (95% CI: 5.4% - 8.8%) in Nguenyyiel to 34.6% (95% CI: 30.9% - 38.5%) in Tsore camp. The majority (96%) were using modern methods of contraception, but overall, the unmet need for FP was high, indicating that a large proportion of women who wish to space or delay pregnancy are not using any method.

Women's attitudes towards contraceptive use also varied. While about 66.5% (95% CI: 64.5% - 68.4%) of the women supported the use of FP overall, more women from the Nguenyyiel camp opposed the use of contraception. Moreover, almost half (43.7%) of all women reported their partner opposed the use of contraception. Among current non-users, 33.4% (95% CI: 30.9% - 36.0%) intended to use a contraceptive method in the future. Intention to use contraception in the future was highest in the Tsore camp (64.2%) and lowest in the Awbare camp (16.6%).

Table 2: Women's pregnancy intention, Knowledge of methods, attitudes & use of contraception in refugee camps in Ethiopia, 2025

Variables	Awbare Camp N ^a =310	Nguenyiel Camp N=901	Tsore Camp N=619	Shedder Camp N=369	Total (all camps) N=2,184
	%(CI)	%(CI)	%(CI)	%(CI)	%(CI)
Currently pregnant (N=413)					
Yes	11.9(8.8-16.1)	22.9(20.2-25.8)	19.2(16.3-22.5)	14.9(11.8-19.1)	18.9(17.4-20.7)
No	87.7(83.9-91.2)	76.8(74.2-79.7)	80.8(77.5-83.7)	84.0(80.9-88.2)	80.7(79.3-82.6)
Pregnancy intention (current pregnancy)					
Intended	54.1(38.1-69.2)	43.4(36.8-50.3)	75.9(67.2-82.8)	69.1(55.7-79.9)	56.9(52.1-61.6)
Unintended	45.9(30.8-61.9)	56.6(49.7-63.2)	24.1(17.2-32.8)	30.9(20.1-44.3)	43.1(38.4-47.9)
Knows at least one method					
Knows at least one method	99.7(97.7-100.0)	39.8(36.6-43.0)	97.7(96.1-98.6)	99.5(97.9-99.9)	74.3(72.4-76.1)
Currently using a method					
No current use	85.9(81.5-89.4)	93.1(91.2-94.6)	65.4(61.5-69.1)	89.4(85.9-92.2)	83.8(82.2-85.3)
Currently using a method	14.1(10.6-18.5)	6.9(5.4-8.8)	34.6(30.9-38.5)	10.6(7.8-14.1)	16.2(14.7-17.8)
Demand for family planning					
Overall demand for FP ^b	52.0(46.3-57.6)	63.0(60.0-66.3)	62.9(59.0-66.7)	48.5(43.4-53.6)	59.0(57.0-61.1)
Unmet need for FP	37.9(32.6-43.6)	56.1(53.0-59.5)	28.3(24.8-32.0)	37.9(33.1-43.0)	42.8(40.7-44.9)
Methods commonly used					
Implants	11.9(5.0-25.6)	11.3(5.5-21.9)	36.4(30.1-43.1)	20.5(10.6-36.0)	27.3(22.9-32.2)
Injectables	40.5(26.8-55.8)	48.4(36.3-60.7)	52.2(45.4-58.9)	28.2(16.3-44.2)	47.4(42.3-52.7)
Pill	16.7(8.1-31.1)	25.8(16.4-38.1)	5.3(2.9-9.3)	25.4(7.1-30.3)	11.4(8.4-15.1)
LAM ^c	26.2(15.1-41.4)	0.0	3.3(1.6-6.9)	19.8(18.3-36.8)	8.5(6.0-11.9)
Other methods	4.8(1.2-17.2)	14.5(7.7-25.7)	2.9(1.3-6.3)	5.1(1.3-18.4)	5.4(3.5-8.3)
Respondent supports use of contraception					
Oppose	16.4(12.7-21.1)	51.1(47.8-54.3)	13.6(11.1-16.5)	23.6(19.5-28.2)	31.2(29.3-33.2)
Support	82.9(78.2-86.8)	44.8(41.6-48.1)	85.1(82.0-87.7)	75.3(70.7-79.5)	66.5(64.5-68.4)
Unsure	0.7(0.2-2.6)	4.1(3.0-5.6)	1.3(0.7-2.6)	1.1(0.4-2.9)	2.4(1.8-3.1)
Male partner supports use of contraception					
Oppose	25.8(21.2-31.1)	74.5(71.5-77.2)	16.9(14.1-20.1)	27.4(23.1-32.2)	43.7(41.7-45.8)
Support	54.7(49.0-60.3)	7.7(6.1-9.6)	70.4(66.6-73.9)	49.6(44.5-54.7)	38.7(36.7-40.8)
Unsure	5.4(3.3-8.6)	8.7(7.0-10.7)	2.8(1.8-4.5)	5.7(3.7-8.6)	6.1(5.2-7.2)
No husband/partner	14.1(10.6-18.5)	9.1(7.4-11.2)	9.9(7.8-12.6)	17.3(13.8-21.6)	11.4(10.2-12.8)
Intention to use a method in the future					
Yes	16.6(11.9-22.6)	29.4(26.0-33.1)	64.2(58.1-69.8)	24.8(19.8-30.6)	33.4(30.9-36.0)
No	80.7(74.5-85.8)	65.1(61.3-68.7)	35.4(29.8-41.5)	73.6(67.7-78.7)	63.2(60.6-65.8)
Unsure	2.7(1.1-6.3)	5.3(4.0-7.6)	0.4(0.1-2.7)	1.6(0.6-4.3)	3.4(2.5-4.5)

