

Quality of Youth Friendly Service at Public Health Facilities in Sendafa Town, Oromia Region, Ethiopia: A Facility Based Cross Sectional Study

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Abstract: *Background:* Global initiatives are urging countries to prioritize quality as a way of reinforcing human rights-based approaches to health. Yet, evidence from both high- and low-income countries shows that services for adolescents are highly fragmented, poorly coordinated and uneven in quality. *Objective:* The main aim of the study was to assess quality of youth friendly service at public health facilities in Sendafa town, Oromia Region, Ethiopia. *Methods:* Facility based cross-sectional study design using both qualitative and quantitative data was conducted from April 12 to May 14, 2021 at two public health centers in Sendafa town. Four hundred twenty one (421) samples were included by using a systematic sampling technique. To collect the data interview-administered questionnaire and observation checklist was used. Binary logistic regression model were applied to identify the independent predictors of client satisfaction. Strength of association was measured using adjusted odds ratio (AOR) with 95% confidence interval. Key informant interview and observation were used to collect qualitative data. Qualitative findings were coded and analyzed by using thematic content analysis. *Result:* A total of 421 youth friendly service clients age between 10-24 years were participated in the study. The overall quality of youth friendly services for public health facilities in Sendafa town was 58% which is below the standard of care. Age (15-19) (AOR=0.34, 95% CI: 0.12, 0.97), education below secondary (AOR=0.041, 95% CI: 0.013, 0.134), who do not get all services (AOR=0.02, 95% CI: 0.001, 0.36), current schooling status of in school (AOR=6.7, 95% CI: 2.12, 21.5), experience of youth friendly service visit (AOR=10.86, 95% CI: 4.72, 25.0) and comfortable with age and sex of provider (AOR=9.86, 95% CI: 3.58, 27.12) had statistically significant association with client satisfaction. *Conclusion:* The study shows that, quality of youth friendly service at public health facilities of Sendafa town was poor quality or below the standard of care.

Keywords: Quality of Youth Friendly Service, Satisfaction, Donabedian Model

1. Introduction

According to the World Health organization, Adolescents comprising age groups between 10-19 years, youth as 15-24 and young people are those in age group 10-24 years [1] The young people (10-24) comprise over 1.8 billion of the world's population, with 90% living in developing countries [2]. In Ethiopia there are about 21 million young people aged 10-24 years, which accounts approximately up to 30% of the total population in the country [3]. Young age is a period of transition from childhood to adulthood, and is characterized

by a series of Physiological, Psychological, and social changes that expose them to unhealthy sexual behavior such as early sex experimentation, unsafe sex and multiple sexual partners [4]. Despite being considered a healthy group, young people are at higher risk of sexual and reproductive health (SRH) problems, premature death, illness, and injuries [5]. Such SRH problems include early marriage, teenage pregnancy, unsafe abortion, Gender based violence (GBV), sexually transmitted infections (STIs), HIV/AIDS, and other life threatening SRH problems [6]. Mostly substantial premature death, illness and injury among young population is due to unhealthy behaviors

like Alcohol or tobacco use, lack of physical activity, unprotected sex and or exposure to violence which jeopardize not only their current health, but also their health as adults, and even the health of their future children [7].

Young people require services that support their physiological, cognitive, emotional and social transition in to adulthood [8, 9]. World Health Organization (WHO) promotes Youth Friendly Reproductive Health Services (YFRHS) as strategies for enhancing health services quality for adolescents which aimed at availing “services that are accessible, acceptable, equitable, appropriate and effective for adolescents. In addition they are in the right place, at the right price (free where necessary), and delivered in the right style to be acceptable to young people” [10]. It is a promising approach to deliver health services to meet the SRH needs of Young people [11]. In addition it is highly specialized and a cost effective program that could contribute to better health among young people through reducing SRH problems and increased overall service utilization [12–15].

Currently many countries have different policies and strategies on adolescent and youth health. Countries in Africa, particularly Ethiopia is, dealing with the young people by availing Youth Friendly Sexual and Reproductive Health (YFSRH) services in health facilities [16, 17]. Youth Friendly Service is an approach which brings together the qualities that young people demand, with the high standards that have to be achieved in the best public services. The Ethiopian governments along with international and local Non-Governmental Organizations (NGOs) have made great strides in supporting activities to increase access to SRH services for young people. Over the past decades the government has developed several policies and guidelines to support the implementation of YFS starting from the commencement of the program in Ethiopia, which was 2006. For the effective implementation of the program, standards on YFS, delivery guideline, and minimum service delivery package were developed. The Ethiopian Ministry of Health (MOH) developed nine national adolescent and youth health quality standards includes, adolescent and youth health literacy, Comprehensive package of services, facility characteristics, providers competencies, adolescent and youth participation, community engagement, data and quality improvement, equity and non-discrimination, inter-sectoral collaboration [3, 18]. Currently all young people (age 10-24) are getting services in one room (age driven approach) irrespective of their compliant. YFS includes comprehensive SRH services like information and counseling on SRH issues, family planning information, counseling and methods provision, condom promotion and provision, testing services (pregnancy, HIV), abortion and post abortion care, management of sexually transmitted infections, and other medical conditions with appropriate referral linkage [19, 20].

