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Knowledge, Attitude and Practice of Emergency Contraceptive Among Female Preparatory School Students in Awsi Resu Zone(01), Afar, Ethiopia, 2023

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Abstract

Background: Students in preparatory schools are more likely to engage in risky sexual behavior, which may lead to a rise in untended pregnancies, unsafe abortions, and STIs. Many of these unplanned pregnancies can be avoided using emergency contraception. Therefore, this study was aimed at assessing the knowledge, attitude, and practice of emergency contraceptives.

Objectives: To assess the knowledge, attitude, and practice of emergency contraception among preparatory school students of Awsiresu zone (01) in Afar, Ethiopia.

Methods: A school-based cross-sectional study was conducted in selected preparatory schools in Awsi Resu Zone, Afar, Ethiopia, from October 20 to November 8, 2023, among 419 female students who were selected using the systematic random sampling method. A semi-structured questionnaire was developed and entered into the Kobo toolbox. Data were collected by five female public health officer students using interview-administered methods. A one-day discussion was held among group members and data collectors on how to obtain consent and collect complete data. The collected data was exported to SPSS window version 26 for analysis, and a descriptive analysis was performed for all variables.

Result: Three hundred ten (74.0%) of the students said that they have heard about emergency contraceptives. 57.7% of the students had a positive attitude towards emergency contraceptives. One hundred (32.3%) of the students said that EC is recommended as a regular contraceptive method, and another one hundred forty-one (50.2%) students said that EC can prevent STIs. Among the ten respondents who had used emergency contraceptives, six (60%) used regular contraceptives.

Conclusion and recommendations: The study findings showed that most of the respondents who had ever heard of emergency contraception had good knowledge and a positive attitude, despite some respondents having misunderstandings about emergency contraceptives. Therefore, the Afar Health Bureau should distribute educational materials such as brochures, posters, and flyers that teach about emergency contraception and arrange programs on a regular basis to provide accurate information concerning the utilization of emergency contraception.

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1. Introduction

1.1. Background

The emergency contraceptive pill (ECP) was first documented in writing in the 1960s, when doctors began prescribing it to women who had been sexually attacked to delay pregnancy [1] . This was a common use area until the 1990s, when it gained recognition as a successful strategy for all women, regardless of their circumstances, who wanted to avoid getting pregnant after engaging in unprotected sexual activity [2].

An emergency contraceptive technique gives women a last chance to avoid getting pregnant after unprotected sexual activity. It is used after unsafe sexual activity but before the possible time of implantation [3]. The term "post-coital contraception," often known as emergency contraceptives (ECs), is a method of birth control that can be used to avoid pregnancy within the first five days following a sexual encounter. When no contraceptive has been used, in cases of rape or coerced sex, when the woman was not protected by an ineffective method, and in cases of contraceptive failure or incorrect use, such as condom breakage, slippage, or incorrect use, emergency contraceptives are meant to be used, according to the World Health Organization (WHO) [4].

There are two types of emergency contraception: intrauterine devices (IUDs) and hormonal treatments (pills). As soon as it is convenient, but no later than three days (72 hours), one progesterone-only pill (POP) must be used as the initial dosage [4]. Proper use of emergency contraceptives can reduce the occurrence of unintended pregnancy and the risk of an abortion if used before the potential time of implantation, especially within 72 hours after unprotected sexual intercourse. However, emergency contraception does not offer the same level of protection against HIV and other STDs as condoms do [5].

Young people today start sex before marriage. Thus, they face a greater risk of unintended pregnancy, which leads to

unsafe abortions [6]. According to the 2021 WHO report, in Africa, the majority (approximately 3 out of 4) of all abortions are unsafe. Despite the fact that the proportion of abortions is particularly high among teenagers and poor sectors of the population, it will also be seen among both single and married women.

In our country, unwanted pregnancy is a critical problem among teenagers. Many studies in Ethiopia have documented the prevalence of unwanted pregnancies among young women. While a significant portion of Ethiopians are aware of modern family planning techniques, the majority do not use them [7].

As per the findings of the Ethiopian Demographic Health Survey (EDHS 2019), 41% of women of reproductive age use modern contraception, with the lowest percentage in Africa (13%). Students in preparatory schools fall into the youth age group. They are more likely to engage in risky sexual behavior, which may lead to a rise in STIs and risky sexual behavior. Hence, it is crucial to understand that although EC can successfully avoid unintended pregnancies, it cannot provide protection from STIs. Therefore, the assessment of KAP as an emergency contraceptive could help plan to reduce unplanned or unwanted pregnancies, unsafe abortion, and its complications, and improve the sexual and reproductive health (SRH) of adolescents and women [3].

1.2. Statement of Problem

About one-third of unintended pregnancies each year result from the incorrect use or failure of contraceptives[8]. As of 2021, the WHO reports that an estimated 61% of all unintended pregnancies end in abortion. Each year, nearly 25 million unsafe abortions are performed worldwide. Ninety-seven percent of all unsafe abortions occur in developing countries [9]. Moreover, 59% of all unsafe abortions in Africa are among young women aged 15-24 years. In Africa, the risk of dying after an unsafe abortion is one in fifty [10]. Emergency contraceptives can prevent unsafe abortions and maternal mortality by reducing unintended pregnancies.

