Sexual behaviors and its association with life skills among school adolescents of Mettu town, South West Ethiopia: A school-based cross-sectional study

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Abstract

Background: Adolescents need to have adequate life skills along with personal and social competencies to build responsible adults for healthy behavior. Works of literature agree that life skills improve adolescent’s cognitive, social, and emotional skills; however, there is a paucity of evidence on the association of life skills with sexual behaviors. Therefore, this study aimed to determine the association of life skills with sexual behavior among school adolescents aged 15–19 years in Mettu Town, South West Ethiopia.

Methods: School-based cross-sectional study was employed among 372 school adolescents from 15 to 25 April 2016. A list of school adolescents aged 15–19 years old from students’ register was taken as a sampling frame. Then, simple random sampling was employed using computer-generated random numbers for final study participants’ selection. A pretested self-administered questionnaire was used. The data were entered into Epidata version 4.1 and analyzed using SPSS version 20. A bivariable and multivariable logistic regression analysis was carried out.

Results: Ninety-one (24.5%) adolescents ever practiced sexual intercourse, of which 19.1% of them were exposed to risky sexual behaviors. Unfavorable life skill dimensions, that is, social (adjusted odds ratio = 3.71; 95% confidence interval = 1.64, 8.38), coping with emotions (adjusted odds ratio = 3.114; 95% confidence interval = 1.286, 7.542), and cognitive (adjusted odds ratio = 2.835; 95% confidence interval = 1.288, 6.239), were found to be statistically significant associations with risky sexual behaviors, after controlling for confounders, that is, use of psychoactive substance (adjusted odds ratio = 6.73; 95% confidence interval = 2.27, 19.87) and urban adolescents who dwell in a rental house (adjusted odds ratio = 4.05; 95% confidence interval = 1.59, 10.33) as compared to those living with families.

Conclusion: Developing life skills helps adolescents make more reasoned and intentional choices sexually, which will result in fewer unwanted pregnancies, less sexually transmitted disease, and stronger relationships.

Keywords
Ethiopia, life skills, school adolescents, sexual behavior, substance use

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Introduction

Adolescents, individuals 10–19 years old, are target groups for sexual and reproductive interventions and services. These services may help adolescents establish patterns of responsible and healthy partnerships and families.¹ However, they face many changes and challenges during these important growing up years; they are at high risk of sexual violence due to the impact of their low decision-making skills, especially if education has not provided them with skills to resist sexual pressure and be assertive.²–⁴

World Health Organization (WHO) defines life skills as “abilities for adaptive and positive behavior that enable an individual to deal effectively with the demands and challenges of everyday life.” These sets of skills help
individuals develop psychosocial competence and empower adolescents to have control over what they do. The most common life skills are decision-making, communicating, building self-esteem, developing relationships, dealing with conflicts, problem-solving, and coping with stress and emotions. Adolescents with low levels of life skills are known to develop high-risk behaviors which lead to long-lasting health and social consequences. In addition, adolescence partakes both risk and opportunity having many important life events and behaviors with adverse health outcomes. 

Today’s generation of adolescents is the largest in history. Nearly half of the global population is less than 25 years old. These young people face many significant sexual reproductive health challenges such as limited access to youth-friendly services including information on growth, sexuality, and contraceptive methods. This has led youth into risky sexual behaviors resulting in high sexually transmitted infections (STIs) and HIV prevalence, early pregnancy, and vulnerability to delivery complications resulting in high rates of death and disability.

