Prevalence And Determinants of Unintended Pregnancy Among Female High School Students in Arsi Zone, Oromia Regional State, Ethiopia: Cross-Sectional Study

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Research Article

Keywords: Prevalence, Untended pregnancy, Arsi Zone

Posted Date: December 2nd, 2020

DOI: <https://doi.org/10.21203/rs.3.rs-109263/v1>

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1ORIGINAL RESEARCH

2**Manuscript title:** Prevalence And Determinants of Unintended Pregnancy among Female High
3School Students in Arsi Zone, Oromia Regional State, Ethiopia: **Cross-sectional study**

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27Abstract

28**BACKGROUND:** Unintended pregnancy which ends up majorly with induced abortion is the
 29leading cause of maternal mortality and morbidity around the globe. Youths are more prone to
 30unintended pregnancy because of the rising level of premarital sexual practice across all parts of
 31the world. This raising level of premarital sex can be partly explained by the fact that youths face
 32various problems in regulating fertility through the use of modern contraceptives. Lack of
 33information, socio-cultural, economic barriers in accessing contraceptives, violence as well as
 34socio-cultural beliefs impede major role in preventing unintended pregnancy.

35**OBJECTIVE:** To assess the prevalence and determinants of unintended pregnancy among
 36female high school students in Arsi Zone.

37**METHODOLOGY:** Institutional-based cross-sectional study was conducted between February
 38and August 2018 G.C to collect data using a self-administered questionnaire. A multi-stage
 39sampling procedure was employed to reach 830 respondents. A bivariate analysis was carried out
 40to examine the relationship between unintended pregnancy and explanatory variables. Variables
 41that were statistically significant (with p-value <0.05) at the bivariate level were included in the
 42multivariate logistic regression to control confounding factors and determine the independent
 43determinants of unintended pregnancy among high school students.

44**RESULT:** Forty five (30%) of the respondents reported that they were pregnant at the time of
 45the study period. Of the study participants who had been pregnant, 28(62.22%) students got their
 46pregnancy at the age of 16 and 17; and 6(13.33%) got pregnant at the age of 18 and 19. Age at
 47first sexual intercourse, using contraceptive methods, drinking alcohol, chewing kchat, lack of
 48knowledge, and failure to discuss reproductive health information with families were significant
 49predictors of unintended pregnancy.

50**CONCLUSION:** The prevalence of unintended pregnancy among the study participants is high
 51(29.3%), and almost all were ended up with abortion. Most reasons reported for having unwanted
 52pregnancy were that they were still in school and they don't have money to take care of their
 53baby.

54**Keywords:** Prevalence, Untended pregnancy, Arsi Zone

55Introduction

Unintended pregnancy is a pregnancy that is neither planned nor wanted at the time of conception. In most cases, it is a cause for maternal morbidity and adverse feto-maternal outcome. Women of all ages may encounter unintended pregnancies but some groups of the society such as teenagers are at higher risk. Unintended pregnancies are affected by a number of factors including personal beliefs, socio-cultural values, religion, and existing laws in society (1). Now a day, the incidence of unintended pregnancy and abortion particularly in developed countries has greatly reduced by using modern contraceptives. Modern contraceptives to those who do not have access to them would prevent a large proportion of unintended pregnancies and abortions, as well as many maternal and infant deaths (2, 3).