Moreover, results from earlier studies indicated that the level of knowledge regarding EC is below 50% and the practice level is below 10%. These statistics alarmingly show that over 60% of pregnancies among adolescents in Ethiopia are unwanted and result in unsafe abortions. The majority of these pregnancies occur either due to a low level of knowledge, poor attitudes, or a lack of access to contraceptives [11][12][13][14].

The majority of sexual characteristics emerge during adolescence, and preparatory school is where teenagers spend the majority of their hours. Numerous studies revealed that a high percentage of Ethiopian preparatory school students had engaged in sexual activity at least once. Adolescents are turning more and more to emergency contraception (EC) as a means of preventing unplanned pregnancies, frequently undervaluing the value of using barrier techniques like condoms to guard against STIs. This inclination calls into question their general sexual health and emphasizes the necessity of looking into the underlying causes of this behavior. The issue under investigation concerns teenagers who frequently use emergency contraceptives in the absence of indications for EC use [11][12][13][14].

While many studies conducted concerning emergency contraceptives' knowledge and practice focused on universities and college students, little focus was given to preparatory schools. But cultural transformations and globalization effects, which

resulted in increased adolescent sexual activity and a lower age at first sex, make preparatory schools an important focus area to assess emergency contraceptive knowledge and practice [11][12][13][14][15]. In addition to possible effects on STI risks, this study attempts to close the research gap by examining preparatory students' knowledge, attitudes, and practices regarding the use of EC. By addressing this problem, educational programs can help people make well-informed decisions about contraception by fostering a balanced understanding of the significance of STI protection in addition to pregnancy prevention. Eventually, this research aims to improve overall sexual health outcomes and ensure adolescents receive the necessary guidance to make responsible decisions regarding contraception and protection against STIs.

1.3. Significance/Rationale of the study

Preparatory students are vulnerable to unprotected sexual habits because they are of a young age. That was why we intended to study in this area. The main purpose of this study was to assess the level of knowledge, attitude, and practice towards emergency contraception, prevent and avoid unwanted pregnancy, and the consequent STI risk.

This finding can benefit non-governmental organizations working to provide reproductive health services to these populations by conducting educational programs to raise awareness.

The Afar Health Office also informs about the current level of knowledge and attitude towards emergency contraception in the preparatory schools. This could lead to targeted educational programs and interventions to address any misconceptions or barriers to access.

For other researchers, this study could contribute to the existing literature on emergency contraception and serve as a reference for KAP studies in this area.

1.4. Objectives

1.4.1. General Objective

To assess the knowledge, attitude, and practice of emergency contraception among female preparatory school students of Awsi Resu Zone (01), Afar, and Ethiopia.

1.4.2. Specific Objectives

To assess the knowledge of emergency contraception among selected preparatory school students of Awsi Resu Zone (01), Afar, Ethiopia.

To assess the attitude towards emergency contraception among selected preparatory school students of Awsi Resu Zone (01), Afar, Ethiopia.

To determine the practice of emergency contraception among selected preparatory school students of Awsi Resu Zone (01), Afar, Ethiopia.

2. Methodology

2.1. The study area and period

This study was conducted in selected preparatory schools in Awsi resu zone (01), Afar Ethiopia, from October 20 to November 8, 2023. Awsi resu zone (01) is located 570km from Addis Ababa, the capital city of Ethiopia. According to the Education Office of Awsi Resu Zone (01), there are a total of ten preparatory schools in Awsi Resu Zone (01): Asayta Preparatory School, Eli Da'ar Preparatory School, Bidu Preparatory School, Mille Preparatory School, Chfra Preparatory School, Afambo Preparatory School, Eli Wuha Preparatory School, Samara Preparatory School, Logia Preparatory School, and Dubti Preparatory School. Samara, Logia, and Dubti preparatory schools were selected using a simple random method.

2.2. Study design

A school-based cross-sectional study was conducted in selected preparatory schools in Awsi Resu Zone (01).

2.3. Population

2.3.1. Source population

All female students who were attending preparatory schools in Awsi Resu Zone (01).

2.3.2. Study population

Female students who were learning in the selected (Samara, Logia, and Dubti) preparatory schools of Awsi Resu Zone (01).

2.3.3. Study unit

Systematically selected female students in the selected schools

2.4 Eligibility criteria

2.4.1. Inclusion

All regular female students' who were attending grades 11 and 12 were included.

2.4.2. Exclusion

Female students who were seriously sick and unable to respond

2.5. Sample size determination and sampling procedure

2.5.1. Sample size determination

The sample size was determined using a single population proportion formula with an input of the expected proportion of knowledge about EC in Wolkiete, Ethiopia (54.8%) (24), a 5% margin of error, a 95% confidence interval, and 10% for non-response compensation.

$$n = Z(\alpha/2)2\frac{Pq}{d2}$$

Where,

- n = the required sample size
- d = desired precision (5%)
- P = proportion of students having awareness of emergency contraceptive to be 54.8 %
- Z α/2 = 1.96 at confidence level 95%
- n = 381

And by using the non-respondent rate of 10% the final sample size= 419.