Note: ^a N, sample size; ^b FP, family planning; ^c lactational amenorrhea method

During in-depth interview and discussions, many participants said they believed contraception was important but was mainly for younger and unmarried girls and women to prevent unintended pregnancy. FGD participants purported that unmarried girls were at particular risk because they were sexually active but unlikely to seek family planning services.

"Mostly, girls are affected by unwanted pregnancy and abortion and therefore need contraception. They have sex before marriage and will not go to the hospital to get family planning, so they end up pregnant."

FGD Participant, 25–45 years, Tsore

Across the four camps, contraceptive method mix preferences varied. Injectables were the most widely used contraceptive method (47.5%), followed by implants (27.2%) and pills (17.3) (Figure 2). Qualitative accounts from health providers shed light on the dynamics shaping these patterns. A midwife in Nguenyiel noted that while injectable contraceptives were the method of choice for most women, counselling efforts aimed to broaden women's awareness of the full range of available options:

"Many women in this community primarily use injectable contraceptives. However, we provide counselling and advise them to choose from the full range of family planning methods based on their needs and preferences. Currently, some men are also taking condoms from the health center, though this is still relatively rare." Midwife, Nguenyiel

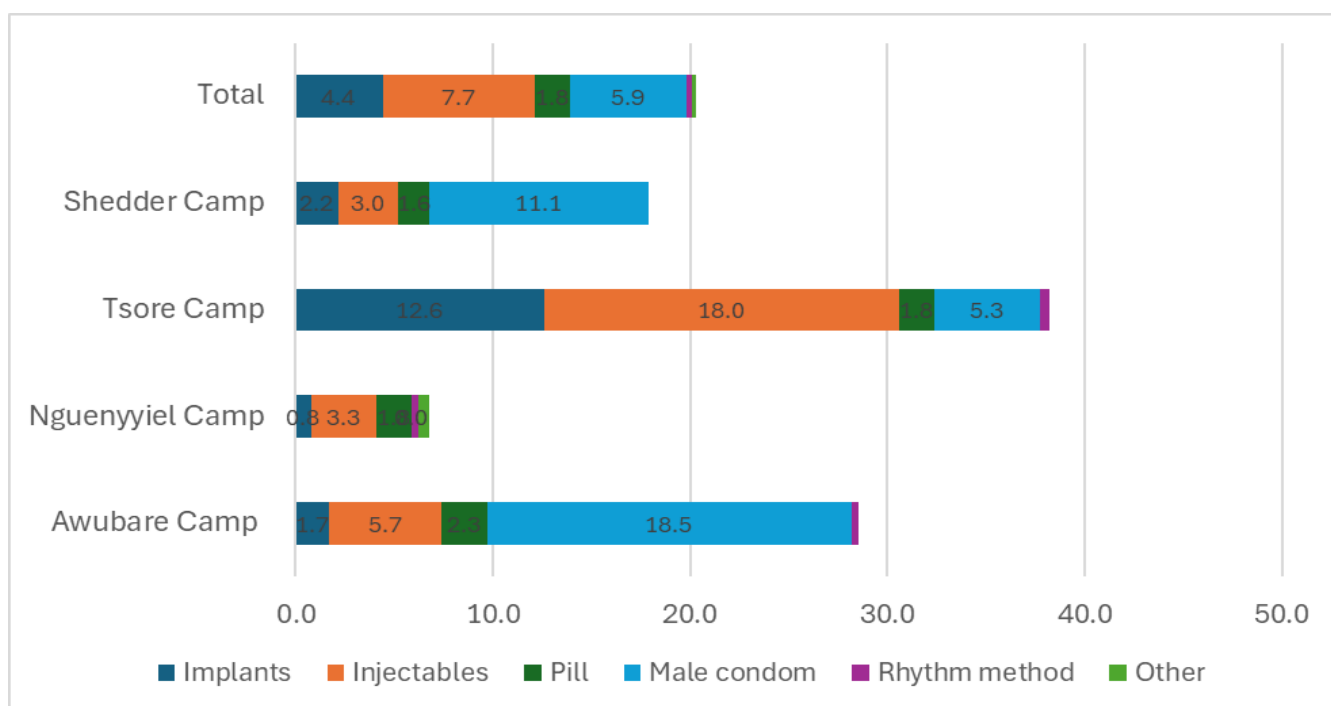


Figure 2: Contraceptive method mix among refugee women by camp, Ethiopia 2025

Reasons for not using family planning