Annually, about 80 million unintended pregnancies are estimated to occur worldwide. In developing countries alone more than one-third of all pregnancies are considered unwanted and about 19% will end up in abortion (4). Among the direct cause of maternal death in the world, unsafe abortion accounts for 13% of overall maternal mortality (5). Africa shares more than 40% of the total global death due to unsafe abortion which puts Africa as a leading region. The prevalence of abortion is higher where the unmet need for family planning is high, the contraceptive acceptance rate is low, and less effective contraceptives have been used (4, 6). Even if contraceptive methods have been used correctly and consistently as recommended, still there will be nearly 6 million accidental pregnancies annually which may end up with unwanted pregnancy and subsequent abortion(7). Unmarried adolescent girls across all parts of the world are more likely prone to rising levels of premarital sexual activities and thus unintended pregnancies and unsafe abortion(8). Among women who were admitted to hospitals for management of unsafe abortion complications, 38 to 68% were under the age of 20 years (9). The world health report noted that unwanted, mistimed, and unintended pregnancy is the most common cause of maternal mortality in developing countries. According to this report, unintended pregnancy was identified much higher in Eastern Africa(118 per 1000 women of childbearing age) and middle Africa(94 per 1000) than in the other three sub-regions: Northern, Southern, and West Africa where the rate ranges between 56 and 83 per 1000(10). For this reason, unintended pregnancy is an important public health issue especially, in developing countries because of its negative association with social and health outcomes for both the mother and child (11). Unintended pregnancy among adolescents is a global health problem that affects not only girls but also their families and society at large. Even though there are disparities in magnitude and consequence between countries, unintended pregnancy is a challenge for every

88society (12). In sub-Saharan Africa, it is estimated that 14 million unwanted pregnancies occur
 89every year with almost half occurring in women age 15-24 years (13). Despite several
 90international declarations and abortion laws, many women in developing countries are still
 91victims of unwanted pregnancies and complications of unsafe abortion (14). Even though the 5th
 92MDG is targeted to reduce maternal mortality by three-fourth by 2015, Ethiopia had the 5th
 93largest number of maternal deaths in the world which was estimated to be 676 deaths per
 94100,000 live births in the year 2011(15).

95The EDHS report showed that 16.2% and 18.7% of women reported that their last pregnancy
 96was unwanted and mistimed respectively (14). Another study in Ethiopia also pointed out that
 97more than 40% of pregnancies are unintended and only 14% of the reproductive age women use
 98birth control methods (16). Peer influence, poor school-based sexual education, and poor
 99parental involvement in preparing young people for safe sexual life are factors that lead an
 100adolescent to unintended pregnancy (13). Substance use, living arrangement, age of students,
 101school performance, having pocket money, watching pornographic video, place of the family
 102residence, and parental education status are also factors of unintended pregnancy(13,17).
 103Similarly, unintended pregnancy is higher among women who are unmarried, lower economic
 104status, at an early or late age of reproductive life, and among those who attend formal education
 105(15). Even though continued attention has been given to reproductive health issues, maternal and
 106reproductive status in most of the world remains dismal. Still, the problem of unwanted
 107pregnancy and induced abortion at the community and school is believed to be very high but
 108underreport, limited data sources and inaccurate information on the event are the major obstacles
 109to obtain the actual figure.

110Moreover, there are limited numbers of literature dealing with unintended pregnancy among high
 111school students. Having this information in mind, the aim of this study will be to address the
 112clear knowledge gap on the prevalence and determinants of unintended pregnancy among female
 113high school students.

114Material and methods

115An Institutional based cross-sectional survey was conducted to assess the prevalence and
 116determinants of unintended pregnancy among female high school.