WHO defines quality of care as, “the extent to which health care service provided to individuals and patient populations improved desired health outcomes, in order to achieve this, health care provided needs to be safe, effective, timely,

efficient, equitable, and people centered” [21].

As per the Donabedian definition of quality, the ultimate goal of quality assessment in health care program is to assess whether a program possesses the right things (input), is doing the right things (processes) and it leads to the right things (outcome) to happen [22].

Global initiatives are urging countries to prioritize quality as a way of reinforcing human rights-based approaches to health. Yet, evidence from both high- and low-income countries shows that services for adolescents are highly fragmented, poorly coordinated and uneven in quality [23]. The concern about adolescent sexual and reproductive health (ASRH) across the globe has grown due to high increase in the rates of sexual activity, early pregnancy and STI including HIV among adolescents [24, 25]. Since the 1994 International Conference on Population Development (ICPD), AYFSRH services have been recognized as an appropriate and effective strategy to address SRH needs of adolescents [26]. Despite compliance of many countries with 1994 ICPD to increase SRH care, however recent assessments show a continued gap between quality of care and international standards [27].

Young people need sexual and reproductive health services but little is known about quality of care in lower- and middle-income countries where most of the world's adolescent reside. Assessing the quality of sexual and reproductive health care is fundamental to understanding how care is being delivered to adolescents, identifying barriers and problems and proposing potential solutions [28].

Health systems globally have to be responsive to the unique demands of young people and focus on improving quality alongside coverage of AYFSRH care services [29]. Delivering quality services that are tailored to young people may improve service use, adherence to contraceptive methods, and increase the likelihood of obtaining ongoing care [30]. But evidence from both high and low income countries shows that young people face many barriers which prevent their use of health services. Similarly young people in Sub-Saharan Africa face plenty of challenges in accessing SRH services that are friendly [30, 31]. Most of the reasons why young people haven't utilized SRH services at YFS corners were distant health facilities, inconvenient service locations, inconvenient hours of operation, unaffordable service cost, long waiting time and poor quality of care evidenced by lack of resources, staff shortages, insufficient diagnostic equipment and drug stock-outs [32, 33].

Although there has been momentum in implementing SRH services in most countries young people typically remain under served by these services despite their demonstrated need [34] and there by suffering from much health and health related problems which is evidenced by, today millions of adolescents face the prospect of early marriage, unwanted pregnancy, early child bearing, incomplete education, gender based violence and the threat of STIs including HIV/AIDS [7]. There is growing evidence that the impact of health intervention is undermined by poor quality of care in lower-income countries. But there is a limited evidence on

quality of youth friendly service (YFS) [35].

In Ethiopia, despite the commitment of the government to improve the provision of SRH services for young people, the utilization of SRH services by young people remains very low. This indicates that the mere existence of youth policies, strategies and youth friendly services does not ensure that young people's health benefits from them. In order to achieve this beneficial effects, such SRH services provided at YFS corners should fulfill certain standards of quality of care for youth friendly services [19].

Quality of care in adolescents has important implications as a lower quality linked to higher unplanned pregnancy and sexually transmitted infection rate [23]. Similarly, quality contraception services reduces unintended pregnancies that would mean averting unplanned births, abortions and maternal death [36].

So far, little is known about the extent of quality of YFSRH services in Ethiopia in general and Oromia region in particular at Sendafa town. The existing literature focuses merely on assessing factors that affect YFSRH service utilization and quality, focusing on specific dimensions.

Therefore, the aim of this study was to assess all dimensions of quality of YFSRH services in public health facilities of Sendafa town by using the Donabedian framework which argued that quality of care can be assessed as a triad of Structure, Process and Outcome (SPO) constructs.

2. Methods

2.1. Study Area

The study was carried out at public health facilities in Sendafa town, which is found in Oromia Special Zone. At 2514 meter elevation above sea level, Sendafa is located 39 km away from Addis Ababa on the way to DebreBerhan town. According to regional population projection 2020 the total populations of the town were 27776 with 13888 male and 13888 female. Estimated number of young people aged 10 to 24 were 9722 of which 4861 were 10 to 19 and 4861 were 15 to 24 with equal proportion of males and females. In the town there is one government primary hospital which started functioning in 2019, two health centers (Sendafa and Walgawo), one health post and 15 Private clinics. The Youth Friendly Health service was given at the two health centers only.

2.2. Study Design and Study Period

A facility based cross-sectional study design using qualitative and quantitative data was conducted in Sendafa town from April 12 to May 14, 2021.

2.3. Source and Study Population

2.3.1. Source Population

All young people between 10 to 24 years who attend youth friendly service, YFS providers and head of health facilities in Sendafa town.

