


# BMJ Open Barriers to contraceptive use among secondary school adolescents in Gedeo zone, South Ethiopia: a formative qualitative study

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## ABSTRACT

**Objective** To assess barriers to contraceptive use among secondary school adolescents in Gedeo zone, South Ethiopia, in 2021.

**Design** A grounded theory approach to the qualitative study was conducted between December 2020 and April 2021 in Gedeo zone, South Ethiopia.

**Setting** The study was conducted in two urban and four rural schools, in Gedeo zone; Gedeo zone is one of the 14 zones in the Southern Nations, Nationalities, and Peoples' Region of Ethiopia.

**Participants** The study involved 24 in-depth interviews with secondary school adolescents and 28 key informants. The interviews were conducted with students, school counsellors, Kebele youth association coordinators, zonal child, adolescent, and youth officers, health workers, and non-governmental organisation workers.

**Results** The findings were organised into four major themes that influence contraceptive use; these include; (1) Individual-related barriers such as knowledge, fear and psychosocial development. (2) Community-related barriers encompass fear of rumours, family pressure, social and cultural norms, economic vulnerability, and religious beliefs. (3) Health service-related barriers include the lack of adolescent-responsive health services, health workers' behaviour, and fear of health workers. Furthermore, (4) The school and service integration barrier was identified.

**Conclusions** Adolescents' contraceptive use was affected by various barriers ranging from individual to multisectorial levels. Adolescents note various barriers to using contraception and that, without contraception, sexual activity can lead to an increased risk for unintended pregnancy and its associated health risks.

## BACKGROUND

Global developmental goals and strategies have recognised the importance of adolescents' health and rights.<sup>1–3</sup> For example, one of the targets for Goal 3 of the United Nations Sustainable Development Goals (SDGs) by 2030 is to ensure universal access to sexual and reproductive healthcare services, including modern contraceptive use, information and education, and the integration of

## STRENGTHS AND LIMITATIONS OF THE STUDY

- ⇒ The study employed semistructured interviews with a relatively large sample of participants.
- ⇒ A well-established qualitative thematic analysis approach is used to understand in-depth school adolescent and healthcare provider perception towards contraceptive use barrier.
- ⇒ Only adolescents attending secondary schools were involved in the study.
- ⇒ Because of the delicate nature of the subject, focus group discussions were not used.
- ⇒ Data analysis was limited by the lack of depth in adolescent boys' responses.

reproductive health into national strategies and programmes.<sup>4</sup> The largest-ever group of young people in history is becoming sexually active and therefore needs contraceptive utilisation services.<sup>5</sup> On the other hand, adolescents' sexual and reproductive health (SRH) needs remain primarily unmet globally.<sup>6</sup>

Access to SRH information determines the burden of adolescent pregnancies and unwanted pregnancies.<sup>7</sup> Worldwide, about 15% of unsafe abortions occur annually among girls under the age of 20 years. Early pregnancy and childbearing typically denote the end of formal education, expose the student to early marriage and restrict employment opportunities.<sup>8</sup> SRH issues, including unwanted pregnancies, remain a significant public health concern in sub-Saharan Africa.<sup>9</sup>

Approximately 85% of sexually active adolescent girls who do not want to become pregnant do not use modern contraception.<sup>10</sup> Moreover, in most parts of the developing world, unmarried, sexually active adolescents who are not in a formal partnership require contraception, which is often unrecognised by their community; additionally, this population faces stigma and social condemnation if forced to use it.<sup>11 12</sup> As a result, they are easily



exposed to undesirable health and socioeconomic consequences such as unsafe abortion, high fertility, obstructed labour, complications such as obstetric fistula, and hypertensive disorders of pregnancy.<sup>13</sup>

The importance of education on reproductive health in schools has been recognised in the SDGs' agenda to ensure that the necessary knowledge and skills in this area are acquired by all learners.<sup>14</sup> Schools are an appropriate setting in which to contribute to the development of healthy sexuality.<sup>15</sup> Studies showed that about 40% of girls reported difficulties discussing sexual issues with their mothers due to fear and shyness.<sup>13 16</sup>

This issue demand for the use of effective strategies that engage and empower adolescent girls in the school setting about contraceptive use as they spend a significant amount of their time in a school setting, parallel to this government of Ethiopia committed to improving the health status of Ethiopian school adolescents by increasing modern contraceptive prevalence rates among those aged 15–19 years.<sup>17 18</sup>

Adolescents' access to SRH services and comprehensive sex education that is high quality, youth-friendly, and respects the right to confidentiality, privacy and informed consent remains challenging in many countries.<sup>5</sup> In such circumstances, designing programmes in the school environment improves young people's decision-making and negotiation skills, self-esteem and reproductive health.<sup>19</sup> However, there is still insufficient evidence in this regard. Thus this study examines barriers to contraceptive use among secondary school adolescents for programme planning and interventions in Gedeo zone, South Ethiopia.