2.5.2. Sampling procedure

From ten Awsi Resu Zone preparatory schools, a simple random sampling method was used to select three preparatory schools. Namely, Logia, Samara, and Dubti preparatory schools; then, after obtaining the student list of each grade from each school, female students were stratified into six strata based on grade level and the school they attended (grade 11 of Samara, Logia, Dubti, and grade 12 of Samara, Logia, and Dubti). The total calculated sample size was proportionally allocated to each grade of the three schools based on the number of female students in each grade (see figure 1). Finally, students were selected using the systematic sampling method by using the student list as a sampling frame.

Proportional allocation according to their size

11th logia----------169*419/796==89

12th logia----------207*419/796=109

11th samara----------115*419/796=61

12th samara----------94*419/796=50

11th dubti----------101*419/796=53

12th dubti----------107*419/796=57

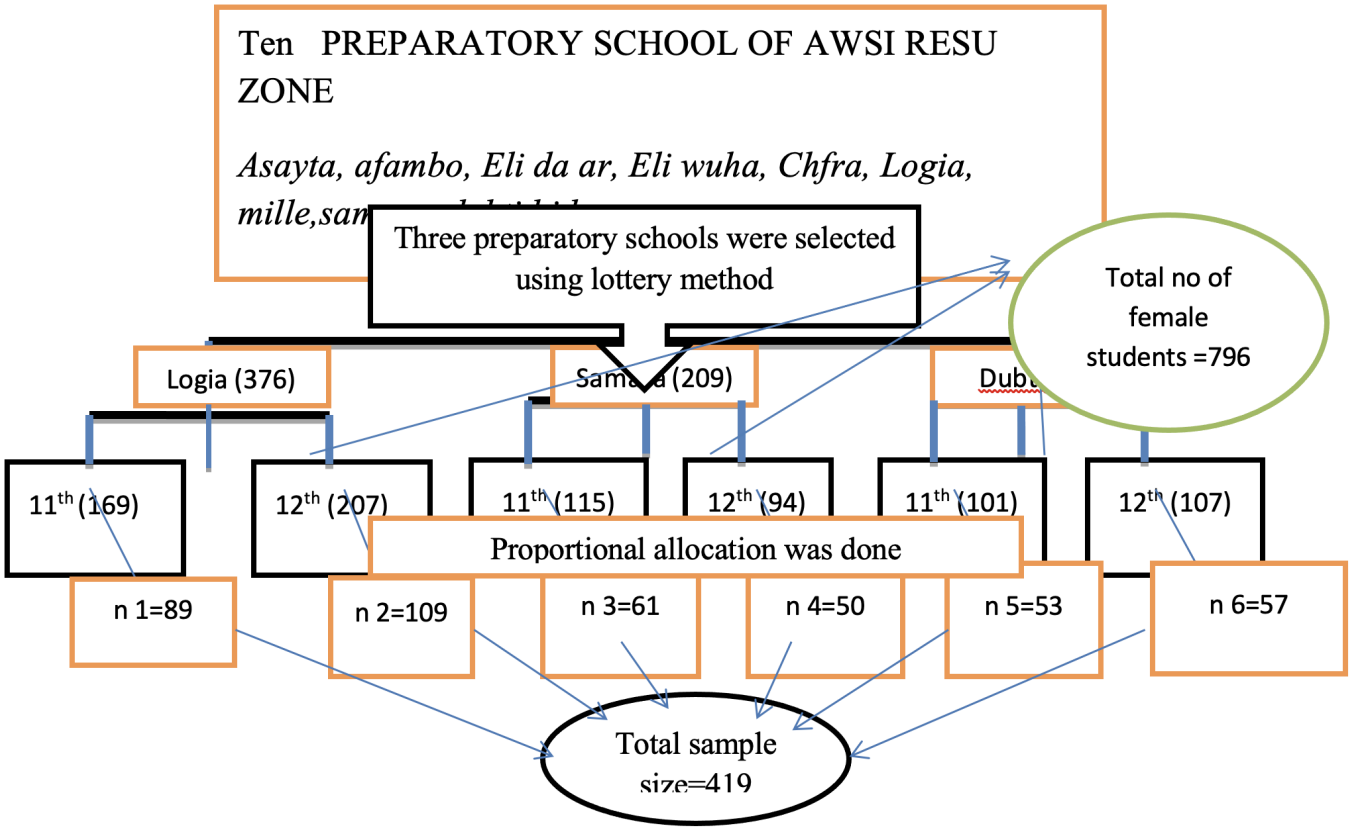

Figure 1. Schematic presentation of the sampling procedure

2.6. Study variables

2.6.1. Dependent variable

- Knowledge on emergency contraception
- Attitude on emergency contraception
- Practice on emergency contraception

2.7. Independent variable

- Socio demographic variables:
  - Age
  - gender
  - Religion
  - Marital status
  - Ethnicity
  - Place of residence (where they come from)
  - Sexual and reproductive health behavior:

- Ever had sex
- Ever used emergency contraception
- Ever used condom
- Operation definitions

Good knowledge was defined as those who scored the mean and above value of knowledge-related questions. Poor knowledge was defined as those who scored below the mean value of knowledge-related questions. [12][16]

Respondents were considered to have a positive attitude if their scores were greater than or equal to the mean and a negative attitude if their scores were below the mean of the attitude equations and Practice of emergency contraceptives" refers to a female student who ever used emergency contraceptives after unprotected sexual intercourse to prevent unintended pregnancy [12][16].