2.3.2. Study Population

Selected young people between 10 to 24 years, who attend youth friendly service during the study period at the public health centers in Sendafa town and the head of health centers (PHCU directors) and Youth friendly service providers.

2.4. Inclusion and Exclusion Criteria

2.4.1. Inclusion Criteria

All young people, who attend YFS during study period at public health facilities in Sendafa town.

2.4.2. Exclusion Criteria

YFS clients with emergency condition, critically ill and adolescents who were under 15 years and come alone to the health facilities were excluded from the study.

2.5. Sample Size and Sampling Procedures

2.5.1. Sample Size

The sample size for the study was calculated using a single population proportion formula, considering the following assumptions. From the previous study done at southern Ethiopia [37] the overall youth client satisfaction to YFS was 49.1%, 95% confidence level, 5% degree of precision, and 10% non-response rate the sample size n will be,

$$n = \frac{(Z \alpha/2)^2 \times p \times (1-p)}{d^2}$$

Where, n = sample size,

Z = the standard normal deviation at 95% confidence interval; = 1.96,

P = proportion of client satisfaction on youth friendly service,

d = margin of error that can be tolerated, 5% (0.05).

Therefore, based on the above single population proportion formula the sample size was calculated as,

$$n = \frac{(Z \alpha/2)^2 \times P \times (1-P)}{d^2}$$

$$n = \frac{(1.96)^2 \times 0.49 \times (1-0.49)}{(0.05)^2}$$

$n=383.25$.

So, the minimum sample size becomes $383.25 \approx 383$, by considering 10% non-response rate, the final sample size becomes 421.

The sample size for the second objective was calculated by using Epi info version 7 software by taking 80% power and 95% confidence interval. Factors affecting YFS clients satisfaction were employment, waiting time and comfortable with providers sex were considered. Therefore, since the calculated sample size for the second objective was lower than the first objective sample, the final sample size for the study is 421.

For the qualitative part in-depth interview was conducted

on two PHCU director and two YFS providers, who were purposively selected and eight client-provider interaction sessions (WHO recommends at least three observations per site) was done.

2.5.2. Sampling Procedure

The study was conducted at the two public health centers in the town (Sendafa and Walgawo health center); those were the only facilities providing youth friendly service currently. A sample was allocated proportionally based on the average monthly YFS attendants of the health centers. Finally, systematic sampling technique was used to select individual

clients. The total monthly YFS attendants of Sendafa town were 680 (Sendafa health center 375 and Walgawo health center 305). The sampling interval was determined to select study participants and was calculated by dividing the average monthly YFS attendants in Sendafa town to the total sample size. Since the monthly average number of YFS attendants in Sendafa town were 680 then $K^{\text{th}} \text{value} = 680/421 = 2$ and the sampling interval value 2 was used. The first study participant was selected by lottery method and then the other study participants from each health facilities were selected based on the interval value (Figure 1).

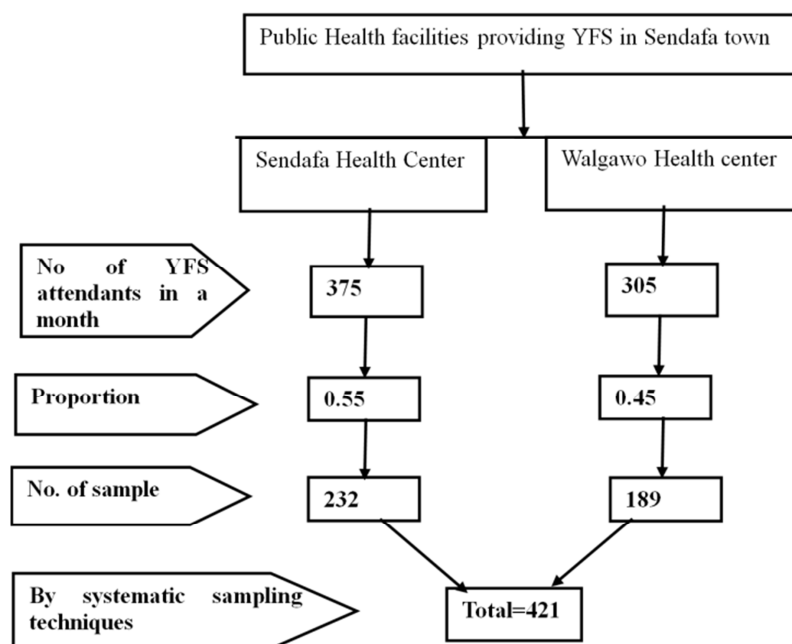


Figure 1. Schematic presentation of sampling procedures among YFS clients in Sendafa town, Oromia region, Ethiopia, 2021.

2.6. Data Collection Method

Quantitative and qualitative data collection methods were used to generate findings from the health facility, YFS providers, head of health centers and youth clients attending the facility for YFS uptake. The quantitative data was collected by using structured client exit interview questionnaires on socio-demographic information, experience of YFS utilization and satisfaction of clients. Qualitative data was collected through an interview guide, facility observation and client-provider interaction score sheets. Generally, structure (Input), Process and Output quality were measured by using 45, 21 and 17 items respectively.