## METHODS AND MATERIAL

### Study setting and period

The study was conducted in Gedeo zone. Gedeo zone is located in the Southern Nations, Nationalities, and Peoples' Region of Ethiopia, with a population of 1651 000 and a total of 336 804 households. This makes it the most densely populated zone in the southern region of Ethiopia. Currently, the zone hosts a large population density of over 1300 people per km<sup>2</sup>. Dilla is the capital of Gedeo zone, 362 km from Addis Ababa, the capital city of Ethiopia. There are 26 junior high schools and 9 senior secondary schools in the zone, with 24 445 students attending the schools during the study period.<sup>20</sup> The study was conducted from 2 December 2020 to 29 February 2021.

### Study design

This study's data were obtained from two sources based on the grounded theory approach involving in-depth interviews with secondary school adolescents and key informant interviews (KIIs) with health workers. Grounded theory is a suitable methodology when the researcher is keen to know the basic psychosocial process which occurs over time and explains changes in a particular behaviour.<sup>21</sup> Furthermore, the grounded theory was chosen because it

is suitable for guiding the development of essential data and themes inductively based on systematically obtained and analysed data.<sup>21 22</sup>

### Study population

The study population was made up of carefully selected secondary school adolescents (who could actively engage in the school) who attended the assigned schools during the study period. Adolescents were recruited from a variety of grades and schools. Gender and residence (rural vs urban) were also considered in the selection process. In addition, healthcare experts from various fields (health extension workers, nurses, public health officers and midwives) and clinical psychologists were included. The participants and data sources were chosen in stages to saturate ideas about the contraceptive use barrier. The study applied a purposive sampling technique for data collection.

### Data collection methods and procedures

Data were collected through in-depth interview with secondary school adolescents and KIIs with health professionals who knew about a topic. Before data collection, the selected schools and health facilities were contacted to obtain permission to conduct the study. The study participants were contacted on the day of the interview. All the interviews and conversations took place in schools and healthcare settings, and no one else was present in the room during the interview except the participants and data collectors. The interview guide aided the interviews. The interview guide questions are different for in-depth interviews and KIIs. It includes an average of six main questions and one or more probing questions. The interview guide questions have been taken from previous similar literature.<sup>23 24</sup> All interviews (between 30 min and 91 min) were recorded using a digital voice recorder, and notes were taken during each interview. The number of interviews was determined by category/theme saturation, which occurred when the research team observed similar responses from multiple respondents. In this study, a barrier refers to anything regarded as an obstacle that prohibits contraceptive utilisation.

### In-depth interviews with secondary school adolescents

In-depth interviews were conducted with a total of 24 secondary school adolescents. Adolescents were sampled to ensure diversity in age (ranging from 15 years to 19 years) and sex (11 female and 3 male), and various grade levels (which included from grade 9 to 12) and from social and natural science streams. Investigators conducted the interviews in Amharic language and transcribed them verbatim. The interviews were conducted in a private setting to ensure the privacy and comfort of the respondent.

### KIIs (in-depth interviews with health staff)

A total of 28 health professionals, 19 women and 9 men, were interviewed by purposively selected staff to triangulate the results of the adolescent interviews, at least

three informants from each health facility. Consequently, clinical psychologists and diverse healthcare providers, including community health workers (CHWs), nurses, public health officers and midwives, were included in the KIIs. Key informants were also purposively selected to ensure the diversity of experience. Moreover, about half of the key informants interviewed were trained and certified in contraceptive services or youth health.

### Patient and public involvement

No patient was involved. Data analysis

The interview data were transcribed verbatim and then translated into English for analysis. ATLAS.ti V.7.1.4 aided in the coding and further analysis of the data. First, investigators read and reread the transcripts before assigning codes (open coding) and developing an initial coding structure. Then one coder performed iterative rounds of open coding on selected transcripts guided by the grounded theory approach to ensure the coding structure was relevant and appropriate. In contrast, the second coder reviewed and verified the emergent codes. Finally, the study team analysed the coded transcripts and generated codes to agree on the coding system and code definitions used to code all transcripts. The findings were organised into themes, categories and subcategories based on important quotes. Finally, peer debriefing was held with the research team to find alternative explanations and to have formal or informal discussions with a peer to help interpret the data. For reporting qualitative findings, this study adheres to the Consolidated Criteria for Reporting Qualitative Research standard protocol.<sup>25</sup>

