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Knowledge, needs, access to services, and associated factors related to sexual and reproductive health among internally displaced youth in the Dschang health district

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Abstract

Background: *In Cameroon, ongoing conflicts have led to significant internal displacement, limiting displaced youth's access to information and sexual and reproductive health services. The objective of our study was to assess the knowledge, needs, access to, and use of sexual and reproductive health (SRH) services among these internally displaced youth in the Dschang Health District (DHD).*

Methodology: *A community-based, mixed-methods cross-sectional study was conducted in the DHD from January to July 2025. Participants included internally displaced youth (IDYs) aged 10 to 24 years, residing in the DHD for at least six months, and officially registered on the official list of internally displaced people (IDPs). Married IDYs or those with severe cognitive impairments were excluded. Data were collected using a structured questionnaire adapted from the UNDP/UNFPA/World Bank/WHO illustrative questionnaire for youth surveys. Statistical analyses were performed using SPSS 21.0 software.*

Results: *We included 276 IDYs, 57.2% of whom were women, with an average age of 18.7 (± 4.12 years). Sexual activity (aOR = 6.80; 95%CI: 3.50–13.20; p < 0.001), secondary or higher education level (aOR = 0.45; 95%CI: 0.25–0.80; p = 0.006), living in a health zone with youth-friendly sexual and reproductive health services (aOR = 3.10; 95%CI: 1.70–5.65; p < 0.001), knowledge of the location and type of SRH services (aOR = 2.50; 95% CI: 1.40–4.45; p = 0.03) and the presence of unmet needs (aOR = 1.95; 95%CI: 1.10–3.45; p = 0.02) were significantly associated with increased use of SRH services.*

Conclusion: *This study highlights the interdependence between the availability of services and unmet needs, and underlines the urgency of developing and strengthening youth-friendly SRH programs and improving access to reliable information.*

Keywords: *Sexual and reproductive health, Internally displaced youth, Access to health services, Dschang Health District, Cameroon.*

INTRODUCTION

Internal displacement is one of the most pressing humanitarian crises today, affecting nearly 83.4 million people by the end of 2024 [1]. People forced to flee their homes due to conflict, violence, or disasters often face extreme vulnerabilities, including limited access to basic healthcare [2,3]. Among them, adolescents and young adults are particularly affected, yet their sexual and reproductive health (SRH) needs are often overlooked in these challenging environments [4,5]. The changes that occur during adolescence can make young people more likely to engage in risky sexual behaviors, a situation that is made worse when health services are disrupted due to displacement [5,6].

In Cameroon, ongoing conflicts have led to significant internal displacement, leaving many young people with limited access to information and sexual and reproductive health services [7]. According to the OCHA Humanitarian Response Plan 2023, the Western region of Cameroon hosts the largest number of displaced persons (20,000), followed by the Littoral (12,000) and Central regions (11,350). A large proportion of these displaced individuals are youth: 13,973 are aged 5 – 14 years, and 14,882 are aged 15 – 24 years [8]. Despite their numbers, the services available often fail to meet the unique needs of young people. Research shows gaps in SRH knowledge, a lack of youth-friendly health facilities, and increased risks such as unprotected sex, early pregnancy, and sexually transmitted infections [9,10]. For example, a study of young people living with HIV in the Northwest Region of Cameroon revealed that only 58% used SRH services, while counseling, pregnancy prevention, and STI prevention services were accessed by 78%, 70%, and 76% of participants, respectively [11]. Service use was lower among men, urban residents, and those with no formal education, but increased among young people who had good knowledge of available services, highlighting the critical importance of health education [11,12].

Similarly, studies in the conflict-affected Northwest and Southwest regions show that even when SRH services are available, they are often not designed with young people in mind. Barriers include poor awareness campaigns, insufficiently trained health workers, socio-political instability, as well as fear, stigma, and resistance from families or religious groups, all of which limit young people's access to care [13].