In this study data collection tools adopted from the WHO [23, 41] and national guidelines. All interview and observation tools were first designed in English and then translated to Amharic and Afan Oromo to ease and simplify its utilization during data collection.

The quantitative part of the study data (client exit interview) was collected by two clinical nurses i.e. one at each health center. For the qualitative part primary health care unit director and Service providers interview, client-provider

interaction and facility observations were conducted by one senior Nurse. All data collection process was supervised by one Health Officer. Data collectors including the supervisor were deliberately selected and they were not belonging to the study health centers.

2.7. Study Variables

2.7.1. Dependent Variable

Quality of youth friendly service from outcome dimension (i.e. client satisfaction).

2.7.2. Independent Variable

Socio demographic variables- Age, sex, educational status, religion, ethnicity, occupation.

Structural quality - (facility infrastructure, availability of supplies, drugs, equipment, IEC material, guidelines, separate YFS room and waiting area, trained staff & peer educators, youth involvement in PIE of YFS, Convenient hours and location).

Process quality- (Client-Provider interaction, technical skill, waiting time, privacy & confidentiality, services provided, client experience).

2.8. Operational Definition

Adolescent and Youth Friendly Services: - are services that are accessible, acceptable, and appropriate for adolescents. They are in right place, at the right price (free where necessary) and delivered in the right style to be acceptable to young people. In this paper the term “Adolescent friendly health services and youth friendly health services” was used interchangeably.

Quality of care: is a health care service which fulfills a set of certain standards and assessed as a triad of structure, process, and output dimension.

Good quality or good standard of care: - if the health center scores 75% and above of WHO quality standards by combining the three quality assessment items for structure, process, and output.

Poor or low quality or not good quality or below the standard of care: if the score is below 75% of WHO quality standards by combining the three quality assessment items for structure, process, and output.

Structural or Input quality: The professional and organizational resources associated with provision of health care (availability of adequate service providers, facilities, information, essential drugs, equipment, and basic infrastructure).

Process quality: Things done to and for the client like client-provider interaction including privacy, good communication, education and use of job aids, guidelines, and examination and treatment procedure according to WHO standards.

Outcome quality: is concerned with youth clients satisfaction level towards youth friendly services provided at YFS corners.

Standard of care or service: is a care or services that are delivered in accordance with technical and practical guidelines or protocols set by WHO and MOH.

Satisfaction: is the satisfaction of adolescent and youth clients gained during service uptake.

Level of Satisfaction: is the “proportion of clients who were satisfied with the variables, representing by five-point likert scale, scored on an ordinal scale ranging from, very dissatisfied [1], to very satisfied [5]. For the overall satisfaction level, those who were satisfied in greater or equal to factor mean score of the items 3.65 in this study were categorized as “satisfied” and those who were satisfied in less than factor mean score of the items were categorized as “dissatisfied”.

Percentage of good score: for both structural quality (good score of 38 and 31 out of 45 for Sendafa and Walgawo health center respectively) and process quality (good score of 28 and 19 out of 84 for Sendafa and Walgawo health center), percentage is computed from total number of good score * 100 divided by total number of items for both facilities.

2.9. Data Processing, Analysis and Quality Assurance

2.9.1 Data Processing and Analysis

After the data collection, the quantitative data coding, sorting, and entry was made using Epi-data version 3.1 and then exported to SPSS version 20.0 statistical software for

further analysis. Descriptive statistics was used to describe the study population in relation to relevant variables. Descriptive statistics such as frequency and percentage was computed for categorical variables. Continuous variable was presented as mean \pm standard deviation. Multi-colinearity was tested by variance inflation factor. Model fitness was checked by using Hosmer and Lemeshow goodness of fitness and to check the reliability of the tool crumbach alpha test was done and items had good internal consistency and reliability coefficient of 0.82, 0.93, and 0.75 for input, process and output items respectively. Bivariate and Multivariable model was used to assess any relationship between each independent variables and outcome variables. Crude and adjusted odds ratios were used to ascertain any associations between the dependent and independent variables while significance was determined using 95% confidence intervals. A p-value <0.25 in bivariate analysis were considered to Multivariable logistic regression analysis to see the effect of confounding variable. Variables with P-value <0.05 in Multivariable logistic regression analysis were declared as statistically significant. Qualitative data from key informants was taped, transcribed word by word, similar responses categorized and finally summarized based on thematic area and analyzed by using content analysis and the results were presented in the form of narratives and percentages in the three main parts based on Donabedian quality of care model, the Structure-Process-Output.

