

Research Article

Disparities in Sexual and Reproductive Health Service Utilization and Associated Factors among Adolescents with and without Disability in Southern Ethiopia

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Background. 1 in 4 people in Ethiopia are adolescents, and around 1% of them are affected by one form of disability. However, there is little knowledge about factors affecting sexual and reproductive health service utilization to the adolescent with or without disabilities. This study aimed to assess the disparities of sexual and reproductive health (SRH) service utilization and factor associated among adolescents with or without disabilities in southern Ethiopia. **Methods.** Institutional-based cross-sectional study was conducted among 422 adolescents (211 with disabilities and 211 without disabilities). Multistage sampling was conducted. Data were collected by four diploma health workers, and one of the data collectors could communicate with sign languages. Multivariable logistic regression was used to identify sociodemographic factors associated with outcome variables. **Result.** The SRH utilization among students with and without disabilities was 40.52% and 69.1%, respectively. Having an open discussion with peers (AOR = 2.5; 95% CI: 1.60–3.94), having good knowledge (AOR = 1.9; 95% CI: 1.21–3.09), and participating in a school club (AOR = 1.9; 95% CI: 1.19–3.19) were factors positively associated with SRH services utilization. **Conclusion.** The overall SRH utilization was found to be low for students both with and without disabilities. Variables like having good knowledge, ever having discussions on SRH issues with peers, and participating in school clubs were found to be significantly associated. Therefore, governmental and NGOs should strengthen their SRH friendly service with a special focus on peer discussion and awareness creations.

1. Introduction

Adolescence is defined by the World Health Organization as ages 10 to 19 which is around 1.2 billion people, comprising 16% of the world population. Out of this global estimate, there are about 150 million adolescent people with disabilities and 80% live in developing countries, where the majority of human rights abuse occurs [1, 2]. Adolescence is not only the change in body size and shape but also vulnerability to human rights abuse specifically, sexual abuse, and early marriage which leads to bearing children [3]. Pregnancy and bearing children among adolescent have serious consequences in their social, economic, educational, and health outcome. It also results in unintended pregnancy and unsafe abortion. They result also in poor schooling, quit school, marital disruption, and low earning [4].

WHO supposes that, every year, approximately 21 million girls from 15 to 19 years and 2 million girls aged below 15 years become pregnant in developing countries, with an estimated 12 million girls between ages 15 and 19 years and 777,000 million girls below the age 16 years giving birth [5]. Also, WHO estimated about 10 million unintended pregnancies and 5.6 million abortions among adolescent girls aged 15–19; from this, 3.6 million were unsafe, and 800,000 young people are affected with HIV/AIDS in developing regions [6].

The existing health facilities, educational segments, and other social programs largely ignored adolescents' reproductive health needs [7]. These problems are more severe in developing countries and sub-Saharan African regions like Ethiopia, where minimum Initial Service Package for SRH in crisis and adolescent-friendly SRH services are limited in humanitarian [8].

Ethiopia is characterized by rapid population growth and the second most populous in Africa in which most of the population is under 25 years. At current fertility levels, an Ethiopian woman will have an average of about 4.1 children by the end of her reproductive years. To reduce this high fertility rate, Ethiopia has put a goal to increase the CPR to 55 percent, reduce the total fertility rate (TFR) to 3, and reach an additional 6.2 million women and adolescents with FP services by 2020 [9]. However, still the sexual and reproductive health service for the adolescent, HIV/AIDS positive women, a street person, and people with disability is low.

Different studies addressed factors associated with sexual and reproductive health utilization; sex, knowledge, age, age at marriage, education, discussion with peers and health care provider, and occupation of parent were considered as common predictors to the utilization of SRH in Ethiopia [10–13]. The systemic reviews on sexual and reproductive service use in Ethiopia finding stated also that education level, discussion with parent, and school adolescents were determinants of sexual and reproductive health service utilization in Ethiopia [14].

About one in four people is an adolescent in Ethiopia. However, few adolescents have access to SRH services; the problem is more severe in adolescents with disabilities. A study done in Addis Ababa public university showed that SRH use among adolescent with disabilities was only 40.1% less by 20% from without disabilities [15].