117

118The sample size was calculated using the formula for a single population proportion by
 119taking the proportion for unintended pregnancy among female adolescents 37.8% (14),
 120with a confidence interval of 95% and a degree of precision of 5%. Finally, the design
 121effect of 2 was taken and 10% was added to the sample size for non-response rate and
 122possible absenteeism compensation to yield the final sample size of 830. A multistage
 123sampling procedure was employed to select a representative sample of female adolescent
 124students (stratification into grades and simple random sampling to select sections and
 125respondents were selected systematically from their sections). Five districts/towns were
 126selected out of 26 woredas in Arsi Zone using simple random sampling, identified by
 127name i.e. (Lode Hetosa, Bekoji, Arsi Robe, Hetosa, and Asella). Then from each five
 128selected districts, one secondary and preparatory schools were selected using a simple
 129random sampling technique. The calculated sample size was distributed proportionally to
 130each selected schools based on the number of students they had. Each school was
 131stratified by grade i.e. grades 9, 10, 11, and 12. The proportional allocation of the sample
 132was assigned to the respective grade. Two sections were randomly selected from each
 133grade and all-female students were included in the study. Using students list respondents
 134were selected by a systematic random sampling method. Data was collected using a self-
 135administered questionnaire that had both close and open-ended questions. Data collectors
 136and supervisors were trained on the objective of the study and maintaining
 137confidentiality. Students who gave their verbal informed consent were provided with
 138written, self-administered questionnaires. Research instruments and research procedures
 139were pretested with the whole research team, including research assistants. The
 140completeness of the data was analyzed and sorted properly. Data was entered into the
 141computer twice before processing and analysis to avoid mistakes. The collected data was
 142entered into the computer using EPI Info version 7.0 in order to ensure its accuracy then
 143transported to the Statistical package for social science(SPSS version 21.0) software for
 144analysis. Descriptive statistics were computed to determine frequencies, percentages, and
 145mean of the variables. A Bi-variate analysis was carried out to examine the relationship
 146between unintended pregnancy and explanatory variables. Variables that were
 147statistically significant (with p-value <0.05) at the bivariate level were included in the

148multivariate logistic regression to control confounding factors and determine the
149independent determinants of unwanted pregnancy among students.

150Ethical approval involving human study and protocol was obtained from Adama general
151hospital and medical college research and ethical review committee in accordance to the
152national protocol.

153Results

154Socio-demographic information on female high school students

155A total of 830 female adolescents aged from 15-24 years participated a response rate of
156100%, and the respondents' mean age was 17.29 years, of all respondents 686(82.65%)
157were between 15 and 24 years old; and 144(17.35%) were between 19 and 24 years old.

158Of all 250(30.1%) were grade 9th students; 240(28.9%) were grade 10th students,
159171(20.6), and 169(20.4) were grade 11th and 12th students respectively.

160Of 830 respondents, 770(92.8) of respondents' fathers were alive during the survey.

161When we see fathers' educational status, there were about 217(28.2%) students' fathers
162had college and above educational levels; 159(20.65%) were attended high school;

163245(31.82%) were attended elementary school while 147(19.2%) of respondents' father

164were illiterate. With regards to students' father's job, the majority of students' fathers were

165farmers, 362(47.01%); 211(27.4%) were governmental employees; 95(12.34%) were

166merchants; 80(10.39%) and 22(2.86%) were a private employee and others respectively.

167The majority of students' fathers earned more than three thousand birrs, 146(18.96%).

168Of the total participants' mothers, 798(96.1%) were alive. Of these mothers, 199(24.96%)

169were illiterate; and 295(36.97%), 205(25.69%), and 99(12.41%) had elementary, high

170school, and college and more educational levels respectively. Unlike students' father, the

171majority of students' mother 334(41.85%) were housewife, 147(18.42% were farmers;

172114(14.29) and 112(14.04%) mothers were merchants and governmental employee

173respectively; 89(11.15%) of respondent' mother were a private employee and 2(0.25%)

174were others [Table-1]

175

176Reproductive Health History and Contraceptive use among Study

177Participants

178Of the total study participants, 150(18.1%) of them reported having had sexual
 179experience at the time of the survey. The mean age of first pregnancy among study
 180participants was 16.76. Of total students who had been pregnant, 28(63.64%) pointed out
 181that never think of pregnancy was their major reasons for not to control the unintended
 182pregnancy, 9(20.45%) of them had reported that their incidental practice of sexual
 183intercourse was their reasons for the occurrence of unintended pregnancy. Of all students
 184who had been pregnant, almost all were unwanted 44(97.78%) while only 1(2.22%) of
 185them were wanted. It was reported that a big number of abortions were taking place at
 186private clinic 20(44.44%); 9(20%) of the respondents aborted at a private home;
 1872(4.44%), 7(15.55%), and 6(13.64%) abortion were taken place at the health center,
 188hospital, and others (Marie stops) respectively.