The reasons for not using a contraceptive method varied by camp but across all the camps, the most common reason reported for not using a contraceptive method was desire for another child soon (25.2%). This was more prominent in Awbare (38.7%), and Shedder camps (34.6%). Another major reason for not using a method was infrequent sex/partner being away reported by 11.8% of respondents. This reason was more commonly reported by participants in the Tsore camp (24.5%) and Shedder camp. Husband's opposition (8.0%), concerns about side effects and health problems (5.9%), and lack of knowledge of methods (5.7%) are also among the major reasons for non-use. Details about the reasons for non-use of contraception is provided in Table 3.

Table 3: Reasons for not using family planning in refugee camps in Ethiopia refugee settings, 2025

<i>Reasons for not using a method</i>	<i>Awbare Camp</i>	<i>Nguenyiel Camp</i>	<i>Tsore Camp</i>	<i>Shedder Camp</i>	<i>Total (N=1684)</i>

Want another child soon	38.7	18.4	26.9	34.6	25.2
Infrequent sex/partner away	13.0	4.9	24.5	19.9	11.8
Knows no method	0.9	10	1.4	0.4	5.7
Knows no source of method	0.9	6.3	0.7	0.4	3.6
Side effects/health concerns	7.4	5.8	7.9	2.9	5.9
Respondent opposed	2.2	6.4	8.6	0.4	5.2
Husband/partner opposed	4.3	10.5	6.9	3.7	8.0
Religious prohibition	3.0	0.1	2.1	6.2	1.8
Breastfeeding/not menstruated	4.3	5.9	5.5	4.8	5.5
Menopausal/can't get pregnant	7.4	0.3	0.7	8.5	2.7
Up to God	12.6	0.7	3.1	9.9	4.2
Other (specify)	4.8	0.7	6.9	5.5	3.1

Note: ^a N, sample size

Male partner opposition

FGD participants described a range of reasons why they did not use contraception. One common reason was that their husbands or male partners were against the use of contraception. Participants reported that men wanted large families and saw FP as a threat to this fertility desire. When husbands found out their wives were using contraception, it sometimes caused significant household or relationship conflict.