Ethiopia, like any other developing country, is a country of the young because more than 50% of the total population is under 20 years of age. About 11.9% of this group of people are in the age range of 15–19 years. Adolescents have limited access to health care, the health services are not comprehensive for adolescents, and sometimes they are stigmatized by health providers. Hence, early sexual debut and limited use of contraceptive methods have been associated with increased risk of unwanted pregnancy, STI/HIV infection, and maternal mortality and morbidity. Currently, 21% of adolescents aged 15–24 face unwanted pregnancy and STI/HIV infection add to this and make the problem more worsen. However, recent studies indicated very few youth contacts dealt with life skills and service utilization is still lagging to 12% in Addis Ababa, where high service utilization is expected. Schools were a good place where adolescents can share their life experiences and abilities both positively and negatively. Hence, understanding the association between the life skills and sexual behavior of adolescents is decisive in designing adolescent-centered sexual and reproductive health and provide an insight on whether to include the life skills in school health activities. In addition, the study area was a Zonal town and has different public institutions like health science college, teachers training college, technical and vocational education college, and University for which the adolescents’ behavior would be influenced. Believing that, this study was conducted to determine the association between life skills and sexual behavior among school adolescents aged 15–19 years in Mettu Town, South West Ethiopia.

Methods

Study area and period

Mettu Town is the capital of Illu-Ababor Zone, South West Ethiopia; 695 km away from Addis Ababa, the capital of Ethiopia. The town has one referral hospital, one health center, three high schools including preparatory school; each one (Health Science, Teachers Training, and Technical and Vocational Education) College and one University, and one youth center owned by a family guidance association of Ethiopia, a local non-governmental organization that serves the adolescents and youth in the town. It has a total population of 41,231 and out of which, about 12,369 (30%) were young people aged 10–24 years, which includes adolescents. The study was conducted on 15–15 April 2016.

Study design and population

A descriptive school-based cross-sectional study was employed among school adolescents (15–19 years old) in Mettu town, South West Ethiopia. The sample size was determined using EpInfo version 7.1.1 with an assumption of 95% confidence level (CI), 5% degree of precision, 50% proportion of the outcome variables, and N=3436 school adolescent 15–19 years of age. After adding a 10% non-response rate, the final sample size was 380.

Ethical considerations

Ethical clearance and approval were obtained from the research and community service directorate of Jimma University. Then, the letter was given to the district education office and the school offices as well. In line with this, a consent form was given for participants whose ages were below 18 years old so that their parents sign-on and brought it on the date of data collection.

Inclusion and exclusion criteria. All school adolescents aged 15–19 years old were included, and those adolescents who were sick and unable to tolerate to fill the questionnaire were excluded.

Sampling techniques. A list of students from the register of students aged 15–19 years of age in 9th–12th grade was used and computer-generated random numbers run to get study participants.

Data collection methods

Quantitative data were collected using a structured and semi-structured questionnaire that is adapted from different works of literature. Because of the sensitive nature of the issues under study, a self-administered questionnaire was preferred to minimize bias and distortion that often resulted from the use of face-to-face interviews. The main contents of the tool include sociodemographic characteristics, life skills, and practice assessment questionnaires on the sexual behaviors of adolescents in such a sequence.
Measurement

Life skills. Three dimensions of life skills according to WHO based on 10 core life skills were used to assess life skills: (1) social skills, which refers to the measure of the cumulative level of the social, interpersonal relationships and empathy life skills; (2) cognitive skills refers to the measure of the cumulative level of decision-making, problem-solving, self-awareness, critical thinking, and creative thinking life skills; (3) emotional coping skills refers to the measure of the cumulative level of coping with emotional and coping with stress life skills.

The life skills of adolescents were measured by a 5-point Likert-type scale ranging from “strongly disagree = 0” to “strongly agree = 5.” Score having average and above categorized as a favorable life skill and unfavorable otherwise.13

Risky sexual behavior. Five questions were asked to assess risky sexual behaviors. These were (1) having more than one sexual partner (multiple sexual partners), (2) inconsistent condom use (if sexual intercourse is out of marriage), (3) involved in casual sex, (4) early sexual initiation and/or marriage before 18 years, and (5) performing sexual intercourse (other than in marriage) enforced by the use of any psychoactive substances like alcohol, khat, and shisha. Finally, the responses were dichotomized as adolescents who have risky sexual behavior (coded as = 1) if they practiced at least one of the above-listed problems, and no risky sexual behavior (coded as = 0) otherwise.15