In Ethiopia, to the best of our knowledge, there is limited comparative study conducted on SRH service utilization among adolescent with or without disabilities. Therefore, this study compares the magnitude of SRH service utilization and factor associated among adolescent with or without disabilities in southern Ethiopia.

2. Methods

2.1. Study Design and Setting. An institutional-based comparative cross-sectional study was conducted from 6 February to 19 March 2019/2020 among Arba Minch Secondary and Special Need School Adolescents in southern Ethiopia. According to the latest national population projection based on the population and housing census, the total population of the town is about 103,965 people. In the town, there is one special need school, six high schools, and two preparatory schools. All secondary and special needs school adolescent students enrolled in the year 2019/2020 in the town were the source population and randomly selected adolescent students in all secondary and special need schools were the study population.

2.2. Sample Size Determination. The sample size of this study was determined with the assumptions of 50% for prevalence of sexual and reproductive health service utilization among adolescent without disabilities (no study in the same topic) and the difference is 20% between adolescent with and without disabilities and prevalence of sexual and reproductive health utilization among adolescent with disabilities

($P_2 = 30\%$), of 95% confidence level, power of 80, marginal error 5%, and the unsure ratio of exposed to unexposed 1. Therefore, the final required sample size was 454 (227 non-disabled adolescent students and 227 disabled adolescent students) with design effect two and 10% nonresponse rate enrolled in the study.

Regarding sampling technique, multistage sampling was used to select a representative sample. First, four schools (one preparatory, two high schools, and one special need school) were selected randomly. Next, proportionally the required sample sizes were allocated independently for each of disabled and non-disabled adolescent students based on the total number of students in each school. Then, the number of students required to be enrolled was allocated proportionally based on grade level. Finally, study participants were selected by simple random sampling technique (Random Number Generator) using a list of the students as a sampling frame.

2.3. Study Variable. The dependent variable of this study was SRH services utilization. Independent variables were sociodemographic factors like sex, age, marital status, religion, and ethnicity, father's educational status, mother's education status, occupation of father, mother educational status, and HH income. Individual factors also include knowledge, attitude, discussion of SRH issues with partner and peers, participating in a school club, ever had sexual intercourse, and perception towards HIV/AIDS.

2.4. Operational Definition

Adolescent: in this study, adolescent stands for boys and girls between the ages of 15–19 years. The dependent variable (SRH services utilization) was determined by asking the participant one or more components of SRH for the last 12 months, considered as service utilization.

Knowledge of SRH: the knowledge was assessed by 8 items on knowledge of SRH service components and the respondent who scored above the mean had good knowledge and below the mean had poor knowledge [16].

Attitude of SRH (favorable attitude): those respondents who scored the mean and above were considered favorable attitude; on the other hand, those respondents who scored below the mean were considered as unfavorable attitude [16].

Students with disability: those students who have impairment which interaction with various barriers may hinder their full and effective participation in the society on equal bases with others (including visual impairment, hearing impairment, and physical disability).

Sexually active women: women who were sexually active within the last 30 days.

2.5. Data Collection Tools and Procedures. The data collection instrument was a self-administered questionnaire developed after reviewing previous publications from similar or related literatures. The questionnaire was prepared in English and

translated to Amharic and back to English to check for consistency.

Data were collected by four diploma health workers and two bachelor holder supervisors. One of the data collectors could communicate with sign languages. The interviewer-administered questioner was used for data collection.

2.6. Statistical Analysis. All field questionnaires were checked for completeness, consistency, and accuracy; then the data were entered into Epi data and analyzed by Statistical Package of Social Science (SPSS) version 22. Bivariate analysis with a crude OR (COR) of 95% CI was used to assess the degree of association between each independent variable and the outcome variable by using binary logistic regression. Independent variables with a *P* value of ≤ 0.25 were included in the multivariable analysis to control confounding factors. Variables with a VIF of >10 and a SE of >2 were dropped from the multivariable model. The fitness of the model was checked by the Hosmer–Lemeshow goodness of fit test not statistically significant *P* value 0.721. Crude and adjusted odds ratios along with a 95% of confidence interval were used to identify factors associated with the outcome variable.