“Mothers face major challenges with their husbands because our men often want to have many children and grow their lineage. When they find out that their wives are using family planning services, it can lead to the breakdown of the family.”

FGD Participant, 18–24, Awbare

Some women revealed that they secretly used contraception without telling their partners.

“I have given birth to nine children, and my husband still refuses to let me use birth control pills. For the past eight years, I have been using them secretly. I tell him it is for high blood pressure. I continue to use family planning secretly because it is the only way I can protect my health.”

FGD Participant, 25–45, Awbare

Concerns about side effects and method choice

Women also said that worries about side effects and a lack of preferred method choices stopped them from using contraception. Some found certain methods unreliable or difficult to use, while others had bad experiences with side effects.

“The pill is not good because if you forget to take it one day, or do not take it at the right time, you can get pregnant. Most women in the community prefer the arm implant that lasts three years.”

FGD Participant, 15–24, Tsore

“The pill is fine, but the arm implant causes fainting. So, some family planning methods are good and others are not.”

FGD Participant, 25–45, Tsore

Cultural and social barriers

Social and cultural norms also played a role in limiting women’s access to contraception. In some communities, there were strict rules about who could use which methods. For example, condoms were seen as acceptable for men but not for married women.

“From what we have heard in the community, men use condoms for protection, but a married woman would not be allowed to.”

FGD Participant, 15–45, Nguenyyiel

Health system barriers

Beyond individual and community-level barriers, women and providers also highlighted bottlenecks within the health system itself. These included shortages of preferred contraceptive methods, unavailability of female providers, and limited facility infrastructure.

“The most needed service is the three-month injection and the pill. Most people in this community want those types of family planning, but there are shortages, and they are often not available.”

FGD Participant, 25–45, Tsore

Some women also said they were uncomfortable receiving services from male health workers.

“Another challenge is that most health workers are men, and we are afraid of them.”

FGD Participant, 15–45, Nguenyyiel

Health providers confirmed these challenges. They pointed to shortages of staff and supplies, and the closure of outreach programmes that had previously helped reach women in the community.

“There is a problem with the budget, and the staff at the health facility are very few compared to the number of patients we see. We also have only one centre.”

Field Coordinator, Awbare

“I worked in the outreach programme, providing information and encouraging women to seek services. Unfortunately, those services are no longer available, and now the only option for women is this health centre.”

Community Health Worker, Nguenyiel

“A key gap is the lack of organised community support. There is also no women-friendly space where women and girls can feel safe, supported, and heard.”

Reproductive Health Focal Point, Tsore

Opportunities to improve contraceptive uptake

Despite these barriers, women and health providers identified several ways to increase the use of contraception. These included women-friendly spaces, community outreach, and more involvement from male partners.

“When the organisation was working in this camp, we received support through the women and girls’ friendly space, including information about family planning.”

FGD Participant, 18–45, Nguenyiel

“There are still some women who do not come on their own. They only visit the health centre when someone from the outreach team comes to their home to bring them.”

Midwife, Nguenyiel

“Community-based approaches, such as using community health workers to raise awareness and support self-care, are important.”

Coordinator, Awbare

Women also asked for a wider range of contraceptive options to meet the needs of different individuals.

“If both types of family planning services were available in enough quantities, things would be better.”

FGD Participant, 25–45, Tsore

Educating husbands about the health benefits of family planning was suggested as one of the most important means of addressing cultural bottlenecks to uptake.

“It will be easier if husbands who do not allow their wives to use family planning are told about the harm this causes to the health of mothers and children.”