### Data validation

Lincoln and Guba's criteria were used to maintain data validation.<sup>26</sup> Initially, the data collection tool (interview guide) was pretested on two KIIs and one in-depth interview. KIIs were conducted with health personnel trained on youth-friendly service (YFS) and IDIs were conducted with female secondary school adolescents. A study assistant and crew engaged in peer debriefing to establish trustworthiness. Following a dialogue with corporations of principal investigators, the tool was modified. To diversify the study participants, the school adolescent interviewees and key informants were recruited based on sociodemographic characteristics (gender, age, education level and profession) to get a broader range of perspectives from various participants. A summary of significant themes was presented to study participants at the end of each data-collection day, and a discussion was held to avoid confusing matters. To ensure member checking, the transcription and translation were given, as well as a synopsis of key themes and some perplexing concepts, so that they could check the interpretations and offer their comments, critiques,

explanation and confirmation. The study's conclusion was shared with all participants to ensure that their ideas were appropriately reflected. Prolonged engagement, which has been achieved by staying in the research area for an extended period, was done. The principal investigators verified the points mentioned in the IDIs and KIIs throughout this time. In addition, various concerns, such as the public's impression of contraception, awareness about contraceptives, rumours about contraception, health professionals' attitudes regarding adolescent contraception use, and existing sociocultural expectations and norms about contraceptive use of adolescents were observed. To ensure transferability, the entire research process, participants' different viewpoints and experiences, methods, interpretation of results, and contributions of research assistants were all thickly described. Participants who contribute to the findings, interpretations and recommendations ensure dependability. The findings of this study have been audited and confirmed with the aid of advisors, colleagues and different individuals familiar with qualitative research. The findings have been correspondingly verified with the aid of key informants like health workers, school counsellors and secondary school adolescents.

### Ethical consideration

The Institutional Review Board of Jimma University gave ethical clearance with the reference number IHRPG995/20/11/2020. Written informed consent was obtained from a parent or legal guardian for study participation after providing detailed information on study objectives and benefits.

## RESULT

### Participants' demographic profile

This study involved 24 in-depth interviews with secondary school adolescents (grades 9 to 12) and 28 key informants with health workers. The majority of study participants' religion (both in-depth interviews and key informants respondents) was Protestant, followed by Orthodox Christians. The students' ages were between 15 years and 19 years (mean 17.1 years). Health professionals from various backgrounds participated in the KIIs (10 CHWs, 4 nurses, 4 public health officers, 7 midwives, 1 health promoter commissioned by a non-governmental organisation (NGO) clinic and 2 clinical psychologists). Almost half of the key informants were trained in contraceptive services or youth health (tables 1 and 2).

### Themes and category related to the study

In this study, four themes were identified: individual-related barriers, community-related barriers, health service barriers, and school and service integration barriers (table 3).

**Table 1** Sociodemographic characteristics of in-depth interview respondents, Gedeo zone, Southern Nations, Nationalities and Peoples' Region, Ethiopia (n=24 adolescents)

Characteristics of respondents	Category	Frequency	Per cent
Age, years	15	5	20.8
	16	3	12.6
	17	5	20.8
	18	6	25.0
	19	5	20.8
Sex	Female	16	66.7
	Male	8	33.3
Residence	Urban	10	41.7
	Rural	14	58.3
Marital status	Unmarried	19	79.2
	Married	5	20.8
Education level	ninth grade	6	25.0
	10th grade	7	29.2
	11th grade	5	20.8
	12th grade	6	25.0
Religion	Protestant	13	54.2
	Orthodox	8	33.3
	Muslim	2	8.3
	Catholic	1	4.2

### Theme: individual-related barriers

The first theme in the current study was individual-related barriers; under this theme, the categories identified were lack of knowledge, fear and psychosocial development.

#### Lack of knowledge

In this study, one of the individual-related barriers that influenced adolescents' contraceptive use was lack of knowledge. Most key informants stated that students had limited knowledge of contraception due to a lack of opportunities to learn about reproductive health.

They also mentioned that some students, particularly those who live in rural areas, are unaware of the availability of contraceptive services.

We usually weigh adolescent knowledge during counseling; most lack knowledge about contraceptives. (KII, Health worker)

Usually, adolescents do not relate sexual practice to pregnancy. In addition, they do not plan to use contraceptives proactively before conception because they lack knowledge of contraceptive methods. (KII, Health worker)

Moreover, in this study, various misconceptions concerning contraceptives were widely explored. For example, according to both categories of participants, a student who uses contraception is regarded as a deviant.

**Table 2** Sociodemographic characteristics of key informant interview respondents, Gedeo zone, Southern Nations, Nationalities and Peoples' Region, Ethiopia (n=28 health workers)

Characteristics of respondents	Category	Frequency	Per cent
Age, years	23–29	7	25.0
	30–40	16	57.1
	41–50	5	17.9
Sex	Female	19	67.9
	Male	9	32.1
Residence	Urban	10	35.7
	Rural	18	64.3
Marital status	Unmarried	16	57.1
	Married	12	42.9
Educational status	Certificate	1	3.5
	Diploma	12	42.9
	Degree and above	15	53.6
Religion	Protestant	14	50.0
	Orthodox	10	35.8
	Muslim	2	7.1
	Catholic	2	7.1
Profession	Community health workers	10	35.7
	Nurses	4	14.3
	Public health officers	4	14.3
	Midwives	7	25.0
	Health promoter	1	3.6
	Psychologists	2	7.1

Similarly, concepts such as considering only condoms and postpill as appropriate contraceptives used before marriage; having sex with a wide interval period does not expose to pregnancy; connecting condoms only with the prevention of sexually transmitted diseases such as HIV/AIDS rather than as a contraceptive; pregnancy could not happen again to someone who had a history of terminating the pregnancy; and perceiving use of medical abortion and postpill redundantly as a common thing, were investigated. Furthermore, once a long-acting contraceptive has been used, they believe it is impossible to remove it whenever they wish to have a child.