189The mean age of menarche among study participants was age14.1. Among the study
 190participants, only 279(33.6%) of them knew when pregnancy occurs in relation to the
 191menstruation cycle. 392(47.2%) of study participants had discussed reproductive health.
 192The majority of participants discuss reproductive health issues with their friends,
 193138(35.2%); 77 (19.64%) of them discussed with their mothers, and 27(6.89%), and
 19419(4.85%) talked with their sisters and fathers, respectively.

195More than two-thirds of the study participants did not drink alcohol, 789(95.1%). Of the
 196total study participants only 41(4.9%) female students drink alcohol, 39(4.7%) of them
 197chewed kchat; 96(11.6%) of them watched pornographic movies, and 2(0.2%) uses others
 198(hashish, etc). 96(11.57%) of sexually active students used contraceptives during they
 199had sexual intercourse.

200Of the total respondents, only 55(6.6%) had used emergency contraceptive. [Table -2]

201Prevalence of unwanted pregnancy among respondents

202Of the total respondents, 45(5.42%) of them became pregnant at some point in their lives.
 203Among women who had been pregnant almost all were unwanted 44(97.8%), and among
 204women who had ever had unwanted pregnancy 44(97.8%) of them were reported that the
 205pregnancy was terminated. Of these, all of them were induced abortion. [Figure-1 and 2]

206Factors related to unwanted pregnancies among respondents

207The majority of the respondents who did not want pregnancies were still in school
 20829(65.9%) followed by 4(9.1%) fear of social isolation; 3(6.82%) who did not have

209 money to take care of their baby; 3(6.82%) were due to rape; 1(2.27%) were not wanted
 210 their pregnancy to have a gap between births and others 4(9.1%) of them were due to
 211 divorce, being single, etc.

212 **Relationship between socio-demographic factors and unintended** 213 **pregnancy**

214 In the bivariate logistic regression, students' age and parents' demographic characteristics,
 215 mother's (educational level and salary) had a significant association with unintended
 216 pregnancy at 95% CI COR. However, in multivariate logistic regression students' grades,
 217 students' mothers' educational level had only a significant association with students'
 218 unintended pregnancy.

219 Regarding the level of students' mothers' education, students whose mothers were
 220 illiterate were more likely to get unwanted pregnancy [AOR=0.16; 95% CI=0.04, 0.66];
 221 and students whose mother were elementary schools in education were also more likely
 222 to experience unwanted pregnancy as compared with students whose mothers were
 223 secondary school and came from college and more [AOR=0.07; 95% CI=0.01, 0.56]
 224 [Table-3].

225 **Relationship between Reproductive health issues and Contraceptive use** 226 **with unwanted pregnancy among respondents**

227 There was a positive association between alcohol drinking, kchat chewing, and watching
 228 pornographic movies with ever having an unintended pregnancy. Students who
 229 mentioned fell in love as their main reason for sexual intercourse activity were more
 230 likely to experience unintended pregnancy than students who reported peer pressure,
 231 marriage, and benefits as their major sexual reasons [AOR=0.05; 95% CI=0.01, 0.6].

232 Study participants who drank alcohol were three times more likely to experience
 233 unintended pregnancy as compared to those who did not drink alcohol [AOR=3; 95% CI:
 234 1.86, 13.0]. Students who chew kchat were 2.5 times more likely to experience
 235 unintended pregnancy as compared to those who did not chew kchat [AOR=2.5; 95%
 236 CI=1.4, 3.0].

237 Knowledge of pregnancy occurrences in relation to the menstruation cycle was an
 238 independent determinant of unintended pregnancy among students. Students who were

239not knowledgeable were nearly two times more likely to get unintended pregnancy than
 240those who did know [AOR=1.6; 95% CI: 1.02, 2.3]. Students who did not discuss
 241reproductive health information were almost two times more likely to get unintended
 242pregnancy [AOR=2.38; 95%:1.38, 4.13].