3. Results

3.1. Sociodemographic Characteristics of the Respondents. A total of four hundred twenty-two adolescents (211 disabled and 211 nondisabled) have participated with a response rate of 95.5%. Out of 211 disabled adolescent respondents, almost half (52.1%) were male and 47.9% were female. Among nonadolescent students, 51.2% were male and 48.8% were female. The mean age of adolescents was 17.39 (SD \pm 1.3) years. One hundred sixty (75.8%) disabled adolescent students and one hundred forty-nine (70.6%) nondisabled adolescents were protestant Christian followers. Based on their ethnic group, Gamo consisted of 340 (80.6%) and majority of the disabled adolescent (89.1%) and nondisabled adolescents (78.2%) were unmarried.

In terms of the educational status of parents of adolescents with disabilities, 105 (49.8%) mothers and 98 (46.4%) fathers had no formal education. Around 180 (85.3%) and 176 (82.9%) adolescents without disability father and mother were employed, respectively. About 245 (58.05%) of the respondents had low household monthly income, 161 (38.1%) had moderate household monthly income, while 11 (2.6%) were categorized as having a high household monthly income (Table 1).

3.2. Respondents’ Individual Attribute Related to Sexuality and Reproductive Health. To assess their knowledge about SRH, 152 (72%) adolescents with disabilities and 147 (69.7%) adolescents without disabilities had poor knowledge. There were 97 (46%) adolescents with disabilities who had begun sexual intercourse, compared to 159 (75.4%) adolescents without disabilities. Those students with disabilities who had ever discussed with peers were 194 (91.9%) and students without disabilities who had ever discussed RH issues with their

TABLE 1: Frequency distribution of adolescents by their background characteristics in Arba Minch town school, 2019/2020.

Variable	Adolescent with disabilities		Adolescent without disabilities	
	Frequency	%	Frequency	%
Sex				
Male	110	52.1	108	51.2
Female	101	47.9	103	48.8
Age				
15–17	85	40.3	147	67.3
18–19	126	59.7	69	32.3
Mother education				
No education	98	46.4	105	49.8
Primary	76	36	60	28.4
Secondary	27	12.8	41	19.4
Higher education and above	10	4.7	5	2.4
Father education				
No education	105	49.8	72	34.1
Primary	43	20.4	36	17.1
Secondary	41	19.4	72	34.1
Higher education and above	23	10.4	31	14.7
Ethnicity				
Gamo	165	78.2	175	82.9
Gofa	35	16.6	27	12.8
Others	11	5.2	9	4.3
Occupation of father				
Employed	184	87.2	180	85.3
Daily laborer	13	6.2	12	5.7
Unemployed	7	3.3	14	6.6
Others	7	3.3	5	2.4
Occupation of mother				
Employed	178	84.4	176	83.4
House wife	14	6.6	16	7.6
Unemployed	12	5.7	16	7.6
Others	7	3.3	3	1.4
Religion				
Protestant	160	75.8	149	70.6
Orthodox	48	22.7	54	25.6
Other	3	1.5	8	3.8
HH monthly income in birr				
Low (<2000)	121	57.3	124	58.8
Moderate (2000–5000)	81	38.4	80	37.9
High (>5000)	9	4.3	7	3.3
Marital status				
Currently married	23	10.9	46	21.8
Currently unmarried	188	89.1	165	78.2

parent were 136 (64.5%). The media exposures for students with disabilities in the last 12 months were 87 (41.2%) and those adolescents without disabilities were 105 (49.2%) (Table 2).

3.3. Sexual and Reproductive Health Services Utilization. Sexual and reproductive health services utilization in adolescents with and without disabilities were 32.2% [95% CI (26–39)] and 51.7% [95% CI (45.0–58.0)], respectively. The

TABLE 2: Frequency distribution of adolescents by their individual-level characteristics in Arba Minch town school, 2019/2020.