Additionally, restrictive policies, such as the prohibition on contraceptive counseling in some faith-based facilities, further prevent adolescents from receiving comprehensive SRH services [13,14]. Education has been shown to play a key role in helping young people access and use these services effectively [14,15]. Considering the low uptake of modern contraceptives and the high rates of abortion among youth (22–35%) [16–20], it is critical to understand the knowledge, needs, and challenges young people face regarding SRH. Coupled with gender-based violence, ongoing conflicts, and growing inequalities, these barriers highlight the urgent need for targeted research and interventions to support the most vulnerable, including internally displaced youth [21].

The main objective of this study was therefore to assess the knowledge, needs, access and use of SRH services among internally displaced youth in the Dschang Health District (DHD).

MATERIALS AND METHODS

Design and study setting

This community-based, mixed-methods cross-sectional study was conducted in the Dschang Health District (DSD) from January to July 2025. Since 2016, the DHD has experienced a significant influx of internally displaced persons (IDPs) fleeing the Anglophone crisis in the Northwest and Southwest regions. The presence of a state university in the city of Dschang and its proximity to these conflict zones make it an attractive refuge for IDPs. According to information from the Office of the Head of Division of the Department of Culture and Social Affairs [22], Dschang currently hosts more than 3,799 IDPs from the Northwest and Southwest regions of Cameroon. These IDPs are distributed across seven localities within the DHD: Fiala-Foreke, Fometa, Siteu, Fongo-Tongo, Mbeng, Fokoue, and Ndoh-Njutitsa.

Study population and sampling

All internally displaced youth (IDY) aged 10 to 24 years residing in the DHD constituted the target population, while the source population consisted of those whose head of household was listed on the official internally displaced persons register. Participants had to have resided in the Dschang health district for at least six months before data collection. Married IDYs or those with severe cognitive impairments were excluded. The sample size was calculated using the proportion formula for a single population [23], as shown below.

$$n = \frac{Z^2 * P(1-P)}{d^2}$$

Using a proportion (p) of 11.1% from the literature [9], a margin of error of 5% and taking into account an estimated coverage of 80% of household surveys in Cameroon and a non-response rate of 20% [24,25], the final sample size was set at 190.

Stratified systematic sampling was used to select respondents aged 10–24 years in the seven health zones. The displaced household population was divided into distinct strata, corresponding to the health zones (HZs). Within each stratum (health zone), households were systematically selected based on their proportional representation in the total household population.

- Within each selected stratum, the number of respondents is determined proportionally, and households were systematically chosen from the exhaustive list of households in that housing area. The total number of respondents included per housing area is determined as follows:

$$\frac{\text{Total number of registered IDP households in HA}}{Total\ number\ of\ IDP\ households\ in\ HD(672)} x\ sample\ size(190).$$

A simple lottery was used to randomly select the first household between 1 and k, then the others were selected by systematically adding the sampling interval until the desired size was reached in each area.

Quantitative data were collected using a structured questionnaire adapted from the UNDP/UNFPA/World Bank/WHO illustrative questionnaire for youth surveys [26]. The questionnaire was pre-tested with 7% of the total sample. Within each household, one participant was selected by simple random sampling. The interviewer conducted a follow-up visit 48 hours later to collect the completed questionnaire, which was placed in a sealed envelope provided at the time of delivery.

In addition, four focus group discussions and four individual interviews were conducted. The interviews with key informants, adapted from previous studies [27], aimed to describe young people's perception of the current service offering, to identify and document their needs, to analyze the demand and adequacy of services, to identify gaps and obstacles related to supply and demand, and then to formulate recommendations to improve services.

Measurement of dependent and predictive variables

The use of sexual and reproductive health services was evaluated using a two-step process adapted from previous studies [28]. Participants first indicated, by a yes/no question, whether they had used SSR services in the past two years, then those who answered yes specified the number of visits and the type of services, to confirm and standardize the measurement of care use.