2.8. Data collection instrument and procedure

2.8.1. Data collection tool

To assess the knowledge, attitude, and practice of EC, a semi-structured questionnaire was developed[17][18]. The questionnaire consisted of five sections: socio-demographic information, knowledge about the EC, attitude towards its use, and practice of EC and STI-related questions. The demographic information section aimed to collect data on participants' age, educational background, and residency. Additionally, information regarding participants' previous knowledge about emergency contraception and STIs was also collected to assess their baseline understanding. The knowledge section included questions to assess participants understanding of emergency contraception, including its types, side effects, and availability. Participants were asked to select the most accurate statements regarding emergency contraception and to rate their confidence in their knowledge level. The attitude section explored participants' attitudes towards the use of emergency contraception, including their beliefs, concerns, and perceived risks. The practice section aimed to gather information about participants. They were asked about their use of emergency contraception in the past as well as their adherence to safer sex practices such as condom use and regular. Open-ended questions were also included to allow participants to provide additional insight into their knowledge and experience.

2.8.2. Data collection procedure

A semi-structured interview administration questionnaire was developed. The questionnaire was initially developed in English, and we also discussed the direct and appropriate meaning of the questions in Amharic. Finally, the data translated the questions to Amharic when asked of the respondent. Five female students were trained to collect data to reduce the bias that comes from possible unreliable responses when we ask sensitive questions. With the help of assistants from each school, the selected students were taken to a hall and informed about the purpose of the study and the importance of their participation, and consent was ensured. All information was filled out anonymously; there was no personal identification of the participants to ensure confidentiality.

2.8.3. Data Quality control

All questionnaires were coded onto the Kobo Toolbox and checked for completeness, consistency, and logical accuracy of the survey instrument before it was deployed. A one-day discussion was held among group members and data collectors on how to obtain consent and collect complete data. To avoid any biases and to assure the quality of the data, it was cross-checked for consistency and completeness every day after coming back from the field for data collection. The data were clean before being exported to SPSS version 26 for analysis.

2.8.4. Data processing and analysis

The collected data were checked for completeness and accuracy, cleaned, and analyzed using the statistical package for social sciences (SPSS) version 26 software. A descriptive analysis was performed for all variables and presented using frequency and percentage. We calculated percentages for categorical variables.

2.9. Ethical considerations

This research was done after getting full ethical approval and permission from the ethical review board of the College of Medical and Health Science at Samara University. An official letter of cooperation was written from the Department of Public Health officer to the deans of all the schools that were to be a part of this study to seek permission to undertake the study of cooperation. This permission was subsequently granted. Before issuing the questionnaire, informed verbal consent would be sought from all respondents; each respondent was assured of the anonymity and confidentiality of any information they may provide. Additionally, the participant was provided with explicit information regarding the ethical considerations of the study, including assurance that their data would be utilized exclusively for the intended purpose and that they were not obligated to participate in the study.

2.10. Dissemination of the study

The findings of the study will be presented to the Samara University College of Medicine and Health Science Department of Public Health, and the results will be sent to Awsu Resu Zone (01) health facilities as well as all stakeholders in the towns. The results of the study would also be presented at conferences, and we intend to submit the findings for publication in academic journals.

3. Result

3.1. Socio-demographic Characteristics of respondents

A total of 419 female students responded, yielding a 100% response rate. According to the respondents' age distribution, the majority of them (62.1%) were in the 14-18 age range, with a minimum age of 17 and a maximum age of 21. 324 (77.3%) of the respondents identified as Muslims, followed by 83 (19.8%) who identified as Orthodox. 38 (9.1%) of the

respondents are from rural areas, while the majority, 381 (90.9%) were town residents. Of the respondents, 414 (98.8%) were single, and 5 (1.2%) had previously been married. Regarding their educational background, 216 (51.6%) were in grade 12 and 203 (48.4%) were in grade 11. Of the respondents, 241 (57.5%) were from afar, followed by Amhara, 126 (30.1%).

Table 1. socio demographic characteristics of respondent's female students in Awsi resu zone preparatory school; NOV 2023

Question	Category	Frequency	Percentage (%)
Age of a respondent	14-18	260	62.1
	19-23	159	37.9
Religion	Muslim	324	77.3
	Orthodox	83	19.8
	Protestant	12	2.9
Grade level	Grade 11	203	48.4
	Grade 12	216	51.6
Residence	Urban	381	90.9
	Rural	38	9.1
Ethnicity	Afar	241	57.5
	Amara	126	30.1
	Tigre	40	9.5
	Oromo	9	2.1
	Others	3	0.7
Marital status	Single	414	98.8
	Married	5	1.2

Sexual characteristics of respondents

Out of the respondents, 3.6% (15 individuals) reported having had sexual intercourse in their lifetime, and 40% (6 individuals) consistently practiced it without using a condom.