FGD Participant, 25–45, Awbare

Discussion

This study examined contraceptive use among women living in humanitarian settings in Ethiopia, the barriers to accessing contraceptive services, and potential opportunities to improve access to family planning. Our findings show that although awareness of contraception is high, contraceptive use remains relatively low. Non-use is driven by a complex interplay of fertility preferences, sociocultural norms, knowledge gaps, and health system barriers. This is well documented in literature that several explicit and nuanced factors interplay in driving women’s demand for and use of contraception (4, 6, 22). Among non-users, the reported reasons for not using contraception, including the desire to have another child and infrequent sex or partner absence pointing to low perceived risk of pregnancy, a pattern commonly seen in low- and middle-income countries where fertility intentions strongly influence contraceptive demand (26). However, the qualitative data suggest these proximate reasons often mask deeper structural barriers, including partner opposition and weak health services, that constrain women’s ability to act on their reproductive intentions even when they exist.

Substantial gaps in contraceptive utilization were identified, despite relatively high levels of awareness in most study communities. Overall, less than a fifth of respondents reported currently using a contraceptive method. Contraceptive use varied considerably across refugee camps, suggesting important contextual differences in access, social norms, and community acceptance of family planning services. Although knowledge of at least one contraceptive method was high in most

locations, knowledge alone did not translate into use corroborating evidence from sub-Saharan Africa that awareness is necessary but insufficient for contraceptive uptake when social, cultural, and structural barriers persist (1, 22). Notably, Nguenyyiel exhibited both the lowest level of contraceptive knowledge (39.8%) and the lowest utilization (6.9%), highlighting the continued importance of information and education interventions as a foundational effort to uptake and use. The large variation across camps within the same national refugee response likely reflects differences in displacement duration, population composition, and availability and continuity of programming. Injectable and implant contraceptives were the most commonly used method, reflecting patterns observed across many low-resource settings where long-acting and provider-administered methods are preferred because of their convenience and effectiveness (27).

Nearly half of reported current pregnancies were unintended, and over two-fifth of women with unmet need, together indicate a large population of women exposed to pregnancy risk without the means to plan or delay it. The qualitative inquiry further sheds light on the fact that adolescent girls and unmarried women were also vulnerable due to limited contraceptive use and concerns about social stigma. Although we have not presented age disaggregated data, associations between unmet contraceptive need, adolescent pregnancy, and restricted reproductive autonomy have been documented in other contexts from Ghana and Kenya (28, 29).

Socio-cultural and gendered power were key barriers to contraceptive uptake. Nearly one-third of women opposed contraception, compared to nearly two-third of their male partners - a gap that, together with qualitative accounts of covert use to avoid conflict, illustrates that many women's preferences are constrained less by their own attitudes than by anticipated or actual opposition from partners who desire larger families. For some women, covert contraception use was the solution to avoid conflict with their husbands, illustrating gendered power imbalances that limit reproductive autonomy. These findings align with evidence showing that male opposition and pronatalist norms remain among the strongest barriers to family planning use in many settings including Nigeria and

South Africa (30, 31). This reinforces calls for interventions that actively engage men in family planning.

Fear and mistrust of contraception services also emerged as important barriers. Community narratives suggested various misconceptions regarding contraceptive methods despite service availability. This phenomenon is widely documented across several global contexts, as reported by D'Souza and colleagues in their global evidence review (32). Religious objections were less frequently cited overall but remained contextually concentrated in some communities, particularly Shedd. The influence of religion on contraceptive uptake is also documented in another study in Western Ethiopia where women expressed that religion forbade deliberately preventing pregnancy (33).

Concerns regarding side effects and health risks were reported by some respondents, consistent with previous studies demonstrating that fear of adverse effects remains a major contributor to contraceptive discontinuation and non-use (33). Fear regarding fertility impairment, menstrual changes, and other perceived health consequences may contribute to these concerns and warrant targeted, person-centred counselling interventions.