The assessment of SRH knowledge was an adapted scale [29], classified as follows: low knowledge (≤ 25%), insufficient (25.1–50%), medium (50.1–69%), or good (≥ 70%). The sexual and reproductive health needs and sources of SRH information of internally displaced youth were self-reported to reflect perceived needs and current resources.

Quantitative analysis

The data were coded and entered using Kobocollect, then exported to SPSS 21.0 for analysis. Descriptive statistics were summarized using frequencies and percentages. A bivariate logistic regression was performed on variables influencing the use of SRH services. Subsequently, the most significant variables ($p < 0.05$) were included in a multivariate logistic regression. From this model, adjusted odds ratios, with a 95% confidence interval, were used to assess the strength of associations between dependent and independent variables, and those with a p-value < 0.05 were considered statistically significant.

Qualitative analysis

Following a review of the verbatim transcripts, we conducted thematic analysis. Links were established between the themes and sub-themes raised during the participants' interviews. We then performed a vertical and horizontal comparison of the opinions expressed. This thematic analysis revealed key points of interest. These points ultimately constituted the main findings in response to our research question.

Ethical considerations

This study received ethical approval no. 387/26/03/2025/CE/CRERSH-OU/VP from the Western Regional Ethics and Research Committee in the Humanities. Additional administrative authorizations included approval from the Dschang District Health Director (DHD) and the Senior Division Chief of the Menoua Division (no. 000060/ACS/F.34/SAAJP).

RESULTS

Demographics of internally displaced youth in the DHD

Of the 293 questionnaires distributed, 276 were completed by consenting respondents, representing a response rate of 94.2%. All the 28 key informants and 12 IDYs who were invited for the qualitative aspect, took part in the interviews and focus groups.

The sample consisted of 57.2% women. The mean age was 18.7 ± 4.12 years. The age distribution showed that the largest group, 50.7% of participants, was between 19 and 24 years old. The majority, 64.1%, had been displaced after the year 2000. It was reported that 62.3% of the subjects lived in extreme poverty (below the national poverty line of 813 FCFA). Regarding their geographical distribution, the vast majority of displaced youth lived in the Siteu health zone (42%), followed by Foreke (18.8%) and Fometa (14.5%).

Table 1: Sociodemographic characteristics of young IDPs in the DHD

Variable	Modality	Proportion	Percentage
Age	10-14	53	19.2
	>14-19	83	30.1
	>19-24	140	50.7
Gender	Female	158	57.2
	Male	118	42.8
Duration of the trip	≤ 4 years	177	64.1
	>4 years	99	35.9
Academic characteristics	None	5	1.8
	Primary	92	33.3
	Secondary higher education	119 60	43.1 21.7
Can read a newspaper	No	27	9.8
	Yes	249	90.2
social status	Worker	99	35.9
	unemployed	177	64.1
Socio-economic status	Below the poverty line	172	62.3
	moderate poverty	91	33
	no poverty	13	4.7
Using drugs or alcohol	Consume alcohol	109	39.5
	Taking other medications in food or drinks	36	13
Living with others	The two parents single parent Tutor	105 50 64	38 18.1 23.2
	Alone	57	20.7
Residence (Sanitary area)	Baleveng	19	6.9
	Fokoue	13	4.7
	Fometa	40	14.5
	Fongo-Tongo	19	6.9
	Foreke	52	18.8
	Ndoh-Njutitsa	17	6.2
	Siteu	116	42

Knowledge level of internally displaced youth in the Dschang health district

Following our analysis, 64.86% of the participants were familiar with the reproductive system mechanisms, and 51.9% knew about methods of contraception. A majority (73.19%) demonstrated knowledge of HIV, including its transmission and prevention measures.

Knowledge of sexually transmitted infections (STIs) was the weakest. Only 39.86% of respondents were able to identify other STIs and recognize their general symptoms.