2.9.2. Data Quality Assurance

Data was collected by interview administered questionnaire and observation check list that was prepared in English. The English version of the questionnaire was translated first to Afan Oromo and Amharic and back to English, by an individual who has good knowledge on those languages, to assure its consistency. Data collectors were trained for one day on interview and observation procedure and techniques and also on the detail of question contents. Close supervision was made by supervisor and principal investigator on a daily basis to ensure completeness and consistency of each questionnaire and check list. Data entry and cleaning was made carefully to avoid potential errors during analysis. Both client exit interview questionnaire and observation checklist was pretested on 5% of the sample size in nearby town at Legetafo Legedadi health center and was checked for need of any correction.

2.10. Ethical Consideration

Ethical approval was obtained from DebreBerhan University, College of Medicine and Health Sciences, Research Ethics Committee and a letter of permission was obtained from Sendafa town Health Office. The purpose of the study was fully informed and a verbal informed consent was obtained from the study participants. For participants in the study no payment was granted or was not have any special privilege to them. There was no possible risk associated with participating in this study except the time spent for responding to the questionnaire. Name of participants was not written in this form and any information they tell us was not disclosed to third party. Their participation was voluntary and was not

obligate to answer any question they do not wish to answer. If they feel discomfort with the question, it is their right to drop it any time they want.

3. Result

3.1. Socio-demographic Characteristics of the Study Participants

A total of 421 youth friendly service clients age between 10-24 years were participated in the study with a response rate

of 100%. Majority 213 (50.6%) of the respondents belongs to age group between 15-19 years with mean age of 19.37 and SD of ± 3 years and more than half 226 (53.7%) were males. Most of YFS clients 352 (83.6%) were single and Oromo 307 (72.9%) in their ethnicity. Majority of the YFS clients were unemployed 329 (78.1%) and orthodox Christians 286 (67.9%) by religion. Moreover, all of the respondents attend a formal education and 257 (61%) of them were from secondary and preparatory school. Regarding the current schooling status nearly two third 277 (65.8%) of them were in school (Table 1).

Table 1. Socio-demographic characteristics of YFS clients in Sendafa town, Oromia region, Ethiopia, 2021 (N=421).

Variables	Category	Frequency	Percentage (%)
Age	10-14 years	30	7.1
	15-19 years	213	50.6
	20-24 years	178	42.3
Sex	Male	226	53.7
	Female	195	46.3
Educational status	Primary School	153	36.3
	Secondary and preparatory School	257	61
	College and above	11	2.6
Schooling status	In-school	277	65.8
	Out-of-school	144	34.2
Religion	Orthodox	286	67.9
	Protestant	94	22.3
	Muslim	41	9.7
Ethnicity	Oromo	307	72.9
	Amhara	91	21.6
	Tigre	23	5.5
Marital Status	Single	352	83.6
	Married	63	15
	Divorced	6	1.4
Occupational Status	Government employee	7	1.7
	Private Business	70	16.6
	Daily Laborer	15	3.6
	Unemployed	329	78.1

3.2. The Structural Quality of Youth Friendly Health Service

In Sendafa and Walgawo Health center there were about 22 and 17 health care providers respectively. The working days and hours were from Monday to Friday starting from 2:30 to 11:30 local time. At both facilities, youth friendly service was given by trained provider on youth friendly sexual and reproductive health Services. But there was inadequate training and only one trained health worker was assigned at each of YFS provision corner (Table 2).

All facilities have a separate YFS corner and adequate medicines and supplies which enable them to provide YFS for the clients. All minimum service delivery packages of YFS recommended by WHO were provided at both health centers. Despite this, both facilities had experienced shortage and stock-outs of some essential drugs and supplies like HIV test kit, contraceptives and misoprostol in the last 12 months. Sendafa Health center have a separate waiting room for adolescents and youth clients. Walgawo health center have no separate youth waiting area. In youth waiting room there was adequate and comfortable seat and IEC materials specifically developed for young people.

The facilities have basic infrastructures like electricity,

telephone, transportation (ambulance) running water, functional toilet with hand hygiene facilities, and waste disposal site. The facilities have no screen or curtains in examination room, to separate the examination area from the consultation area. A signpost had erected at both of YFS sites but, information on SRH services provided for young people and working days and hours was not indicated on it.

In-contrary to Walgawo health center, Sendafa health center have peer education counseling programs, youth dialogue sessions and peer educators who are actively involved in Planning, Implementation and Evaluation of youth friendly service. But none of the health facilities included youth in their governance structure.

At all facilities there was supportive supervision from the Sendafa town health office and zonal health office, but it was not regular. The feedback from the supervisory visit was given in oral way, most of the time and on supervisory register and written form some times.

The structural quality good score at Sendafa health center was (84.4%) and that of Walgawo health center was (68.8%). The overall percentage of good score of YFS structural quality for public health facilities in Sendafa town was (76.6%).

Table 2. Frequency of health care workers trained on minimum service delivery packages at YFS corner, Sendafa town, Oromia region, Ethiopia, 2021.