Data management and quality

The English version of the questionnaire was translated into Afaan Oromo and then translated back to English for consistency. Because of the sensitive nature of the issues under study, a self-administered questionnaire was preferred to minimize bias and distortion that often resulted from the use of face-to-face interviews. Four high school teachers (BSc holders) were recruited from schools and the data were not collected. One-day training was given for data collectors and supervisors. Pre-testing was conducted on 20 (5%) school adolescent students in Gore High School. Cronbach’s alpha 0.7 was taken for each dimension of the questionnaire to declare internal consistency. The data were checked daily for any missing pieces of information and inappropriate response. Then it was cleaned and entered into Epi Data version 4.1 and analyzed using SPSS version 20 for analysis.

Statistical analysis

Summary statistics of mean and percentages were used to describe the study population. Bivariate logistic regression was run for all independent variables to assess the association between the study outcomes and the independent variable. Then, multivariable logistic models were fitted to identify significant factors. Variables with p-value < 0.25 at bivariate regression were included for the multivariable regression model, association with the outcome where. The strength of the association between an outcome variable and the independent variable was reported using adjusted odds ratios (aORs) and the presence of statistically significant association was declared at a p-value less than 0.05.

Result

Sociodemographic characteristics

A total of 372 adolescents responded to the study, yielding a response rate of 97.8%. The mean (± SD) age of the respondents was 16.48 (± 1.073 SD) years, and the median age was 16 years old. As Table 1 shows, 78.5% of the women were Oromo by ethnicity. The religion of 37.9% of respondents was orthodox, followed by 34.7% protestant and 27.4% Muslims. The majority of the respondents (81.5%) were urban dwellers living with their parents and in rental houses, respectively, and the rest (9.1%) were from the nearby rural areas (Table 1).

Level of life skills of adolescents. A majority of the adolescents (81.2%, 74.5%, and 86.3%) have favorable social, cognitive, and coping with emotional life skills, respectively (Figure 1).

Sexual behavior of adolescents. From a total of 372 respondents, about 24.5% of them have had sexual experience, with the mean age of sexual initiation 16.54 years. Of these 31.9% of them had two or more sexual partners, and 68.1% of them had started sex and/or married before they reach 18 years of age, of which 37.1% were male and 62.9% female (Figure 2).

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Bivariate analysis reveals being 17 and 18 years as compared to 15 years old, being female, being grade 12 as compared to grade 9 educational status, being in the urban rental house as compared with those living with their family, having unfavorable life skill, and use of psychoactive substance were found to be statistically significant (see Table 2).

In the multivariate logistic regression after adjusting for potential confounders, being female, being grade 12 as compared to grade 9 and 11 educational status, being in the urban rental house as compared with those living with their family, having unfavorable life skill, and use of psychoactive substance were found to be significant predictors of risky sexual behavior (see Table 2).

A statistically significant difference was seen by life skills even after controlling for the other variables. Having unfavorable social life skill was more than three times more...
likely (AOR = 3.717; 95% CI = 1.648, 8.385), unfavorable coping with emotional skill was about three times more likely (AOR = 3.114; 95% CI = 1.286, 7.542), and unfavorable cognitive life skill was more than twice more likely (AOR = 2.835; 95% CI = 1.288, 6.239) to experience risky sexual behavior (see Table 2).