Beyond individual and sociocultural factors, the qualitative enquiries identified substantial health system barriers. Women and providers converged in describing shortages of preferred methods, too few female providers, and limited outreach and infrastructure – factors well documented as shaping contraceptive uptake and continuation in sub-Saharan Africa (6, 34, 35). Discomfort with male providers and confidentiality concerns when translators were needed further limited access, particularly for adolescents and unmarried women. The discontinuation of outreach programmes and absence of women-friendly spaces likely compounded these barriers. These findings reflect broader evidence showing that service availability, provider characteristics, privacy, and quality of care significantly influence contraceptive uptake and continuation (35). This corroborates existing evidence that such approaches have been shown to be effective in reducing unmet demand for contraception

and preventing unintended pregnancies in humanitarian and resource-constrained settings, as reported from Ugandan humanitarian settlements (36).

Overall, these findings suggest that many women in refugee settings are not using family planning for reasons - such as low perceived risk, side effect concerns, partner opposition, and limited information - that can be addressed through better information and support. Providing accurate information about available methods, where to obtain them, and counselling tailored to individual needs could help overcome these barriers. Women who report infrequent sex or whose partners are often away may still be at risk of unintended pregnancy because sexual activity can be unplanned. In such situations, increasing awareness and use of methods like emergency contraception may be particularly useful.

That many current non-users intend to use contraception in the future, and that partner attitudes are sometimes more supportive than women perceive, points to concrete opportunities. The data also show that many current non- users intend to use contraception in the future, and a significant proportion of non-users who are still supportive of contraception points to potential opportunities. This presents an opportunity to increase awareness of available options and help women choose methods that best fit their circumstances. In addition, many partners are supportive of family planning or have views that are unknown to the women interviewed. Where appropriate and desired by women, involving partners in discussions about contraception could encourage informed and shared decision-making.

The study is not without limitations. One of the limitations of the study is that the four selected refugee camps may not represent all the refugee camps in Ethiopia and the findings from the research may represent the context of all refugee camps in the country or beyond. In addition, some of the key variables may have been affected by recall bias or social desirability bias. Women who were pregnant at the time of the survey were asked to remember whether their current pregnancy had been planned and to report their future pregnancy intentions. Women who had at least one previous birth were also asked to recall whether their most recent pregnancy had been planned. A limitation

of these retrospective questions is that women may later describe a pregnancy as wanted because the child has already been born, even if the pregnancy was unintended at the time (37, 38).

Conclusions and Recommendations

Our findings indicate that there is high unmet demand for family planning in the humanitarian settings of Ethiopia. This holds especially true for context-specific methods that are required to meet the needs and demands of potential users. Our findings suggest that increasing contraceptive utilization will require interventions that extend beyond improving availability of commodities alone. Strategies must address multiple socio-ecological factors including individual fertility intentions, community education, norms and cultural factors. Factors including male partner involvement and responsiveness of reproductive health services must also be addressed. Interventions that engage men, strengthen community-based education, and address prevailing myths about contraception are essential for increasing contraceptive uptake and reducing unintended pregnancies in these communities.

Abbreviations & acronyms

FGD: focus group discussion

IDI: In-depth interview

KII: Key Informant interview

MISP: Minimum initial service package

IAWG: Inter-Agency Working Group

RRS: Refugees and Returnees Service

SRHR: Sexual and reproductive health and right

Declarations

Ethics approval and consent to participate

Ethical approval for the Unintended pregnancy in Refugee Settings in Ethiopia was received from the Institutional Review Board of the Ethiopian Public Health Association (protocol number, EPHA/OG/789/23) and the Population Council IRB (protocol number 986).

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Author contributions

YDW, BW, YD, GO, FO, SM, & HH conceptualized the study. YD, DH, and YDW supervised data collection. HA, HH and BW conducted data analyses. YDW & HH wrote the original draft. YD, PK, GS, GO, SM, AN, FO, DH, CU and CK provided comprehensive feedback on the analysis and manuscript drafts. All authors read and approved the final manuscript.

Declaration of competing interest

The authors declare that they have no conflict of interest.

Consent for publication

Not applicable.

Data availability

The data used for this analysis is publicly available upon request from the following link '<https://microdataportal.aphrc.org/index.php/catalog/246>'.

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