Health Facility	No. of health worker	Number of Health worker trained by type of services						
		YFS * N (%)	PMTCT* N (%)	SAC & PAC N (%)	CFP* N (%)	PITC* N (%)	STI* N (%)	LAFP* N (%)
Sendafa	22	2 (9%)	4 (18%)	3 (13.6%)	3 (13.6%)	4 (18%)	4 (18%)	4 (18%)
Walgawo	17	4 (23.5%)	3 (17.6%)	3 (17.6%)	3 (17.6%)	3 (17.6%)	3 (17.6%)	2 (11.7%)
Total	39	6 (15.3%)	7 (17.9%)	6 (15.3%)	6 (15.3%)	7 (17.9%)	7 (17.9%)	6 (15.3%)

*YFS: youth friendly service, PMTCT: prevention of mother to child transmission, SAC & PAC: safe abortion care & post abortion care, CFP: comprehensive family planning, PITC: provider initiated testing and counseling, STI: sexually transmitted infections, LAFP: long acting family planning.

3.3. The Process Quality of Youth Friendly Health Service

The findings from observation of eight client- provider interaction regarding communication identifies that none of YFS providers introduced themselves to client in order to build a good rapport. Only in half 4 (50%) of cases providers asked about Psychosocial history (sexual relationship, about school, smoking, alcohol and other substance use). In 7 (87.5%) of cases the provider listened with attention to what clients had say and provide accurate and precise information on the medical condition, treatment option and risk reduction and prevention in 3 (37.5%), 3 (37.5%) and 2 (25%) of cases respectively.

Vital sign measurement and Physical examination was performed in 1 (12.5%) and 3 (37.5%) of cases respectively. Only in 1 (12.5%) of cases the result of physical examination was explained for the client. In addition, none of the providers

were asked the clients permission before performing physical examination and any procedures.

None of the service providers used audio-visual material, job aids and case management guides to explain anatomy, diseases or others as relevant to the topic of the consultation. The providers provided sufficient time for consultation in 3 (37.5%) of cases. In 4 (50%) of cases providers informed the clients about the services available for them and 2 (25%) cases clients preference for treatment options was asked by provider.

Regarding the privacy and confidentiality the observation shows that, none of the providers were assured clients about confidentiality issues, like no information will disclosed to any one without their permission. The visual and auditory privacy was ensured in 4 (50%) and 3 (37.5%) of cases respectively. Multiple interruption was observed in 2 (25%) of cases, especially at Walgawo health center (Table 3).

Table 3. Process Quality (client-provider interaction) measuring indicators of YFS, Sendafa town, Oromia region, Ethiopia, 2021.

Process quality measuring indicators	Percentage (%) of good Score	
	Walgawo H/C	SendafaH/C
Made an attempt to ensure visual privacy (closed door)	75	25
Made an attempt to ensure auditory privacy	75	0
Introduce himself / herself first to the client	0	0
Assure the client that no information will disclosed to any one	0	0
Listen with attention to what client had to say	75	100
Measure client's vital sign	0	25
Asked about psychosocial history	75	25
Used job aids and case management guides	0	0
Do physical examination (specific to the complaint)	25	50
Provide sufficient time for consultation	50	25
Ask permission before performing physical examination/ procedure	0	0
Explain the results of the physical examination of the client	25	0
Accurate and precise information on the medical condition	50	25
Accurate and precise information on the treatment options	50	25
Ask client preference for treatment options	25	25
Information on risk reduction and prevention methods	25	25
Check the client's understanding of the information	25	0
Use audio-visual material	0	0
Inform the client about services available for him/her	75	25
Anyone else enter the room during the consultation	0	50
Provide information on follow-up actions	50	50

The process quality good score at Sendafa health center was (33.3%) and that of Walgawo health center was (22.6%). The overall percentage of good score of process quality for public health facilities in Sendafa town was 28% (Figure 2).

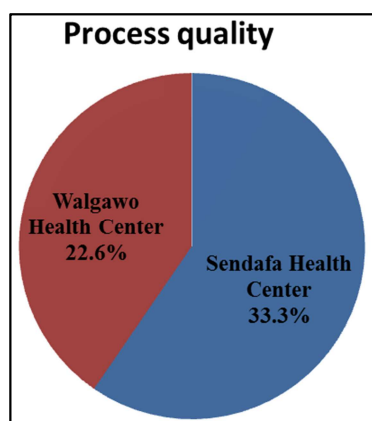


Figure 2. Percentage of good score of process quality of YFS at public health facilities of Sendafa town, Oromia region, Ethiopia, 2021.

3.4. The Outcome Quality of Youth Friendly Service, Client Satisfaction

3.4.1. Youth Friendly Service Utilization

From the respondents about two third 281 (66.7%) of them had a previous experience of visiting the facility for YFS in the past twelve months, of which those who visit one times

and two to four times were 129 (45.9%) and 152 (54.1%) respectively. Regarding the reasons to choose youth friendly service facilities, more than half 223 (53%) of the respondents replied that because it was the nearby facility and low cost of services 123 (29.2%). Majority 219 (52%) of the respondents were traveled less than 30 minute to reach at the health facilities from their residence. Regarding the length of waiting time to visit the service provider, more than four out of five (82.2%) clients waited for less than thirty minute. During waiting for the service providers 240 (57%) and 131 (31.1%) of clients were talk to other clients and read educational material respectively.