### Table 1. Sociodemographic characteristics of study participants, Mettu High Schools, April 2016.

| Components of adolescents’ sociodemographic characteristics | Number (n = 372) | Percent (%) |
|-------------------------------------------------------------|-----------------|-------------|
| Educational status                                          |                 |             |
| Grade 9                                                     | 157             | 42.2        |
| Grade 10                                                    | 133             | 35.8        |
| Grade 11                                                    | 48              | 12.9        |
| Grade 12                                                    | 34              | 9.1         |
| Sex                                                         |                 |             |
| Male                                                        | 180             | 48.2        |
| Female                                                      | 192             | 51.6        |
| Age                                                         |                 |             |
| 15                                                          | 67              | 18.0        |
| 16                                                          | 143             | 38.4        |
| 17                                                          | 96              | 25.8        |
| 18                                                          | 49              | 13.2        |
| 19                                                          | 17              | 4.6         |
| Ethnicity                                                   |                 |             |
| Oromo                                                       | 292             | 78.5        |
| Amhara                                                      | 45              | 12.1        |
| Gurage                                                      | 25              | 6.7         |
| Others                                                      | 10              | 2.7         |
| Religion                                                    |                 |             |
| Orthodox                                                   | 141             | 37.9        |
| Protestant                                                  | 129             | 34.7        |
| Muslim                                                     | 102             | 27.4        |
| Residence                                                   |                 |             |
| Urban (with families)                                       | 303             | 81.5        |
| Urban (live in rented house)                                | 35              | 9.4         |
| Rural                                                       | 34              | 9.1         |
| Marital status                                              |                 |             |
| Unmarried                                                   | 358             | 96.2        |
| Married                                                     | 14              | 3.8         |

**Discussion**

This study indicated a clear association between Ethiopian adolescents’ life skills and their sexual behavior. It revealed that from a total of 372 respondents, 91 (24.5%) of them ever had sexual intercourse. This finding is nearly similar to findings of a research conducted among students of Jimma University, Agaro high school students, and adolescents in Addis Ababa in which 26.9%, 25%, and 24.6% of students ever had sexual experience, respectively.9,15,16 Unlike the above two research findings, another study conducted among school students in Boditti town (Southern Ethiopia), 29.1% of school adolescents reported having had sexual intercourse which was slightly higher than the finding of this research.17 This may be due to the KAP difference in study participants, time (year) of study, and availability and accessibility of adolescent and youth reproductive health (AYSRH) services in the study areas.

This study indicates that there were 29 (31.8%) of the respondents who replied that they have had multiple sexual partners, which is nearly similar to findings from West Gojam Zone, that is, 23 (33.3%).18 And the finding of this study was much less than the finding from Agaro high school, and the result of BSS II conducted in all regions of the country in which 40 (44.4%) and 48.2% of ISY was reported that they ever had two or more sexual partners. On the contrary, the finding of this study was found to be higher than that of Assendabo school adolescents which revealed that among sexually experienced youth 81 (21.8%) of them had sex with more than one sexual partner in their lifetime.16,19,20 This difference may be due to individual differences associated with economic, educational level, family condition, residence, and other multiple factors.

The mean age at first sexual intercourse of this study is 16.18 with SD of ±0.914 years which is nearly similar to studies conducted at Jimma University, Western Oromia, and Agaro high school findings, that is, 17.7 (∓2.7), 14.5 (1.6), and 16.45 years, respectively.15,16,21 This showed that there was no significant change between university and high school students and most of them started sexual intercourse around the age of 15. In line with this, age at sexual debut mentioned ranged from 10 to 18 years of age, and finding of Ethiopian Demographic and Health Survey (EDHS) 2011 revealed that 29% of women had first sexual intercourse before age 15 years.20,22

The result of this study revealed that 42 (46.2%) of them used condoms consistently and 49 (53.8%) of adolescents among those who ever had sexual experience reported that they had used condoms occasionally or never used at all. Unlike the findings on adolescents who ever had sexual intercourse, the finding of this study on consistent use of condom which is 42 (46.2%) was higher than the finding of Western Oromia which was 58 (29.0%)
with a slight difference across districts: Walisso (32.7%), Gechi (26.9%), Jibat (22.2%), and Manna (36.0%). It also exceeds the finding of Agaro high school students in which 46.9% of the students who ever had sexual experience reported that they were using condoms always and 19 (38.8%) of them used occasionally. To the opposite, finding of this study is much less than that of Jimma University students which revealed condom use for the recent sexual contact in last 12 months among 80% of those who had sexual intercourse and again slightly lower

Figure 2. The proportion of adolescents ever involved in risky sexual behaviors, Mettu Town, South West Ethiopia.