Table 2. Sexual characteristics of respondent's female students in Awsi resu zone preparatory school; NOV 2023

Question	Category	Frequency	Percent (%)
Have you ever practice sexual intercourse	Yes	15	3.6
	No	404	96.4
Frequency of intercourse without condom	never	2	13.3
	sometimes	7	46.7
	Always	6	40.0

Knowledge of respondents on emergency contraceptives

About ECs, 310 people (74.0%) have heard of them. Two hundred fifty-three students (81.6%) are aware that ECs can prevent unintended pregnancies. Oral contraceptive pills (OCPs) accounted for 318 (33.47%) of the methods most commonly known. Of those who are aware of EC, 100 (32.3%) say that it is recommended as a regular form of contraception. Menstrual irregularity (156, 25.49%) is the most frequently reported side effect of ECs, followed by vomiting (131, 21.40%). Regarding where to obtain ECs, 295 people (95.2%) said that hospitals were the primary source. Of them, 75 (24.2%) are aware that the EC recommends that within 72 hours following unprotected sexual activity.

Table 3: Knowledge on ECs among female students in Awsi resu zone preparatory school; NOV 2023;

Questions	Category	Frequency	Percentage (%)
Have you Heard about EC	Yes	310	74.0
	No	109	26.0
Is EC recommend as a regular	Yes	100	32.3
	No	97	31.3
	I don't know	113	36.5
EC prevent unwanted pregnancy	Yes	253	81.6
	No	31	10
	I don't know	26	8.4
Where EC obtain	Pharmacy health facilities	295	95.2
	Super market	7	2.3
	I don't know	8	2.6
Among modern contraceptive which one do you know?	Pills	318	33.47
	Injectable	269	28.31
	Condom	250	26.34
	IUDs	52	5.47
	Withdrawal	3	0.31
	Calendar rhythm method	58	6.10
Side effect of EC	Menstrual irregularity	156	25.49
	Breast tenderness	106	17.32
	Ectopic pregnancy	12	1.96
	Vomiting	131	21.40
	Drowsiness	1	0.16
	Delay fertility	31	5.09
	Nausea	82	13.39
	I don't know	93	15.19
Recommend duration	Within 12 hours	46	14.8
	Within 24 hours	47	15.2
	Within 48 hours	18	5.8
	Within 72 hours	75	24.2
	I don't know	124	40.0

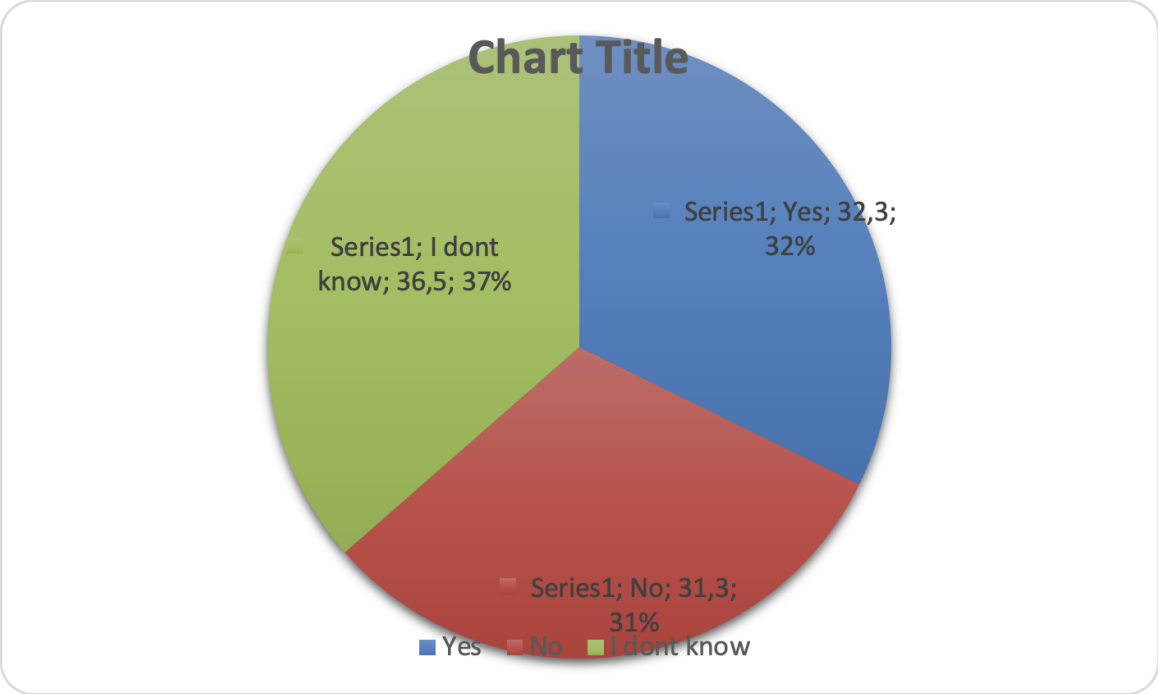

Figure 2. is EC recommend as regular contraceptive?

Attitude of respondents towards Emergency contraceptive

One hundred nine (35.2%) study participants think that giving out EC makes it harder for people to use other forms of contraception. Two hundred seventy-five students (88.7%) think that using EC frequently poses a health risk. Two hundred eight (67.1%) think that sexually active people should have easy access to EC. One hundred fifty (48.4%) think EC should be used regularly to avoid unintended pregnancies. The majority of respondents, 278 (79.4%), think that EC is a useful method for preventing unintended pregnancies, and 270 (77.1%) plan to use EC in the future if necessary.