More than half 227 (53.9%) of clients were not comfortable with the sex and age of the youth friendly service providers. Majority of clients 395 (93.8%) and 370 (87.9%) were recommended the YFS provided at the health facility to their friends and revisit YFS corner in the future respectively. Most of the respondents 361 (85.7%) had received all services they want on the day of their visit, while 60 (14.3%) of clients had not get all services they want because of Service unavailable on the day of the visit 44 (73.3%), feeling discomfort or ashamed to request the service 14 (23.3%) and Providers didn't have time 2 (3.3%) (Table 4).

Table 4. Frequency distribution of YFS utilization and Experiences at Sendafa town, Oromia Region, Ethiopia, 2021.

Variables	Category	Frequency	%
Ever visit facility for YFS	Yes	281	66.7
	No	140	33.3
No. of visit in past 12 month (N=281)	one times	129	45.9
	2-4 times	152	54.1
Reason to choose YFS facilities	low cost of services	123	29.2
	nearby facility	223	53
	recommended by friend	75	17.8
Time taken to reach the health center	<30 minute	219	52
	30 min to 1 hour	186	44.2
	> 1 hour	16	3.8
Waiting time to visit provider	<30 minute	357	84.8
	30 min to 1 hour	64	15.2
What do while waiting for provider	talk to other clients	240	57
	listen to health talks	50	11.9
	read IEC material	131	31.1
Receive all services you demand	Yes	361	85.7
	No	60	14.3
Why not get service (N=60)	Feeling discomfort to ask	14	23.3
	service unavailable	44	73.3
	provider didn't have time	2	3.3
Perceive YFS is open for all youth	Yes	418	99.3
	No	3	0.7
Comfortable with age &sex of provider	Yes	194	46.1
	No	227	53.9
Interviewed by language you understand	Yes	408	96.9
	No	13	3.1
Recommend YFS for others	Yes	395	93.8
	No	26	6.2
Revisit YFS in the future	Yes	370	87.9
	No	51	12.1

Regarding utilization of youth friendly services, services like medical illness services other than reproductive health problem, HIV testing and counseling, IEC-BCC material, STI services and violence related services were utilized by 368 (87.4%), 259 (61.5%), 141 (33.5%), 20 (4.8%) and 11 (2.6%)

of clients respectively. In addition the respondents of female sex (n= 195) use family planning services 18 (9.2%), safe abortion service 4 (4.2%) and maternal health related services 23 (11.8%) (Figure 3).

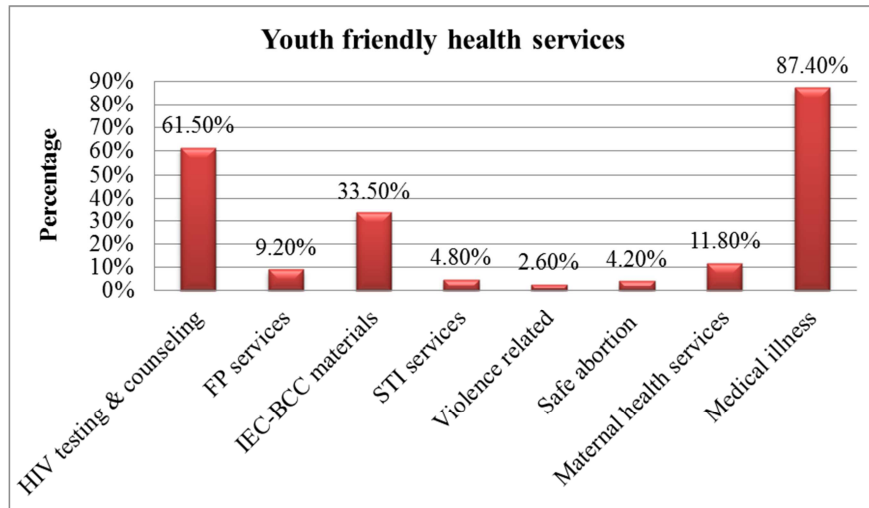


Figure 3. Utilization of youth friendly health services at Sendafa town, Oromia, Ethiopia, 2021.

Regarding to the source of information to visit youth friendly service corners the family members or parents accounts for 296 (70.3%) followed by health workers 66 (15.7%), peers or friends 58 (13.8%) and mass media 1 (0.2%) (Figure 4).