243Students who had ever used a contraceptive method were less likely to have experienced
 244unintended pregnancy than those who had never used contraceptive methods
 245[AOR=0.065; 95% CI: 0.034, 0.121]. [Table-4]

246Discussion

247Prevalence of unintended pregnancy and induced abortion among 248female high school students in Arsi Zone

249 This study was conducted to determine the prevalence and associated factors with
 250 unintended pregnancy among female high school students in Arsi Zone. Eight hundred
 251 thirty representative samples were selected from five districts in Arsi zone (five
 252 secondary and preparatory schools) using multistage probability sampling techniques
 253 (stratification alongside simple random sampling techniques).

254 In this study, 44(29.3% (± 3.3 ; at α 95%CI) of the study participants reported that they
 255 had ever experienced unintended pregnancy at the time of the study. Of all unintended
 256 pregnancies, almost all were ended up with induced abortion with a proportion of
 257 44(97.8%). This meant only one study participant with unintended pregnancy gave
 258 birth.

259 This finding is comparable to a study conducted in Tanzania states 27.1% of
 260 pregnancies were unintended (18) but it is less magnitude than a study conducted in
 261 shire town as 33% of pregnancies were unintended and 87% of them ended up with
 262 induced abortion (3).

263 Another study conducted in Soweto, South Africa revealed 23% of pregnancies occur at
 264 age 13-16 and 14.9% occur at age 17-19 (3). This finding is not coinciding with the
 265 current study result in which 62.22% of pregnancy occurs at age of 16-17 and 22.22%
 266 at age of 18-19.

267 In this study, a total of 18.1% of female students had engaged in sexual intercourse and
 268 30% of them get pregnant. Of all pregnancies, 98.8% were unintended, which has
 269 greater magnitude as compared with a cross-sectional study conducted in Wachamo
 270 University, showed that 39% of female students had sexual intercourse and 12.58% of
 271 them got pregnant, and 91.4% were unintended (4). And also the magnitude of
 272 unintended pregnancy among adolescent high school students is greater than a study
 273 result done in the Ethiopian hospitals showed that there were 37.8% unwanted
 274 pregnancies among female youths and from which 50% were induced abortions (14).
 275 And it has also a smaller magnitude as compared with a cross-sectional study
 276 conducted in Harar, Eastern Ethiopia which showed 33.3% unintended pregnancies and
 277 50% induced abortion(18). However, it is inconsistent with a study conducted on
 278 adolescents in Addis Ababa which indicated that 50% of unintended pregnancy and
 279 74% of these pregnancies ended up with abortion (2).

280 In the current study, the magnitude of adolescents' unintended pregnancy is less. As
 281 compared to previous studies; it is likely that the levels observed here in this study
 282 might be underestimated the magnitude of unintended pregnancy among high school
 283 students, this might be due to the unwillingness of adolescent female students to report
 284 having had an unintended pregnancy or an abortion since it is sensitive and personal
 285 issues. The mean age of the first unintended pregnancy among study participants was
 286 16.75 (± 0.22 , 95% CI). Of the pregnant study participants, 28(62.22%) students got
 287 unintended pregnancy at the age of 16 and 17. Whereas another cross-sectional study
 288 conducted among preparatory school in Addis Ababa showed that the mean age of the
 289 first pregnancy among study participants was 17 which are 59% (14). In this study, of
 290 all pregnant adolescent students, 28(63.64%) pointed out that never think of pregnancy
 291 was their major reasons for not to control unintended pregnancy and having
 292 irregular/incidental sexual intercourse as their major reasons for unintended pregnancy
 293 was 9(20.45%).