Table 4. Attitude on ECs among female students in awsi resu zone preparatory school; NOV 2023;

Question	Category	Frequency	Percentage (%)
The provision of EC would discourage compliance with other contraceptive methods.	Very disagree	13	4.2
	Disagree	76	24.5
	Neutral	112	36.1
	Agree	105	33.9
	Very agree	4	1.3
Repeated use of EC poses a health risk	Very disagree	-	-
	Disagree	13	4.2
	Neutral	22	7.1
	Agree	200	64.5
	Very agree	75	24.2
	Very disagree	2	6.0
	Disagree	98	31.6

EC should be prescribed for a client before unprotected sex.	Neutral	56	18.1
	Agree	111	35.8
	Very agree	43	13.9
EC should be available without a prescription.	Very disagree	9	2.9
	Disagree	60	19.4
	Neutral	42	13.5
	Agree	172	55.5
	Very agree	27	8.7
EC should be easily accessible to sexually active individuals.	Very disagree	3	1.0
	Disagree	27	8.7
	Neutral	72	23.2
	Agree	196	63.2
	Very agree	12	3.9
EC should be used regularly to prevent unwanted pregnancies.	Very disagree	7	2.3
	Disagree	75	24.2
	Neutral	78	25.2
	Agree	136	43.9
	Very agree	14	4.5
EC is a safe method of preventing unplanned pregnancy.	Very disagree	5	1.6
	Disagree	50	16.1
	Neutral	56	18.1
	Agree	170	54.8
	Very agree	29	9.4
I will use EC in the future when the need arises.	Very disagree	34	11.0
	Disagree	66	21.3
	Neutral	32	10.3
	Agree	165	53.2
	Very agree	13	4.2
I will advise family members and friends to use EC.	Very disagree	35	11.3
	Disagree	76	24.5
	Neutral	40	12.9
	Agree	151	48.7
	Very agree	8	2.6

Practice of ECs among female respondents

Among fifteen (3.6%) of the respondents who have had sex, ten (66.6%) of them have ever used EC. From these ever-used ECs, six (60%) were due to unexpected unprotected sex, and five (50%) of them were used within 72 hours. A major source of ECs for respondents were friends (70%). Six (60%) of them used EC as a regular method of contraception. Among those who ever had sex, only two (13.3%) participants never practiced without a condom.

Table 5. practice on ECs among female students in awsi resu zone preparatory school; NOV 2023

Question	Category	Frequency	Percentage (%)
Have you ever used any form of emergency contraception?	Yes	10	66.6
	No	5	33.4
Why did you use an emergency contraceptive?	Because I experienced condom breakage or slippage	-	-
	Because I experienced failed coitus interrupts	-	-
	Because of the miscalculation of the rhythm method	4	40.0
	Because I had unexpected unprotected sex	6	60.0
When did you use EC to effectively prevent pregnancy after sex?	Within 12 hours	1	10.0
	Within 24 hours	2	20.0
	within 48 hours	2	20.0
	within 72 hours	5	50.0
Where did you access the EC?	Friends	7	70.0
	At the pharmacy	3	30.0
Have you ever used emergency contraceptives as a regular method of contraception?	Yes	6	60.0
	No	4	40.0

Sexual transmitted infection related characteristics of respondents

Among the participants, 84.5% (three hundred fifty-four individuals) had heard about sexually transmitted infections, and of those who were aware of STIs, 46.6% (three hundred thirty-five individuals) specifically knew about STIs transmitted through unprotected sex. Vaginal discharge 216 (30.9%) is the most known symptom of STI. One hundred forty (49.8%) students said that EC cannot prevent STIs. One hundred ninety-nine (70.8%) believe that the provision of EC to women would encourage promiscuity and hence increase the prevalence of STIs. Two hundred sixty-three (74.3%) believe that condoms should be used during sexual intercourse in addition to EC to prevent STIs.

Table 6. STI related characteristics of respondent's among female students in Awsi resu zone preparatory school; NOV 2023

Question	Category	Frequency	Percentage (%)
Have you heard STI?	Yes	354	84.5
	No	65	15.5
What is the transmission method of STI?	Unprotected sex	335	46.6
	mother to child transmission	165	23.01
	sharing of needles	179	24.96
	blood donation	29	23.01
	Other	9	46.7
What are the symptoms of STIs?	vaginal discharge	216	30.9
	genital itching	114	16.3
	genital ulcer	168	24.03

	pain during urination	191	27.32
	Others	10	1.43
What are the complications of STIs?	Infertility	219	36.25
	ectopic pregnancy	5	0.82
	Miscarriage	119	19.7
	cervical cancer	50	8.27
	PID	132	21.85
	premature birth	19	3.14
	Other	60	9.94
Can emergency contraception prevent STIs?	Yes	141	50.2
	No	140	49.8
Have you ever suffered from an STI	Yes	2	13.3
	No	13	86.7
The provision of EC to women would encourage promiscuity, hence increasing the prevalence of STI.	Very disagree	5	1.8
	Disagree	21	7.5
	Neutral	56	19.9
	Agree	168	59.8
	Very agree	31	11.0
Condoms should be used during sexual intercourse in addition to emergency contraceptives to avoid STIs.	Very disagree	3	0.8
	Disagree	22	6.2
	Neutral	66	18.6
	Agree	200	56.5
	Very agree	63	17.8
Multiple sexual partners play a role in the transmission of STIs.	Very disagree	3	0.8
	Disagree	1	0.3
	Neutral	3	0.8
	Agree	193	54.5
	Very agree	154	43.5
If unsure of the symptoms of an STI, health personnel must be contacted.	Very disagree	54	15.3
	Disagree	38	10.7
	Neutral	21	5.9
	Agree	205	57.9
	Very agree	36	10.2
What do you know about preventive measures against STIs?	Abstinence	320	37.55
	use of condom	232	27.23
	faith full to one sexual partner	187	21.94
	regular screening	90	10.56
	Vaccination	7	0.82
	taking drugs before	16	1.88