Variable	Adolescent with disabilities		Adolescent without disabilities	
	Frequency	%	Frequency	%
Knowledge about SRH				
Good	59	28	64	30.3
Poor	152	72	147	69.7
Ever had sexual intercourse				
Yes	97	46	159	75.4
No	114	54	52	24.6
Currently sexuality active				
Yes	84	39.8	86	40.8
No	127	60.2	125	59.2
Discuss SRH issues with peer in the past 12 months				
Yes	194	91.9	204	96.7
No	17	8.1	7	3.3
Discuss SRH issues with health worker in the past 12 months				
Yes	39	18.5	88	41.7
No	172	81.5	123	58.3
Discuss SRH issues with partner in the past 12 months				
Yes	129	61.1	136	64.5
No	82	38.9	75	35.5
Participate in school SRH club				
Yes	27	12.8	27	12.8
No	184	87.2	184	87.2
Perception of risk towards HIV/AIDS				
Yes	38	18	37	17.5
No	173	82	174	82.5
Exposure to mass-media on SRH issues in the past 12 months				
Yes	87	41.2	105	49.2
No	124	58.8	106	50.2
Attitude towards SRH				
Favorable	78	37	94	55.5
Unfavorable	133	63	117	44.5

overall sexual and reproductive service utilization was below half (42%), whereas 58% of the respondents were SRH nonuser. The most common service utilized by adolescents was receiving voluntary counseling and testing for HIV followed by getting information, education, and counseling in SRH (Figure 1).

3.4. Factors Affecting the SRH Utilization among Adolescent Students with or without Disabilities

3.4.1. Factors Associated with SRH Utilization among Adolescent Students with Disabilities. Bivariate analysis was conducted and six variables were associated with sexual and reproductive health service utilization among adolescents with disabilities. In multivariable analysis, three of them were found to be significantly associated. An adolescent with disabilities who had discussed SRH issue with their peers was 2.2 times more likely to use SRH service as compared to those who had not discussed (AOR = 2.2, 95% CI: 1.18–4.06), an adolescent with a disability who discussed with a health worker in the last 12 months was 2.3 times more likely to use SRH service than the counterpart (AOR = 2.3, 95% CI: 1.11–4.96), and knowledgeable adolescent with a disability

was almost two times more likely to use SRH service than poor knowledge (AOR = 2.06, 95% CI: 1.04–4.07).

3.4.2. Factors Associated with SRH Utilization among Adolescent Students without Disabilities. Once the binary logistic regression analysis was made, those seven variable (P values < 0.25) were further put into the multiple logistic regression analysis. In multivariable analysis, two of them were found to be significantly associated. Adolescent without disability who had to participate in school club was 1.9 times more likely to use SRH service as compared to those who had not participated (AOR = 3.06, 95% CI: 1.56–6.01), and adolescent without disabilities who had to discuss with their peers about SRH issue was three times more likely to use SRH service than counterpart (AOR = 3.06, 95% CI: 1.06–3.43).

3.4.3. Overall Factors Associated with the SRH Utilization among Adolescent Students with or without Disabilities. This study showed the adolescent students who discussed SRH issues with peers were 2.5 (AOR = 2.5; 95% CI: 1.60–3.94) times more likely to use SRH service as compared