294 **Determinants of unintended pregnancy among female high school** 295 **students in Arsi Zone**

296 In the multivariate logistic regression students' age, grade, and parents' demographic
 297 characteristics (mother's educational level and salary), drinking alcohols, smoking

298 cigarette, chewing kchat, watching pornographic movies, age at first sexual intercourse,
 299 knowledge of pregnancy in relation to the menstrual cycle, discussion on reproductive
 300 health, and practice of contraceptive were significantly associated with students'
 301 unintended pregnancy.

302 Related to students' family demographic characteristics, the father's, and mother's
 303 educational status had a statistically significant association with students' unintended
 304 pregnancy. Regarding the level of students' mothers' education, students whose
 305 mothers were illiterate were more likely to get unwanted pregnancy [AOR=0.16; 95%
 306 CI=0.04, 0.66]; and students whose mothers were elementary schools in education were
 307 also more likely to experience unwanted pregnancy as compared with students whose
 308 mothers secondary school and came from college and more [AOR=0.07; 95%CI=0.01,
 309 0.56]. This means that the relationship between the level of students' mothers' education
 310 and students to be unintended pregnant is negative, when mothers' level of education
 311 increases, getting unintended pregnancy decreases.

312 In this study, among adolescent female students, 84.4% of unwanted pregnancy occurs
 313 at age of 15-18 years. This is consistent with the study conducted in Tanzania which
 314 showed 80 % of female youths (15-18years) exposed to unwanted pregnancy (18).
 315 Although in this study students' age at first sexual intercourse was significantly
 316 associated with students' unintended pregnancy, students whose age ranged from 16-17
 317 at their first sexual intercourse were more likely to be exposed to unintended pregnancy
 318 than those whose age ranged from 18-19 years at first sexual intercourse [AOR=0.32;
 319 95% CI=0.10, 0.99]. There was a positive association between alcohol drinking,
 320 chewing kchat, and watching pornographic movies with ever having an unintended
 321 pregnancy. In the current study, participants who drank alcohol were three times more
 322 likely to experience unwanted pregnancy as compared to those who did not [AOR=3;
 323 95% CI: 1.86, 13]. This might be due to the consumption of alcohol that may distort
 324 their decision and lead to unsafe sexual practice. In confirmation with this study, a
 325 student-based study conducted among female preparatory students in Addis Ababa
 326 revealed that those female students who drink alcohol last week before the study were
 327 three times more likely to have had unintended pregnancy than those who never drank
 328 alcohol; students who chew kchat and who did not discuss reproductive health were

more likely to experience unwanted pregnancy as compared to those who did not chew and discuss (13). Students who watch pornographic movies were 2.6 times more likely to experience unintended pregnancy than those who were not [AOR=2.9; 95% CI=1.9, 4.4]. In this study, the contraceptive utilization result is very low. This might be due to less awareness of female high school students about modern contraceptives. The association between contraceptive use and unintended pregnancy was found to be statistically significant. Students who had not used a contraceptive method were more likely to have had unwanted pregnancy [AOR=0.061; 95% CI: 0.031, 0.12]. This result is consistent with a study conducted among preparatory school in which students who had ever used contraceptive methods were less experienced unwanted pregnancy (13).

Conclusion

The prevalence of unintended pregnancy among female high school students is high 29.3%, and most of the induced abortion was the result of unwanted pregnancy.

There was low utilization of contraceptives among female students and its association with unwanted pregnancy was statistically significant. Students' age, grade, and students' mothers' educational level and salary, drinking alcohols, smoking cigarette, chewing kchat, watching pornographic movies, age at first sexual intercourse, knowledge of pregnancy in relation to menstruation cycle, discussion on reproductive health, and practice of contraceptive were significantly associated with students' unintended pregnancy.

Students who were single were more likely to have an unwanted pregnancy and induced abortion. Most of the reason given by the respondents for having unintended pregnancy and subsequent abortion was that they were still school and they did not have money to take care of the baby.