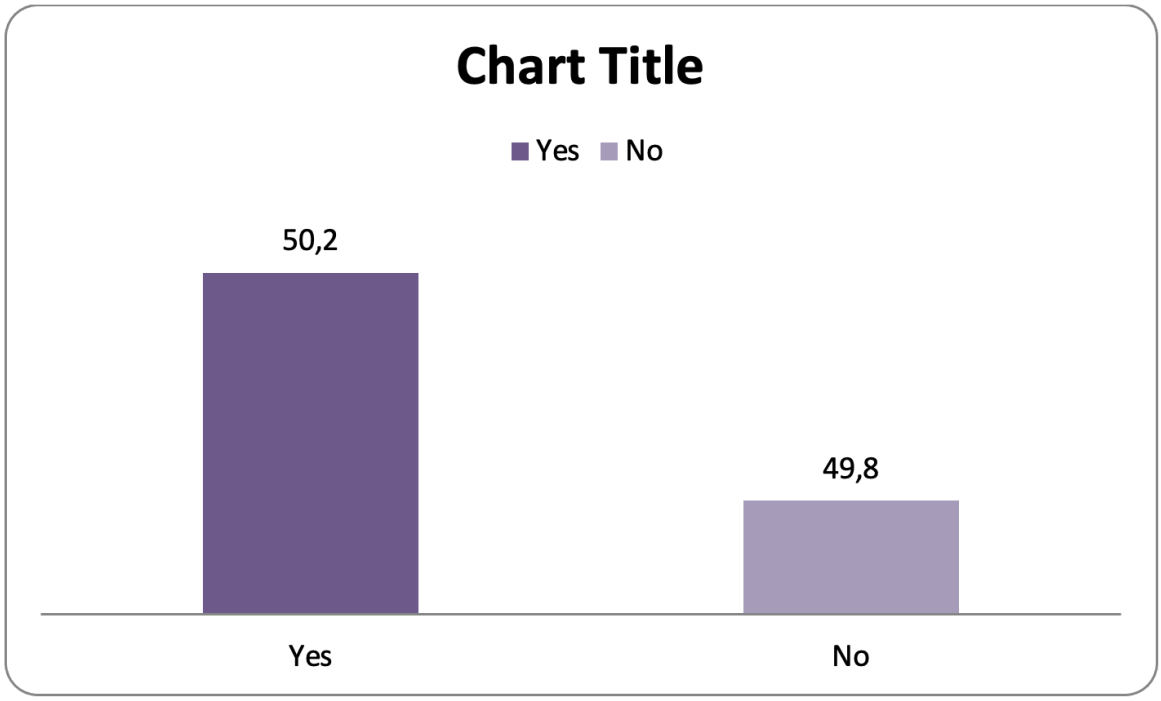

Figure 3. can emergency contraceptive prevent STIs?

Knowledge, attitude and practice of respondent

According to our study, of the respondents, 292 (94.2%) had good knowledge, those responded above the mean score, and out of this, 18 (5.8%) of them had poor knowledge and responded below the mean score, 179 (57.7%) of the respondents had a good attitude, those were answered above the mean score in total questions, and only 131 . (42.3%) of them had a poor attitude, which responded below the mean score. Five (33.3%) have poor practice, and ten (66.7%) have good practice.

Table 7. Knowledge, attitude and practice of respondent among female students in Awsi resu zone preparatory school; NOV 2023

Variable	Frequency	Percent (%)
Knowledge		
Poor knowledge	18	5.8
Good knowledge	292	94.2
Attitude		
Poor attitude	131	42.3
Good attitude	179	57.7
Practice		
Poor practice	5	33.3
Good practice	10	66.7

4. Discussion

This study assessed the knowledge, attitude, and practice of emergency contraception among female preparatory school students in the Afar Regional State's Awusi Resu Zone (01). The background characteristics of the respondents obtained from the descriptive analysis indicated that a large proportion of the study participants (62.1%) were in the age group between 14 and 18 years. Ninety-point-nine (90.9%) were living in urban settings, and 51.6% of the respondents were in gra12.

Out of the total 419 respondents, 74.0% had ever heard of emergency contraceptives, which is higher than other studies conducted in Jimma among Extension University students (22.8%) and Addis Ababa female university students (43.5%) [15]. This could be due to the difference in time of the study conducted, where our finding was related to the availability of social media.