These results align with those obtained during the interviews. The majority of health workers interviewed indicated that "*young migrants have limited knowledge of contraception and STIs*" (Head of the Regional Health Service). This was confirmed by the response of a 17-year-old girl interviewed about contraceptive methods during a focus group. She stated: "*I don't know about contraceptive methods, but if you're talking about family planning, I've heard about it by chance from my sisters at home. At school, the teachers didn't teach contraception well. They mostly taught human anatomy, and even menstruation. I didn't really understand it.*" (Girl, 17 years old)

Table 2: Distribution of sexual and reproductive health knowledge levels among isolated young migrants in the DHD

Variables	Modality	Effective	Frequency relative (%)
Reproductive health function	Good knowledge	179	64.86
	Insufficient knowledge	97	35.14
Contraception	Good knowledge	141	51.09
	Insufficient knowledge	135	48.91
Knowledge about HIV/AIDS	Good knowledge	202	73.19
	Insufficient knowledge	74	26.81
Knowledge of other STIs	Good knowledge	110	39.86
	Insufficient knowledge	166	60.14

Perceived but unmet sexual and reproductive health needs

Among those surveyed, 20.7% reported having been tested positive for STIs. Of these, half demonstrated an unmet need for STI treatment. Among young women, 10.8% expressed a need for more information about SRH, and 8.33% indicated a need for condoms. Although only 10.8% of young women explicitly expressed a need for information about SRH, up to 71.7% reported receiving SRH information from unreliable sources (Figure 01).

During the focus groups, community health workers indicated that condoms and sanitary napkins are in high demand, but these products are often unavailable. A 16-year-old girl explained: "*My problem is sanitary products. Sometimes I have nothing to use during my period. Often I wear two pairs of underwear, but when I go to school, I get stained, and I have to wait in class until everyone has left before I can go home.*"

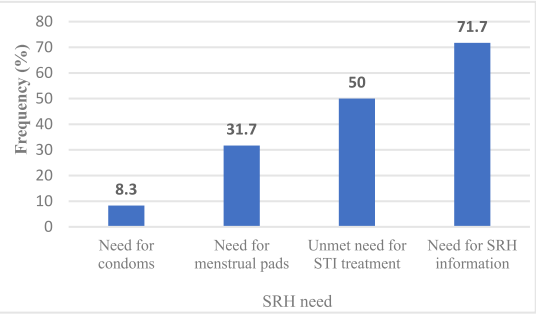

Figure 1: Perceived sexual and reproductive health needs of young IDPs

Awareness and use of sexual and reproductive health services

Of a total of 276 respondents, nearly three-quarters reported knowing where to find sexual and reproductive health (SRH) services. This level of knowledge varied according to the health zone: 76.9% of people living in health zones equipped with youth sexual and reproductive health services (YFSRHS) were aware of these services, compared to 73.7% of respondents residing in health zones not equipped with such services.

Regarding service utilization, less than half of the participants who knew where to find sexual and reproductive health (SRH) services reported having ever visited a health facility to access them. Utilization was lower among residents of health districts without youth sexual and reproductive health services (YFSRHS): 24.75% compared to 78.18% among residents of health districts with such services (Figure 02).

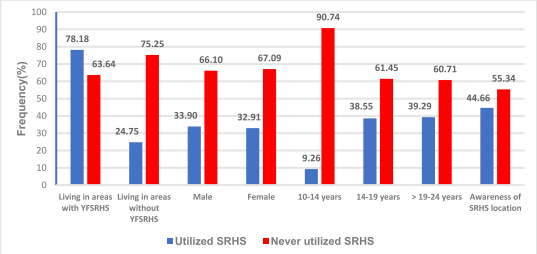

Figure 2: Evaluation of the use of sexual and reproductive health services (SRHS)

During qualitative interviews on access to sexual and reproductive health services, the majority of respondents complained about opening hours.

"...I don't know where to find sexual and reproductive health services, but I think any hospital can help me. The problem is that before the end of classes, the hospital staff have already left the facility" (15-year-old girl).