I do not use birth control. As a student and single woman, I believe no one has ever authorized me to use contraception. (17-year-old student (IDI))

I went two years without using contraception when I was not pregnant, but then I became pregnant

**Table 3** Emergent themes, categories and subcategories of barriers to contraceptive use among secondary school adolescents, Gedeo zone, Southern Nations, Nationalities and Peoples' Region, Ethiopia, November 2021

Major themes	Categories	Subcategories
Individual-related barriers	Lack of knowledge	
	Fear	Fear of side effect
		Fear of being judged by family and friends
Community-related barriers	Psychosocial development	
	Fear of rumours	
	Family pressure	
	Social and cultural norms	
	Economical vulnerability	
	Religious beliefs	
Health service barriers	Lack of adolescent-responsive health services	
	Health workers' behaviour	
	Fear of health workers	
School and service integration barrier	Weak school and service Integration	

without it. I believe that it would always protect me once I started using it. (19-year-old student (IDI))

#### Fear

Fear was noted by nearly all school adolescents and health workers as a critical barrier to using contraception. Fear was one category under the individual-related barrier that further subcategorises into two, fear of side effects and fear of being judged by family and friends.

#### *Fear of side effects*

Both categories of study participants indicated that adolescents are afraid of infertility if they use hormonal contraceptives. Furthermore, many are concerned that contraceptives would alter their body's appearance, making them too thin or too obese, and induce menstrual irregularities.

I understand that contraceptives protect me from unplanned pregnancy for the time being, but I am concerned that I will not be able to have children. (17-year-old student (IDI))

#### *Fear of being judged by family and friends*

School adolescents fear being judged by their parents and friends if they take contraceptives like Implanon or oral tablets. According to a key informant participant, they gossip about and discriminate against her if they find out she uses contraception.

When I use hormonal contraceptives like depo and Implanon, it causes menstrual irregularity and spotting. *I am* afraid my parents will find out and question why my menstruation has become irregular. (19-year-old adolescent (IDI))

If her friends know that she uses contraceptives, they label her a naughty girl, so they discriminate against

her, and everyone thinks she has *an eccentric* character. (17-year-old student (IDI))

#### Psychosocial development

One category identified as an individual-level barrier in the current study was psychosocial development and contraceptive use. According to key informants' responses, adolescents do not have regular sexual interaction and proceed to sex by mistake before planning to use contraception. Unwanted pregnancy is a good indicator that this group should begin using contraception.

Furthermore, adolescents cannot form stable relationships owing to their mental development and age and do not intend to use contraception before sexual intercourse.

Adolescents do not want to take contraceptive measures regularly but want to go to health institutions regularly for abortion or emergency contraception and return to the cycle repeatedly. Furthermore, the key informant interviewee stated that adolescents do not want to attend contraception discussions. The reason for this was that they considered it was only an adult person's or married person's concern. As a result, they gossiped and had fun during the school discussion on reproductive health or felt ashamed or humiliated at home because they feared their parents.

Adolescents at this age are impulsive and want to try everything. They lose control when they have sex and become pregnant without realizing it. (KII, health worker)

Adolescents at this age are abused sexually and have no intention of using contraception since they are exposed to sexual activity hastily or unknowingly. (KII, health worker)

### Theme: community-related barriers

The second theme in the current study was community-related barriers; under this theme, the categories identified were fear of rumours, pressure from family, social and cultural norms, economic vulnerability, and religious beliefs.

#### Fear of rumours

Adolescents and health professionals reported many rumours in the community that prohibited contraceptive use. For example, adolescents worried that if they went to a health centre, the community would suspect they were there for abortion or contraceptive services.

Furthermore, the health professionals stated that because the public mind is already preoccupied with rumours, if users experience problems after using contraception, they instantly associate it with contraception and request its removal or discontinue use.

In the community, there are many rumors about long-acting contraceptives. For example, if a woman inserts IUCD into her uterus, it bursts out and jumps to her brain, causing significant damage. On the other hand, if someone inserts Implanon, it disappears within the flash inside the body. (KII, health worker)

When my mother and our next-door neighbor discuss contraception, they almost always grumble. However, according to what I recall from their conversation, women with contraception injected into their arms become sterile for the rest of their lives. (16-year-old student (IDI)).

#### Pressure from family

According to current findings, the family pressures adolescents not to use contraceptives even if they want to. Adolescents are not very comfortable using contraception because they are young, single and live with family. Reflections from both categories of participants showed that adolescents are terrified of using Implanon and daily pills because their families will notice them. Moreover, they do not want to take Clint's cards home.

The study participants claimed that most adolescents use depo due to family pressure because it is not visible to anyone. Except for a few cases, families are generally resistant. They do not suspect their children are exposed to sexual practices, so they do not discuss contraception with their children or allow health professionals to teach them.