Even though 94.2% of participants in our study demonstrated good knowledge, 24.2% of participants said that the recommended period EC to use is less than 72 hours. This is relatively less than compared to the findings of the studies conducted in Addis Ababa among female university students (26.2%), Gondar University in northwest Ethiopia (73.3%), and Arba Minch (26.4%) who were aware of the proper time to administer pills. This difference might be because of better access to media and reproductive health-related information in major cities.

Similarly, 94.2% of participants in our study demonstrated good knowledge, but there is misunderstanding in such knowledge of EC; 141 (50.2%) students said that EC prevents STIs, and 32.3% of students said that emergency contraceptives are recommended as regular contraceptives.

In our study, 33.47% of participants mentioned pills from modern contraceptives; this is less than the result conducted in East Shewa, Adama, where 51.1% and in Gondar University, northwest Ethiopia (73.3%) of participants specifically mentioned pills. This could be due to sociocultural disparities, educational attainment, or the accessibility and availability of contraceptive services.

About 57.7% of our study subjects had a good attitude towards emergency contraceptives. This is relatively comparable to the findings of the studies conducted at Gonder (53%), and Debre-Markos (53.8%) [18]. In contrast to a study conducted at Debre-Markos University, where 88.9% of participants stated that they would use EC if they had unsafe sex, our study is lower, at 57.4%. And about 51.3% of the respondents have reported being willing to advise friends to use EC whenever they faced the problem of unprotected sex. This could be due to participants' varying levels of education and awareness of emergency contraception.

According to our survey, 79.4% of participants believe that EC is an effective way to avoid unplanned pregnancy. This is greater than the result of the survey carried out at Gondar University (24.0%) of respondents. The possible reason might be due to the difference in study time, which is related to the availability of social media, which makes our respondents highly aware of this.

In our study, out of those who had practiced sexual intercourse (3.6%), the practice of emergency contraception was

66%, which is higher than the findings of the study conducted at Adama (26.1%) and Ambo (36.5%), who used emergency contraceptive methods, and out of those who used EC in our study, 60% of them used regular contraceptive methods. The reason behind this may be due to the low value of the denominator.

According to our study, 70.8% of the respondents believe that the provision of emergency contraceptives to women would encourage promiscuity, hence increasing the prevalence of STIs, and 25.6% of respondents said that condoms should not be used during sexual intercourse in addition to EC to avoid STIs. The belief that providing EC to women might encourage promiscuity, potentially increasing STI prevalence, mirrors concerns expressed in other studies. So it's essential to note that this perception relates to the understanding that condoms should be used concurrently, highlighting the nuanced perspectives held by participants in our study.

4.1. Limitation and Strength of the study

4.1.1. Limitation of study

This study has several limitations that should be taken into consideration when interpreting the findings. Firstly, the study was conducted among a specific population in a defined geographical area, which may limit the generalizability of the results to other populations.

Secondly, participants may have provided answers that they believed were socially acceptable rather than their actual experience, especially when it comes to sensitive topics such as sexual behavior and contraceptive use.

Thirdly, the cross-sectional design of the study only captured snapshots of participants' knowledge, attitudes, and practices at one point in time. With regard to attitude questions, qualitative study designs are better.

Language barriers and a lack of adequate time to conduct the study were the challenges during the research we conducted.

4.1.2. Strength of the study

We collect our data by using the Kobo toolbox, which provides data encryption to protect the confidentiality of participants' responses. This ensures that sensitive information remains secure during data transmission and storage. We implement a rigorous quality control process during data collection and conduct regular monitoring to ensure the reliability and consistency of the data.

5. Conclusion and Recommendation

5.1. Conclusion

The study finding showed that most of the respondents who have ever heard of emergency contraception had good

knowledge and a positive attitude towards EC, but some of the respondents have misunderstandings about emergency contraceptives regarding their ability to prevent STIs. This study shows that about half of the respondents said it can prevent STIs and the recommendation of EC as a regular contraceptive. Therefore, to increase knowledge about emergency contraceptives and how to use them whenever they arise and to bring about attitudinal change among female preparatory school students, there should be continuous open health education on specific information about emergency contraception.

5.2. Recommendation

Girls' school clubs shall work hard to create awareness about the sexual activities of female students in school.

It is better that the Afar Health Bureau distribute educational materials such as brochures, posters, and flyers that teach about emergency contraception to provide accurate information and arrange programs on a regular basis to provide appropriate information concerning the use and utilization of emergency contraception.

The Afar Educational Bureau should incorporate comprehensive sexual education into the academic learning process to provide students with accurate information about sexual health, including emergency contraception, and promote responsible behavior.

Local health care providers should organize open discussions and seminars to create awareness about contraceptive utilization in order to address misunderstandings about the relationship between emergency contraception and STIs and emphasize the importance of combining emergency contraception with condom use to prevent STIs.

Further research is needed to assess the KAP of EC using a qualitative study design.

List of Abbreviations/Acronyms

- CU-T Copper T intra uterine device
- EC Emergency Contraceptive
- ECPs Emergency Contraceptive Pills
- FGAE Family Guidance Association of Ethiopia
- FP Family planning
- HIV Human Immune deficiency Virus
- IUD Intra Uterine Device
- KAP Knowledge, Attitude and Practice
- STI Sexual transmitted infection
- WHO world health organization

Statements and Declarations

Conflicts of Interest

The authors declare no conflicts of interest related to this research.

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