A 16-year-old girl testified: "*If I have to go to the hospital for sexual and reproductive health problems, I'm going to miss my classes. When I get back, I might even find myself locked out of the school. And besides, who would permit me to go to those kinds of places from home?*"

This concern was shared by some community health workers and sexual and reproductive health service managers. One of these managers explained: "Young people in this population often have limited access to sexual and reproductive health services, mainly due to restricted opening hours. Only about 30% of internally displaced youth report having access to these services, and limited opening hours are a major obstacle." She added: "The lack of youth-friendly reproductive health services makes accessing care even more difficult for them. That's why, in some health zones, community health workers are distributing contraceptives directly within the community."

Perceived obstacles reported by internally displaced youth

The most frequent barriers reported were limited opening hours and a lack of accurate information on SRH, reported by 52.2% and 47.8% of the

participants, respectively. Conversely, a lack of qualified staff (13%) was the least frequently mentioned barrier. Other notable challenges included an unwelcoming healthcare environment (39.1%), language barriers (29.3%), distance from healthcare facilities (27.2%), lack of transportation (27.2%), cultural and religious taboos (25%), and a lack of confidentiality (25%) (Figure 03).

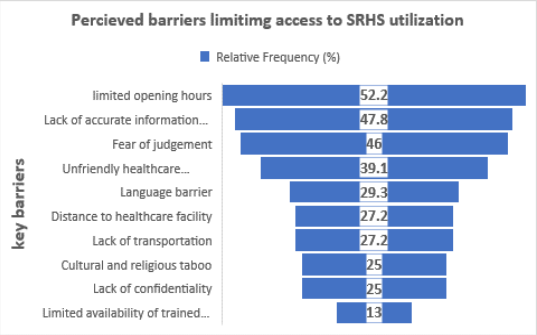

Figure 3: Obstacles perceived by internally displaced youth

Determinants of the use of sexual and reproductive health services

Following multivariate analysis and after adjusting for confounding factors, sexually active individuals had a significantly higher probability of using these services (aOR = 6.80; 95%CI: 3.50–13.20; p < 0.001). In addition, the level of secondary or higher education (aOR = 0.45; 95%CI: 0.25–0.80; p = 0.006), living in a health zone with youth-friendly sexual and reproductive health services (YFSRHS) (aOR = 3.10; 95%CI: 1.70–5.65; p < 0.001), knowledge of the location and type of SRHS (aOR = 2.50; 95%CI: 1.40–4.45; p = 0.03), and the presence of unmet needs (aOR = 1.95; 95%CI: 1.10–3.45; p = 0.02) were also significantly associated with increased use of these services.

Table 3: Factors associated with the use of sexual and reproductive health services among YDPI

Variable	modality	Utilization		Wald test	ORC (CI95)	ORa (CI95)	P-Value
		Yes	No				
Health area	With SRHS	43	35	16.8	3.73 (2.15-6.4)	3.10 (1.70–5.65)	<0.001*
	Without YFSRHS	49	149				
Unmet needs	Yes	42	51	5.3	2.17 (1.29-3.65)	1.95 (1.10–3.45)	0.02*
	No	50	133				
Academic characteristics	Primary and below	20	77	9.1	2.6 (1.45-4.61)	2.15 (01.2–3.85)	0.01*
	Secondary and above	72	107				
Sexually active	Yes	74	61	35.6	8.29 (4.55-15.10)	6.80 (3.5-13.20)	<0.001*
	No	18	123				
Awareness of the location of SRHS	Yes	78	128	4.5	2.44 (1.27–4.67)	1.85 (1.05-3.26)	0.03*
	No	14	56				
Awareness of the type of SRHS	Yes	40	37	9.8	3.05 (1.77-5.27)	2.50 (1.40–4.45)	0.002*
	No	52	147				