Furthermore, the health professionals explained that families believe that discussing contraception encourages their children to use contraception or implies that it allows them to practice sex indirectly. Adolescents ascertained that the family had followed up to see if their menstruation had come. If there is an irregularity, they have inquired why this is happening. As a result, they exert unnecessary negative reinforcement.

Because they (adolescents) are afraid of their families, most adolescents who receive contraception

from our facility choose to leave their cards with us rather than take it home. Sometimes, we call to remind them when their schedule is due. (KII, health worker)

#### Social and cultural norms

Another category related to the community-related barrier to contraception use was social and cultural norms. According to most health personnel respondents, adolescents seeking contraception face social and cultural challenges.

The community believes that adolescents who live with their families and use contraception are deviant or unique. (15-year-old adolescent (IDI))

Adolescent girls who use contraceptives before marriage are considered indecent and experience multiple sexual practices. Therefore their chance of getting a husband decreases because everybody perceives such adolescents as not pure. (19-year-old student (IDI))

One student has excellent manners and is seen as a role model. However, she becomes pregnant unexpectedly, and she attempts suicide because she is too humiliated and ashamed to seek emergency contraception. (KII, health worker).

#### Economical vulnerability

Another category under the community-related barrier was economic vulnerability; as reflections from clinical psychologists and other health personnel participants indicated, some adolescents may not use contraception to become pregnant to secure their relationship if their partner has a job with a good wage. Furthermore, adolescents whose parents are impoverished or deceased may engage in various activities to generate income to support themselves and other family members. This condition may expose them to sexual abuse and unintentional sex without planning to use contraception.

I know an orphan female student who sells coffee on the street who was sexually molested and got pregnant; consequently, she came to the health post and asked me to give her a post-pill tablet. (KII, health worker)

#### Religious beliefs

Religious beliefs, according to both kinds of study participants, are a barrier to contraceptive use since practically everyone in the study area values religious beliefs and advocates for abstinence before marriage, and views contraception as a bad thing. Moreover, adolescents who desire contraception before marriage are considered sinful and repulsive.

It is assumed that every adolescent should be a role model for others, and using contraception at such a young age is a sign of a bad girl and a sin in God's eyes.

Those adolescents who have married resist contraceptive use. *They mentioned that if God gives them a child, why do they resist God's gift and use contraceptives to prevent pregnancy?* (KII, health worker)

### Theme: health service-related barriers

Health service-related barriers are divided into three categories: lack of adolescent-responsive health services, health worker behaviour and fear of health workers.

#### Lack of adolescent-responsive health services

The healthcare providers ascertained that health centres lack a structured approach to serve students' SRH needs. Without segmentation, family planning is provided to all age groups within the maternity and child health department.

Moreover, adolescents do not know where to find contraceptives after they arrive at health facilities. There is also a lack of a clear and fluid system that allows adolescent reproductive health services through referrals from health posts, schools, and NGOs to focal YFS or health facilities.

Furthermore, according to the health personnel report, in most health centres, obtaining a card from the card room is required to get any health service, including family planning, which involves bureaucracy, such as standing in a lengthy line in the corridor.

In addition, the number of YFS available in the study area is minimal; Furthermore, it does not integrated with existing primary and referral care systems such as schools, health centres and health posts, and it needs to address the growing contraceptive demand of adolescents however practically this does not ensure yet furthermore, adolescent does not mention even the few available YFS as YFS, which needs better communication. As a result, most adolescents need to learn where it is located and what kind of service it delivers.

There is no separate room for family planning in the health center and health post for adolescents, but it is given in the health department for mother and child; most health workers do not take special training for the care of adolescents. Moreover, in an urban setting, health posts and Kebele (public department) deliver service in the same building; these things cause serious discomfort to young people thinking about using contraception. (KII, health worker)

Youth-friendly service is not equally visible, and it is the most ignored area through program deliberation and allocation of resources; Even if adolescent and reproductive health is one package among health extension programs, it gets less attention than the mother and child health program. (KII, health worker)

#### Health workers behaviour

According to key informants' reports, most healthcare personnel are not well equipped to serve adolescents. In

addition, healthcare workers believe that adolescents are not eligible for contraceptive services, so they somehow confront adolescents to avoid receiving the service they demand in a health facility.

Counseling should be friendly; if we treat adolescents like family, they will open up and tell us everything about themselves without fear; additionally, a positive approach and counseling will increase contraceptive use compliance. (KII, health worker)

We need more human resources because, despite working on 16 packages of health extension programs, we do not apply our efforts to adolescent reproductive health as boldly as we do to maternity and child health and immunization service. (KII, health worker)

#### Fear of health workers

Both adolescents and health professionals reported that adolescents fear health professionals since most are unpleasant and judgemental and may divulge information to their parents. Consequently, adolescents want to leave the health centre as soon as they take contraception or without it. They even deny having sex until a laboratory test confirms they are pregnant because they fear health workers.