Table 2. Bivariable and multivariable analysis results of life skills and its association with sexual behaviors among Mettu High School Adolescents, South West Ethiopia.

| Variables                      | Risky sexual behavior | Crude OR with 95% CI | Adjusted OR with 95% CI |
|--------------------------------|-----------------------|----------------------|-------------------------|
|                                | Yes (n = 71)          | No (n = 301)         |                         |
| Age                            |                       |                      |                         |
| 15                             | 5                     | 62                   | 1.00†                   | 1.00†                    |
| 16                             | 21                    | 122                  | 2.134 [0.768, 5.932]    | 2.475 [0.20, 30.14]      |
| 17                             | 26                    | 70                   | 4.606 [1.667, 12.725]   | 1.221 [0.12, 12.01]      |
| 18                             | 18                    | 31                   | 7.200 [2.444, 21.213]   | 1.610 [0.16, 15.54]      |
| 19                             | 1                     | 16                   | 0.775 [0.084, 7.109]    | 3.496 [0.37, 32.33]      |
| Sex                            |                       |                      |                         |
| Female                         | 51                    | 141                  | 1.00†                   | 1.00†                    |
| Male                           | 20                    | 160                  | 0.346 [0.197, 0.608]*   | 0.38 [0.16, 0.92]*       |
| Educational status             |                       |                      |                         |
| Grade 9                        | 4                     | 153                  | 0.037 [0.011, 0.125]*   | 0.03 [0.01, 0.16]*       |
| Grade 10                       | 42                    | 91                   | 0.659 [0.304, 1.431]    | 0.55 [0.18, 1.63]        |
| Grade 11                       | 11                    | 37                   | 0.425 [0.163, 1.108]    | 0.22 [0.063, 0.81]*      |
| Grade 12                       | 14                    | 20                   | 1.00†                   | 1.00†                    |
| Residence                      |                       |                      |                         |
| Urban (live with families)     | 44                    | 259                  | 1.00†                   | 1.00†                    |
| Rural                          | 8                     | 27                   | 1.744 [0.745, 4.086]    | 0.74 [0.25, 2.15]        |
| Urban (live in rented house)   | 19                    | 15                   | 7.456 [3.527, 15.763]   | 4.05 [1.59, 10.33]*      |
| Life skill                     |                       |                      |                         |
| Unfavorable social skill       | 27                    | 43                   | 3.682 [2.066, 6.561]*   | 3.71 [1.64, 8.38]*       |
| Unfavorable coping with emotional skill | 17             | 34                   | 2.472 [1.289, 4.743]*   | 3.11 [1.28, 7.54]*       |
| Unfavorable cognitive life skill | 26                | 69                   | 1.943 [1.118, 3.376]    | 2.835 [1.288, 6.239]*    |
| Ever used psychoactive substance | Yes            | 17                   | 19                     | 4.673 [2.283, 9.563]*    | 6.731 [2.279, 19.874]*   |
| No                             | 54                    | 282                  | 1.00†                   | 1.00†                    |

OR: odds ratio; CI: confidence interval.
*Significant at p-value < 0.05, 1.00† Reference category.
than the finding of EDHS (2011) in which 47% and 62% of male and female youth had sexual intercourse, respectively.15,23 This difference is due to individual differences and lack of adequate, accessible, and appropriate youth-friendly SRH services in the study areas.

The study also showed that there was a difference in adolescents with favorable and unfavorable life skills with exposure to risky sexual behavior. For instance, adolescents with unfavorable (social, cognitive, and coping with emotional) life skills were about 3.7, 2.8, and 3 times more involved in risky sexual behavior than those with a favorable life skill. According to a survey conducted by ODA and Packard Foundation in collaboration with Jimma University in November 2014 to assess the SRH services utilization and social empowerment of young people in four districts ( Mana, Gechi, Jibat, and Woliso) of Western Oromia region, 200 (15.8%) of the participants ever had sexual intercourse.21 The findings of this study and that of Jimma University and Agaro high school were about twice larger than the findings of western Oromia which may show AYSRH services, incorporating life skill training were implemented in these areas resulting in such a significant difference. This implies to promote essential behaviors like effective communication, rational decision, conflict resolution and sociability, and preventing high-risk behaviors, such as unsafe sex, and substance use specific skill areas such as assertiveness and decision-making skills are effective.