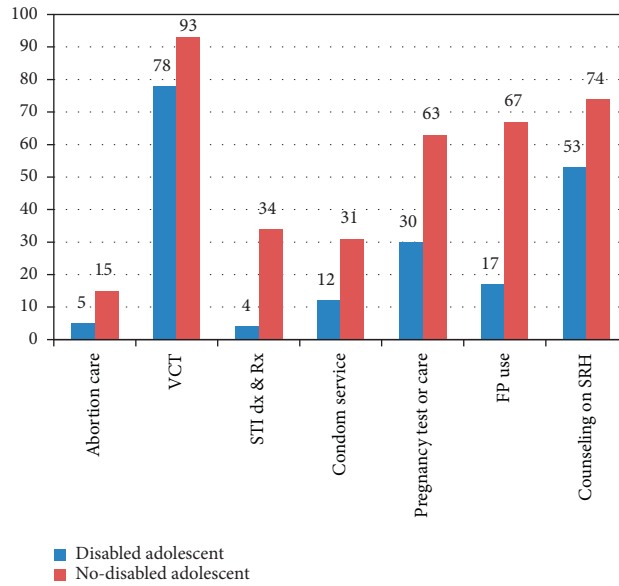


FIGURE 1: Magnitude of sexual and reproductive health service utilization by component among adolescents with or without disability in Arba Minch town school, 2019/2020.

to those who did not discuss. The study also indicated that a participant having good knowledge was almost two (AOR = 1.9; 95%CI: 1.19–3.19) times more likely to use SRH service than that with poor knowledge. Similarly, respondents who participated in the school club (AOR = 1.9; 95% CI: 1.19–3.19) were 1.9 more likely to use SRH than the counterpart (Table 3).

4. Discussion

This study assesses the magnitude of SRH service utilization and associated factors among secondary and special need school adolescent students with and without disabilities in Arba Minch town. Accordingly, the overall prevalence of SRH utilization was 41.9% (37–47). The specific prevalence SRH service utilization was 109 (51.7%) among adolescents without disabilities and 68 (32.2%) among with disabilities which shows there was a significant difference in the prevalence of SRH utilization between adolescents with and without disabilities. The possible explanation for this variation may be that adolescents with disabilities have inadequate access to health information and service and inequitable social norms that lead to lack of knowledge and awareness about puberty, sexuality, and human rights.

The overall prevalence of SRH utilization in this study was comparable with the findings from studies conducted in the Hadyia zone (38.5%) [17], Goba town (37.2%) [18], Addis Ababa (40%) [19], Jima (41%) [20], and 307 (41.2%) for those young people without disabilities SRH utilization in the past six months done in Awabel district of Amhara region in 2016 [21].

The overall prevalence of SRH utilization in this study was slightly lower than studies conducted in Addis Ababa (64.9%), Harar, and Medawalabo [15, 22]. This regional discrepancy might be due to the difference in the study setting, respondent’s level of education, and the age category.

Additionally, this study assesses ever use of SRH unlike one of the studies which assesses only use of SRH months before the study.

The findings of this study showed a better overall SRH utilization among adolescents with or without disabilities as compared to a previous study finding done in Gojjam 31 (21.5%) in Awabel district of Amhara region and Bahir Dar 263 (32.2%) [10, 21, 23]. The disparity may be due to differences in operationalizing SRH use, study population, sampling method, and increased access and awareness of SRH among women with disabilities over the last five years.

This study result shows that the adolescent who discusses the SRH issue with peers had a significant association with the utilization of SRH services. This finding also agreed with the study conducted in Gondar, Awabel district Amhara region, East Gojjam northwest Ethiopia, Goba town, Southeast Ethiopia, and Bahir Dar [21, 24] [10, 18, 23]. This might be due to the fact that those who had a discussion on SRH issues with peers would have a better awareness about RH services and thus would be motivated to use the service. Also, discussion of SRH issues with different peers helps adolescents in exchanging information and practices and assists adolescents in understanding about RH services and uptake of each service. On the other hand, social relations and discussion may also have an impact on young people’s decision-making power.

This study result shows that the overall adolescents who participated in school clubs had a significant association with the utilization of SRH services. This finding was also supported by the study conducted in Adet Tana Haik College students Northwest Ethiopia, Nekemt town, Southern Ethiopia, and Ethiopia [11, 25, 26]. This explains that school clubs allow communicating and sharing ideas, knowledge, and experiences with their friends on sexual and reproductive health issues that affect the utilization of the service.

TABLE 3: Factors associated with sexual and reproductive health service utilization among adolescents in Arba Minch town school, 2019/2020.