By the way, I have never seen an adolescent come straight to the health center and ask for contraceptives because they are afraid that even those that come to health facilities will have difficulties articulating and shaking to ask for contraceptive services. (KII, health worker)

When adolescents arrive at a healthcare facility and are confronted by staff they know or their family, the situation worsens; they feel panic and usually flee without using the contraceptive they intend to take. (18-year-old student (IDI))

### Theme: school and service integration

Finally, a significant number of respondents (health workers) in the current study revealed that weak school and service integration was one major category identified under school and service integration barriers. In addition, contraceptive utilisation services for adolescents are provided in a fragmented and non-standardised manner across organisations.

Furthermore, community healthcare facilities must provide the necessary leadership and information management system to assist students in forming synergistic actions with other sectors such as schools, sports and youth affairs, youth and women associations, media, and non-governmental organisations. In addition, school-based continuous education, in which health experts are invited and participate, is yet to be implemented. Similarly, the topic of student reproductive health is not addressed in the school set-up.

A shaky framework connects the Health Center with the school and other sectors to promote adolescent reproductive health. (KII, health worker)

## DISCUSSION

This study explored adolescents' contraceptive usage barriers as a baseline for programme planning and interventions in Gedeo zone, Secondary School South Ethiopia. Accordingly, the study showed that students have multiple barriers to contraceptive use, namely individual-related barriers, community-related barriers, health Service barriers, and school and service integration barriers.

According to research from Ethiopia, Zimbabwe and Tanzania, poor knowledge was perceived as a significant barrier to contraceptive use.<sup>24 27 28</sup> Furthermore, the lack of reproductive health education at school was the cause of students' lack of knowledge.<sup>28</sup> This indicates that a health communication strategy should be developed, and school-based awareness-raising actions should be implemented.

Furthermore, student reproductive health interventions need to receive adequate attention in the school curriculum and other school club activities; linking students with health facilities, and YFS can help students better understand contraceptive methods; significantly improve their knowledge, misconception and contraceptive use.<sup>29</sup>

According to the current study, fear is one of adolescents' most prominent obstacles to contraception use. This was supported by a study conducted in rural Ghana.<sup>30</sup> As a result, the intervention should include messages encouraging adolescents to have free discussions on SRH topics, including contraceptive use. Moreover, adolescents face difficulty discussing modern contraceptives with their parents. This finding is similar to a study conducted in Zimbabwe and Nigeria.<sup>11 12</sup>

In addition, teachers may also avoid providing SRH content as they do not feel comfortable discussing and teaching the material. Thus, enhancing the capacity of teachers and parents is very important. On top of this, adolescent boys often see contraceptive use as the girl's responsibility.<sup>30</sup> Thus, providing comprehensive sex education at school with trained personnel is needed; service integration with the school facilitates contraceptive utilisation. In the current study, psychosocial development was one barrier to using contraceptives. This finding is supported by a study conducted in Zimbabwe,<sup>27</sup> as adolescents are immature, have reduced impulse control, and are less able to plan and use contraceptives than adults. Usually, this group is a neglected group. Even if they are exposed to sexual practices, which eventually lead to unintended pregnancy, miscarriage and many other problems, medical institutions do not consider them eligible for contraceptives service.<sup>31</sup> Furthermore, adolescents' contraceptive use, negotiation and relationship

skills are not fully developed.<sup>32</sup> Thus, the intervention in the form of a prototype audience and a group discussion by bringing up a specific scenario of a metaphor in the classroom makes the specified gap smoother.

In this study, adolescents believe that contraceptives are only available to adults who are married and that the only contraception available to adolescents is the postpill and condom, similar to a study done in Zimbabwe.<sup>27</sup> As a result, adolescents who use contraceptives other than the above are seen as unique and deviant and associated the user with promiscuity and straying, similar to research conducted in Thailand and Kenya.<sup>33 34</sup> Frequently, adolescents prefer postpill tablets since they are easy to ingest and readily available; however, a case study in India<sup>35</sup> shows that frequent emergency contraception use has a significant negative health impact, including ectopic pregnancy. Similarly, just as it is relatively easy to terminate a pregnancy after initiating medical abortion, this situation has contributed as a barrier to contraceptive use. Thus, we must address these misconceptions through drama, poetry, role play, individual or group counselling, key message preparation, and reading to students during morning flag hour or before or after drama portrayal and other sessions.<sup>29</sup> The current study discovered that numerous rumours are already embedded in the community's mind and may act as a barrier to contraceptive use, consistent with research conducted in Kenya, Ghana and India.<sup>9 33 36</sup>

Furthermore, community norms, sociocultural expectations and contradictions prohibit contraceptive use among the study population. Since the community has a considerable value in preserving virginity until marriage, teaching about contraception through community channels like community dialogue is challenging, similar to a study conducted in Nicaragua and other countries;<sup>37 38</sup> as a result, we must consider several alternatives to community-level intervention, such as school, which is relatively under lower influence from religious leaders, community members and parental pressure.