*ORc = crude odds ratio, ORa = adjusted odds ratio, $\chi^2 = \chi^2$, p = significance level (p > 0.05), * = statistically significant, YFSRHS: youth-friendly sexual and reproductive health services, SRH: sexual and reproductive health*

DISCUSSION

Internally displaced youth (IDY) in our study had significant gaps in their knowledge of SRH services. This was demonstrated by the low levels of knowledge regarding contraception and sexually transmitted infections (STIs), with only 51.09% and 39.86% respectively, demonstrating adequate knowledge. A study [31] highlighted this issue, emphasizing that many young Cameroonians lacked in-depth knowledge about contraception and STI prevention, often relying on informal sources. Furthermore, school-based sexual and reproductive health (SRH) programs focus more on biological aspects than on contraceptive practices, which corroborates the testimony of one participant who deemed school education inadequate. This highlights the need to implement sexual and reproductive health education actions specifically adapted to displaced youth and their cultural context in Cameroon, while ending taboos to mitigate the negative health consequences that bad information can cause [32-34].

Regarding the access and use of SRH services by IDYs, our study revealed that while a large majority of respondents knew where to find these services, less than half had actually used them. This was due to limited opening hours (52.2%), a lack of accurate information (47.8%), and fear of being judged (46%). This has been observed in studies in Nigeria [36] and sub-Saharan Africa [37-41], where restricted opening hours and concerns about stigma limited adolescents' ability to access care despite knowing where the services were located.

IDYs in the DHD presented multiple SRH needs that revealed serious health risks and the burden of poverty, including the management of sexually transmitted infections (STIs), the need for reliable SRH information, menstrual hygiene management, and access to contraception. These unmet needs were significantly correlated with the use of SRH services. This trend is consistent with other studies [35] that have shown that the availability of these resources, combined with a youth-friendly and appropriate service delivery model, improves youth access to SRH services and their willingness to use them.

Furthermore, residence in health districts with youth-friendly SRH centres, a secondary or higher education level, sexual activity, and knowledge of the location were also positively associated with increased use of SRH services. This corroborates research conducted in Ethiopia, which showed higher utilization in areas with SRH centers (33.8%) [42], highlighting the importance of providing essential youth-friendly services in this context. On the other hand, studies conducted in Nigeria and Kenya indicate that adolescents with at least a secondary education use these services much more than those with less schooling levels [43, 44].

Education likely empowers young people to acquire knowledge that facilitates their access to health services. Sexual activity appears to be a key factor in SRH service utilization, as sexually active youth are more likely to perceive the need for these services. Furthermore, knowing the location of sexual health services and the services available is strongly linked to their use, hence the importance of disseminating information to promote access to said services [45,46].

STRENGTHS AND LIMITATIONS OF THE STUDY

Adopting a quantitative and qualitative approach to assess knowledge, needs, access to, and use of sexual and reproductive health services among internally displaced youth in the DHD provides a richer and more comprehensive understanding by combining the generalizability of statistics with the depth of field data analysis. However, the cross-sectional nature of this study does not allow for the establishment of a causal link between knowledge of sexual and reproductive health and service utilization. Furthermore, the use of self-reported data may introduce recall bias.

CONCLUSION

This study comprehensively assessed the knowledge, needs, accessibility, and use of SRH services among internally displaced youth (IDYs) in the DHD. Our findings confirmed that IDYs in this district had gaps in their SRH knowledge, particularly regarding contraception and sexually transmitted infections (STIs). A significant unmet need remained for youth-friendly infrastructure, STI care, and hygiene products. Access to SRH services was also very limited. However, the presence of youth-friendly SRH services in some health centers significantly increased their use, highlighting the crucial role of providing services tailored to this vulnerable population. These results underscore the interdependence between service availability and unmet needs, and emphasize the urgent need to develop and strengthen youth-friendly SRH programs and improve access to reliable information.

Conflicts of interest: The authors declare that they have no conflicts of interest.

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