LIST OF ACRONYMS

AGHMC.....Adama General Hospital and Medical College

CIConfidence Interval

CPR..... Contraceptive Prevalence rate

357	CSA.....	Central Statistics Agency
358	DC	Data Collector
359	EC.....	Emergency contraceptive
360	EDHS	Ethiopian Demographic Health Survey
361	FHI.....	Family Health International
362	GO.....	Governmental organization
363	ICPD.....	International conference on population development
364	IPPF.....	International Planned Parenthood Federation
365	MDGs.....	Millennium Development Goals
366	MMR	Maternal Mortality Ratio
367	MOH.....	Ministry of Health
368	NGOs	Non-governmental Organization
369	OR.....	Odds Ratios
370	PI.....	Principal Investigator
371	RH.....	Reproductive Health
372	SPSS.....	Statistical Package for Social-Science
373	SSA	Sub-Sahara Africa
374	STI	Sexually Transmitted Infection
375	U.S.A.....	United States of America
376	UN.....	United Nation
377	UNFPA	United Population Fund Agency

378WHO.....World Health Organization.

379**Declarations**

380**Ethics approval and consent to participate**

381An approval letter was obtained from Adama General Hospital and Medical College
382Ethical and review committee. At all levels, officials were contacted and permission was
383secured. Purpose, objective, and the benefit of the study were explained to the study
384subjects adequately and their both their verbal and written consent was obtained for those
385students aged ≥ 18 years. For students age between 15 and 18 years, consent wavier was
386obtained from Adama general hospital and medical college research and ethical review
387committee by considering the data collection procedure does not harm the minors.

388**Consent for publication**

389 Not applicable

390**Availability of data and materials**

391 Datasets are available from the corresponding author upon reasonable request

392**Competing interests**

393All the authors declare that there is no conflict of financial and other interests

394**Funding**

395 It is a self-funded project

396**Authors' contributions**

397 Amana Aman took part in conceptualization, proposal writing, searched the database,
398supervised data collectors, analyzed, interpreted results and wrote the first draft of the
399article. Aliyi Kediro was responsible in the proposal writing, supervision during data
400collection, analysis and interpretation of findings, writing and approval of the final

version of the article. Abnet Menene participated in supervision, analysis, editing, writing, and approved the final version of the article. Yirga wondu was also involved in supervision, data entry and cleaning, analysis and interpretation and approval of the final version, manuscript preparation and served as a corresponding author.

Acknowledgment

We would like to present our deepest appreciation to Arsi Zone administration, Arsi Zone education office, and Zonal health bureau for their cooperation. Our thanks also go to school directors and students who were volunteer, and cooperative in providing necessary data to our studies.

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466**Tables**

467**Table1: Socio-demographic characteristics of female students in Arsi Zone High**
 468**Schools**

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Demographic Characteristics		Freq.	%
Age	15-18 years	686	82.65
	19-24 years	144	17.35
Total		830	100
Religion; N=830			
	Muslim	201	24.2
	Orthodox	536	64.6
	Protestant	85	10.2
	Catholic	4	0.5
	Others	4	0.5
Total		830	100
Level of Education (Grade); N=830			
	Ninth	250	30.1
	Tenth	240	28.9
	Eleventh	171	20.6
	Twelfth	169	20.4
Total		830	100
Marital status; N=830			
	Married	41	4.9
	Single	701	84.5
	Cohabitant	83	10
	Widowed	1	0.1
	Divorced	4	0.5
Total		830	100
With whom are you living?; N=830			
	Both parents	609	73.4
	Mothers only	66	8
	Fathers only	9	1.1
	Relative	52	6.3
	Husband	9	1.1
	Boy friend	4	0.5
	Friend	21	2.5
	Alone	38	4.6
	Other	22	2.7
Total		830	100

472**Table 2: Reproductive Health History and Contraceptive use among respondents**