Finally, this study highlights the lack of adolescent SRH capacity building across many sectors, including health-care facilities, schools, sports, and youth affairs, youth and women associations, media, and NGOs as a study supported by evidence from Guinea, northern Ethiopia, Ghana and Bangladesh.<sup>9 24 39 40</sup> As a result, multisectorial integration and involvement can overcome the obstacle and increase the uptake of contraceptive use.

## Limitation

The limitation of the current study was that only adolescents attending secondary schools were involved in the study because the main aim of this study was to have evidence for a barrier to contraceptive use among adolescents to design subsequent interventions in the secondary school setting. In addition to this, we did not consider adolescents attending private and religious schools. Furthermore, the analysis was limited by the lack of depth in adolescent boys' responses, likely due to a lack of



awareness. Moreover, this study excluded early age (10–14 years) adolescents since they need to be more mature to respond as they are unaware of the topic under exploration. Furthermore, because of the subject's delicate nature, focus group discussions were not used; this can potentially decrease the depth of data since qualitative technique triangulation, that is, triangulating in-depth interviews with other techniques, like focus group discussion, is mainly recommended.

### Implications

The current study shows that adolescents should have SRH services integrated with other sectors, such as schools and youth organisations, social welfare and the media. Furthermore, enhancing the capacity building of health workers, teachers and parents, and working with an organisation that functions on this target population is very necessary. Finally, it is crucial to list and identify the significant barrier to contraceptives by adolescents and devise a strategy to address these barriers through multiple methods and approaches as indicated in this study.

### Conclusion

Adolescents' contraceptive use was affected by various barriers ranging from the individual level up to the multi-sectorial level. Students note various barriers to using contraception and that, without contraception, sexual activity can lead to an increased risk for unintended pregnancy and its associated health risks. Moreover, there is a need for SRH integration at the school level and work on the barrier that influences contraceptive use across all levels of influence.

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### REFERENCES

- 1 Kuruvilla S, Bustreo F, Kuo T, *et al*. The global strategy for women's, children's and adolescents' health (2016–2030): a roadmap based on evidence and country experience. *Bull World Health Organ* 2016;94:398–400.
- 2 United Nations, Department of Economic and Social Affairs. *Transforming our world: the 2030 agenda for sustainable development*. 2015.
- 3 Sheehan P, Sweeny K, Rasmussen B, *et al*. Building the foundations for sustainable development: a case for global investment in the capabilities of adolescents. *Lancet* 2017;390:1792–806.
- 4 Judd A. *Sustainable development goal 3: ensure healthy lives and promote wellbeing for all at all ages*. 2020.
- 5 Braeken D, Rondinelli I. Sexual and reproductive health needs of young people: matching needs with systems. *Int J Gynaecol Obstet* 2012;119 Suppl 1:S60–3.
- 6 Casey SE, Gallagher MC, Kakesa J, *et al*. Contraceptive use among adolescent and young women in North and South Kivu, democratic republic of the Congo: a cross-sectional population-based survey. *PLoS Med* 2020;17:e1003086.
- 7 Darroch JE, Woog V, Bankole A, *et al*. Adding it up: costs and benefits of meeting the contraceptive needs of adolescents; 2016.
- 8 Starrs AM, Ezeh AC, Barker G, *et al*. Accelerate progress—sexual and reproductive health and rights for all: report of the guttmacher-lancet commission. *Lancet* 2018;391:2642–92.
- 9 Dioubaté N, Manet H, Bangoura C, *et al*. Barriers to contraceptive use among urban adolescents and youth in Conakry, in 2019, Guinea. *Front Glob Womens Health* 2021;2:655929.
- 10 AbouZahr C. Global burden of maternal death and disability. *Br Med Bull* 2003;67:1–11.
- 11 Remez L, Woog V, Mhloyi M. Sexual and reproductive health needs of adolescents in zimbabwe. *Issues Brief (Alan Guttmacher Inst)* 2014;1–8.
- 12 Macquarrie K. Unmet need for family planning among young women: levels and trends. DHS comparative reports no. 34. Rockville, MD ICF International; 2014.
- 13 Adeniji OI. Knowledge and use of emergency contraceptives among out-of-school female youths in ido local government area, Oyo state, Nigeria; 2013.
- 14 Joseph N, Mahato V, Pandey A, *et al*. Experiences and perception towards reproductive health education among secondary school teachers in South India. *Reprod Health* 2021;18:175.
- 15 Birdthistle I, Vince-Whitman C. *Reproductive health programs for young adults: school-based programs*. Pathfinder International, Focus on Young Adults Project, 1997.
- 16 McCleary-Sills AW, Stoebenau K, Hollingworth G. Understanding the adolescent family planning evidence base; 2014.
- 17 Coyle K, Basen-Engquist K, Kirby D, *et al*. Safer choices: reducing teen pregnancy, HIV, and stds. *Public Health Rep* 2001;116 Suppl 1:82–93.
- 18 Teshome L, Belayihun B, Zerihun H. Modern contraceptives use and associated factors among adolescents and youth in ethiopia. *Ethiop J Health Dev* 2021;35.
- 19 Mason-Jones AJ, Mathews C, Flisher AJ. Can peer education make a difference? Evaluation of a South African adolescent peer education program to promote sexual and reproductive health. *AIDS Behav* 2011;15:1605–11.
- 20 Molla E, Behaksra SW, Tadesse FG, *et al*. Past eight-year malaria data in Gedeo zone, southern Ethiopia: trend, reporting-quality, spatiotemporal distribution, and association with socio-demographic and meteorological variables. *BMC Infect Dis* 2021;21:91.
- 21 Roudsari RL, Khadivzadeh T, Bahrami M. A grounded theory approach to understand the process of decision making on fertility control methods in urban society of mashhad, iran. *Iran J Nurs Midwifery Res* 2013;18:408–15.
- 22 Noone J. *The process of contraceptive decision-making in women: using a feminist grounded theory approach*. University of Hawai'i at Manoa, 2003.
- 23 The DHS Program ICF. Demographic and health survey. Rockville, Maryland, USA Central Statistical Agency Addis Ababa; 2016. Available: EDHS-2016.pdf