Variable	SRH use		OR (95%CI)	AOR (95%CI)	P value
	Yes	No			
Status of the adolescent					
Non-disabled	109	102	2.2 (1.51–3.33)		
Disabled	68	143	1.00	1.25 (0.78–2.01)	0.075
Marital status					
Currently married	22	7	4.8 (2.01–11.56)		
Currently unmarried	155	238	1.00	4.1 (0.87–19.57)	0.07
Father education					
No education	72	105	1.00		
Primary	25	54	0.6 (0.32–1.18)	0.54 (0.18–1.3)	0.68
Secondary	51	62	1.2 (0.76–1.9)	1.13 (0.61–2.09)	0.45
Higher	29	24	1.7 (0.94–3.27)	1.24 (0.74–218)	0.06
Discuss SRH with peers					
Yes	130	120	2.9 (1.98–4.43.)		
No	47	125	1.00	2.5 (1.60–3.94)	0.0001**
Discuss SRH with health worker					
Yes	71	56	2.3 (1.48–3.45)		
No	106	189	1.00	1.15 (0.68–1.97)	0.59
Start sexual intercourse					
Yes	124	132	2 (1.33–3.01)		
No	53	113	1.00	1.53 (0.98–2.39)	0.06
Attitude					
Favorable	80	92	1.3 (0.92–2.06)		
Unfavorable	97	153	1.00	1.04 (0.66–1.63)	0.087
Knowledge					
Good	66	57	1.96 (1.28–3.00)		
Poor	111	188	1.00	1.9 (1.21–3.09)	0.006**
Participate in school SRH club					
Yes	95	23	2.7 (1.62–4.48)	1.9 (1.19–3.19)	
No	184	120	1.00		0.003**

The finding of this study indicated that adolescents having good knowledge were more likely to utilize SRH services than those with poor knowledge. This finding is consistent with the studies conducted in East Gojam, Harar town, Ari district, and North Shewa zone [10, 16, 21, 27, 28]. This can be justified as adolescents with good knowledge had adequate information regarding the consequences of SRH problems.

Finally, this study has some limitations: since the data collection instrument addressed many questions concerning the use of contraceptives and sexual activity with an interviewer-administered questionnaire, visual and hearing impairment respondents may not precisely respond. The study was also institution-based; there is a risk of contamination across observation units. Therefore, to minimize this, data were collected at the same time from the selected schools.

5. Conclusion

The overall SRH utilization was found to be low for students both with and without disabilities. Students with disabilities were again found to have a low level of RHS utilization as compared to students without disabilities. Variables like having good knowledge, ever having a

discussion on SRH issues with peers, and participating in school clubs were found to be significantly associated with SRH use among adolescents with or without disabilities. So, we recommend that each town administration, persons with disability (PWD) organizations, and other governmental and NGOs should strengthen their SRH friendly service with a special focus on peer discussion and awareness creation.

Abbreviations

SRH: Sexual and reproductive health
VCT: Voluntary counseling and testing
WHO: World Health Organization
AOR: Adjusted odds ratio
EDHS: Ethiopian demographic health survey
CI: Confidence interval
COR: Crude odds ratio
FMOH: Federal Ministry of Health.

Data Availability

Full datasets and other materials related to this study could be obtained from the corresponding author upon reasonable request.

Ethical Approval

Letter of ethical clearance was obtained from an institutional review board committee of Arba Minch University College of Medicine and Health Science. Official permission letter was also obtained from Arba Minch town administrations.

Consent

Informed verbal and written consent were obtained from each respondent. Finally, parental informed consent was taken for those aged less than 18 years..

Conflicts of Interest

The author declares that there are no conflicts of interest regarding the publication of this paper.

Authors' Contributions

The author conceived the study, developed the proposal, carried out data collection, conducted the analysis, was involved in reviewing the manuscript, and had full access to all the data in the study and had final responsibility for the decision to submit for publication, also provided general guidance on overall study progress and participated in reviewing the proposal, reviewing the analysis, and participated in the final study document development, and was involved in drafting and reviewing the manuscript.

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Supplementary Materials

Supplementary one: English-version questionnaire used to collect the raw data. (*Supplementary Materials*)

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