RH History, Sexual Behavior and Substance Use	Freq.	%
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Age of first sexual intercourse; N=150		
<14 years	2	1.33
14-15 years	29	19.33
16-17 years	87	58
18-19 years	29	19.33
>19 years	3	2
Total	150	100
Main reason for sexual intercourse at the first time you had it; N=150		
Marriage	15	10
Rape	15	10
Felt in Love	83	55.34
Peer pressure	29	19.33
To get Benefit	6	4
To get grade/mark	2	1.33
Total	150	100
Age of First pregnancy; N=45		
15 years	7	15.56
16 years	14	31.11
17 years	14	31.11
18 years	4	8.89
≥19 years	6	13.33
Total	45	100
Why did not control the pregnancy; N=44		
Rape	2	4.55
Forgetting pills	4	9.1
Failed condom	1	2.27
It was irregular sex	9	20.45
Never think of it	28	63.64
Total	44	100
Reason for not using contraceptive N=734		
Too young to attend FP clinic	481	65.53

No knowledge about contraceptives	31	4.22
Contraceptives not available	16	2.18
Fear of side effects	17	2.32
Social influences/accused of immoral behavior	76	10.36
Others	113	15.4
Total	734	100

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474**Table-3: Association between demographic factors and unwanted pregnancy among**
475**study participants.**

Socio-Demographic Characteristics	Unwanted Pregnancy		P-Value	COR, 95% CI	AOR, 95% CI
	Yes	No			
	N	N			
Age 15-18 years	38	648	0.039	0.49(0.31,0.77)	0.44(0.16,1.20)
19-24 years	6	138		*	1.00
Mother' educational status; Illiterate	19	180	0.004	1	1
Elementary school	14	281		0.30(.10,.89)*	0.27(.05,1.31)
High school	14	197		0.17(.06,.49)*	0.16(.04,.66)**
College and more	3	96		0.16(.04,.54)*	0.07(.01,.56)**
Mothers' Salary; <600 ETB	4	65	0.021	1	1
600-1000 ETB	2	63		0.87(0.31,2.46)	0.75(0.12,4.75)
1001-2000 ETB	4	46		0.49(0.22,1.08)	0.53(0.16,1.70)
2001-3000 ETB	1	63		0.40(0.16,1.01)	0.76(0.19,2.99)
>3000 ETB	2	47		0.9(0.43,0.97)*	1.24(0.429,3.56)
No salary	23	423		0.77(0.37,1.57)	0.83(0.32,2.18)
				1	1

476 * Statistical significant

477 **Table-4: Association between reproductive health history and contraceptive use factors**478 **with** unwanted pregnancy

Sexual Behavior and Substance		Unintended Pregnancy		P- value	COR 95% CI	AOR, 95% CI
		Yes	No			
		N	N			
Age of first sexual intercourse;						
	< 14 years	---	2		1	1
	14-15 years	9	20		0.20(.04,1.12)	0.79(.06,9.14)
	16-17 years	27	60		0.22(.11,.44)*	0.32(.10,.99)**
	18-19 years	7	22	0.012	1	1
	> 19 years	1	2		1	1
During regular menstruation when pregnancy occurs?						
	Knowledgable	18	261		1	1
	Not knowledgable	26	525	0.001	1.6(1.02,2.46)	1.6(1.02,2.3)
Had RH discussion;						
	Yes	12	380		1	1
	No	32	406	0.000	2.37(1.37,4.09)	2.38(1.38,4.13)
Family planning use						
	Yes	15	81		1	1
	No	29	705	0.002	0.06(.03, .12)*	0.061(.031,.12)**
Types of Substance used	Alcohol;					
	Yes	33	8	0.000	7(3,13)	3(1.86,13)
	No	11	767		1	1
	Pornographic Movies;					
	Yes	31	65	0.000	3.8(2.6, 5.6)	2.9(1.9, 4.4)
	No	13	721		1	1

479 * Statistical significant

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Figures

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485 **Figure-1: Prevalence of Unwanted pregnancy among high school students**

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487 **Figure-2: Reason for unwanted pregnancies among high school students**

Figures

Figure 1

Prevalence of Unwanted pregnancy among high school students

Figure 2

Reason for unwanted pregnancies among high school students

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