- 24 Melaku YA, Berhane Y, Kinsman J, *et al.* Sexual and reproductive health communication and awareness of contraceptive methods among secondary school female students, Northern Ethiopia: a cross-sectional study. *BMC Public Health* 2014;14:1–11.
- 25 Allison T, Peter S, Craig J. Critérios consolidados para relato de pesquisa qualitativa (COREQ): lista de verificação de 32 itens para entrevista e grupos focais. *IJQHC* 2017;19:349.
- 26 Guba EG, Lincoln YS. *Competing paradigms in qualitative research*, 2. 1994: 105.
- 27 Moyo S, Rusinga O. Contraceptives: adolescents' knowledge, attitudes and practices. A case study of rural Mhondoro-Ngezi district, Zimbabwe. *Afr J Reprod Health* 2017;21:49–63.
- 28 Nsanya MK, Atchison CJ, Bottomley C, *et al.* Modern contraceptive use among sexually active women aged 15–19 years in north-western Tanzania: results from the adolescent 360 (A360) baseline survey. *BMJ Open* 2019;9:e030485.
- 29 Wondimagegne YA, Debelew GT, Koricha ZB. Effectiveness of peer-led education interventions on contraceptive use, unmet need, and demand among adolescent girls in Gedeo zone, south Ethiopia. A cluster randomized controlled trial. *Glob Health Action* 2023;16:2160543.
- 30 Adjei G, Enuameh Y, Asante KP, *et al.* Predictors of abortions in rural Ghana: a cross-sectional study. *BMC Public Health* 2015;15:202.
- 31 Ekstrand M, Tydén T, Darj E, *et al.* Preventing pregnancy: a girls' issue. seventeen-year-old swedish boys' perceptions on abortion, reproduction and use of contraception. *Eur J Contracept Reprod Health Care* 2007;12:111–8.
- 32 Chanthasukh S, Andajani S, Fairbairn-Dunlop TP. Influencing factors towards thai adolescents' decision making on contraceptive use: preliminary results. In: *13th International Conference on Thai Studies "Globalized Thailand? Connectivity, Conflict and Conundrums of Thai Studies."* 2017.
- 33 Ochako R, Mbondo M, Aloo S, *et al.* Barriers to modern contraceptive methods uptake among young women in Kenya: a qualitative study. *BMC Public Health* 2015;15:118.
- 34 Shah C, Solanki V, Mehta HB. Attitudes of adolescent girls towards contraceptive methods. *Australas Med J* 2011;4:43–8.
- 35 Sharma S, Gupta M, Gupta V, *et al.* Emergency contraception and ectopic pregnancy: report of 2 cases of young unmarried girls—a cause of concern. *Jrnl of Res Med Edu and Eths* 2015;5:260.
- 36 Gyesaw NYK, Ankomah A. Experiences of pregnancy and motherhood among teenage mothers in a suburb of Accra, Ghana: a qualitative study. *Int J Womens Health* 2013;5:773–80.
- 37 de Vargas Nunes Coll C, Ewerling F, Hellwig F, *et al.* Contraception in adolescence: the influence of parity and marital status on contraceptive use in 73 low- and middle-income countries. *Reprod Health* 2019;16:21.
- 38 Nalwadda G, Mirembe F, Byamugisha J, *et al.* Persistent high fertility in Uganda: young people recount obstacles and enabling factors to use of contraceptives. *BMC Public Health* 2010;10:1–13.
- 39 Shahabuddin ASM, Nöstlinger C, Delvaux T, *et al.* What influences adolescent girls' decision-making regarding contraceptive methods use and childbearing? A qualitative exploratory study in Rangpur district, Bangladesh. *PLoS One* 2016;11:e0157664.
- 40 Parker JJ, Veldhuis CB, Hughes TL, *et al.* Barriers to contraceptive use among adolescents in two semi-rural nicaraguan communities. *Int J Adolesc Med Health* 2020;32.