For instance, hostile or antisocial behaviors will be prevented through good communication skills, prevention of unwanted pregnancy by rational decision-making, and substance use by using refusal skills.12 In line with this, another study conducted to assess determinants of sexual behaviors among adolescents in Addis Ababa (the role of individual, familial, and neighborhood) characteristics also revealed that adolescents who demonstrated high self-esteem were fewer substance users than those who demonstrated low self-esteem.9 Concerning the use of psychoactive substances, adolescents ever used psychoactive substances were nearly seven times more involved in practicing risky sexual behaviors than nonusers. This showed that it was more than a fold of the finding of the study at Jimma University which revealed that substance user adolescents were about three times more likely to ever have sexual intercourse as compared to nonusers.15 Ever use of drugs was reported by 7.9% of ISY and the effect of regular alcohol and khat use on sexual behavior; 44% of respondents among the youth who reported having had risky sex in the past 12 months used alcohol and khat regularly.20 Similarly, seven sexually active students (9.9%) reported that they had consumed khat and/or alcohol at sexual debut.18 This difference may arise from personal differences in knowledge, educational status, the timing of the study, and other environmental and socio-cultural factors.

Strengths and limitations of the study

This is a very unique population that makes this study so interesting. However, this study is likely not generalizable. Possibly other similarly situated communities within Ethiopia could apply these findings.

Conclusion

More than a quarter of adolescents have had unfavorable cognitive life skills that embrace (decision making and problem-solving, self-awareness, critical thinking, and creative thinking skills) the most important life skills which believed to help these people in resolving risky sexual behaviors. Hence, adolescents with unfavorable (cognitive and coping with emotional) life skills were nearly threefold higher in practicing problematic sexual behaviors than those adolescents with favorable life skills.

Developing life skills helps adolescents make more reasoned and intentional choices sexually, which will result in fewer unwanted pregnancies, less sexually transmitted diseases, and stronger relationships. This will enable adolescents to practice healthy behaviors, free from psychoactive substance use, and make them think globally for the development of one’s country.

Author contributions

D.T. made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data. M.T. involved analysis and interpretation of data. A.T. has been involved in drafting the manuscript or revising it critically for important intellectual content. All authors contributed to data analysis, drafting and revising of the article, gave final approval of the version to be published, and agreed to be accountable for all aspects of the work.

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The necessary permission to use adapted questionnaires/scales was obtained from the correspondences.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical approval and consent to participate

Verbal informed consent from the participants was acceptable and approved by the Jimma University Health Institutional Review Board (IRB). A parent or legal guardian provided written informed consent for the minors to participate in this study, as per the Ethiopian National Research Ethics Review Guideline. Then, the letter was given to the district education office and the school offices as well. In addition, letter of permission to carry out the study was obtained from each administrative body. Purpose of the study was explained for each participant before the interview and informed verbal consent was taken. The respondents were informed that the data collectors were trained only to collect information, but apart from this particular research, the data were not being passed...
to anybody. Privacy of the respondents was maintained and confidentiality of the information was respected (personal identification and idea was not being used in the way which might threat the respondent). Ethical approval for this study was obtained from JIMMA UNIVERSITY INSTITUTIONAL REVIEW BOARD (RPGe/164/2016).

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**Informed consent**

Verbal informed consent was obtained from all subjects before the study, and written informed consent was obtained from legally authorized representatives before the study.

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**Availability of data and materials**

The data sets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

**Supplemental material**

Supplemental material for this article is available online.

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