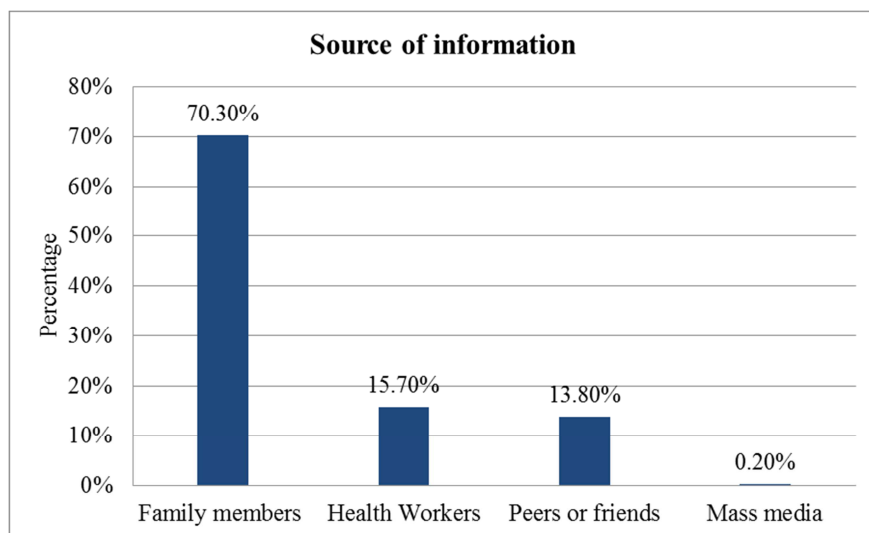


Figure 4. Source of information for visiting youth friendly service corner at Sendafa town, Oromia region, Ethiopia, 2021.

3.4.2. Level of Client Satisfaction on YFS

Based on the likert scale the mean score was 3.65, and taking the mean score of client satisfaction as a cutoff point, about 296 (70.3%) with 95% CI (66%, 74%) of clients were satisfied with the adolescent and youth sexual and reproductive health services provided at YFS corner (Figure 5). The satisfaction level for clients visited Sendafa and Walgawo health center was 160 (69%) and 136 (72%) respectively. In relation to sex of client, 161 (71.2%) of males and 135 (69.2%) of females were satisfied with the service they received. Satisfaction for different age category shows that, 16.7% of age 10 to 14 years, 58.7% of age 15 to 19 years and 93.3% of age 20 to 24 were satisfied. Above three fourth 70 (76%) and two third 226 (68.7%) of employed and unemployed clients were satisfied respectively. Among clients who had a previous youth friendly service corner visit, 229

(81.5%) of them were satisfied.

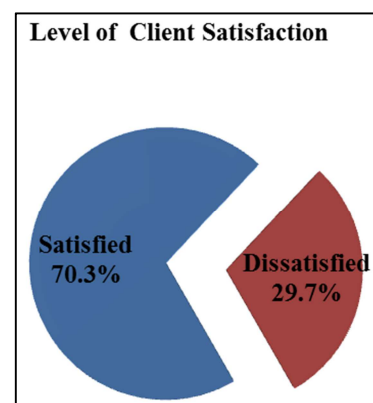


Figure 5. Level of client satisfaction on youth friendly services at Sendafa town, Oromia region, Ethiopia, 2021.

Table 5. Frequency of satisfaction variable with likert scale in Sendafa town, Oromia Region, Ethiopia, 2021 (N=421).

Variables	Very Dissatisfied N (%)	Dissatisfied N (%)	Neutral N (%)	Satisfied N (%)	Very Satisfied N (%)
Working days and opening hours	2 (0.5)	0	56 (13.3)	363 (86.2)	0
Length of waiting time to get YFS	2 (0.5)	30 (7.1)	70 (16.6)	199 (47.3)	120 (28.5)
Respect from supporting staffs	9 (2.1)	62 (14.7)	161 (38.2)	189 (44.9)	0
Respect from the health care providers	0	1 (0.2)	60 (14.3)	294 (69.8)	66 (15.7)
Comfortableness of waiting area	0	0	74 (17.6)	347 (82.4)	0
Privacy given during consultation	0	33 (7.8)	95 (22.6)	293 (69.6)	0
Length of consultation time	0	35 (8.3)	92 (21.9)	294 (69.8)	0
Opportunities to explain feeling	24 (5.7)	46 (10.9)	169 (40.1)	159 (37.8)	23 (5.5)
Cost you paid for the services	1 (0.2)	0	26 (6.2)	264 (62.7)	130 (30.9)
Health information provided was clear	0	24 (5.7)	202 (48)	158 (37.5)	37 (8.8)
Treatment procedure done by provider	0	2 (0.5)	110 (26.1)	276 (65.6)	33 (7.8)
Adequacy of psychosocial assessment	30 (7.1)	151 (35.9)	134 (31.8)	104 (24.7)	2 (0.5)
Information given on risk reduction	39 (9.3)	141 (33.5)	160 (38)	62 (14.7)	19 (4.5)
Distance of health facility	0	13 (3.1)	189 (44.9)	109 (25.9)	110 (26.1)
Availability of drugs and supplies	0	50 (11.9)	64 (15.2)	304 (72.2)	3 (0.7)
Cleanliness of the waiting area, YFS corner	0	0	105 (24.9)	306 (72.7)	10 (2.4)
Being treated in separated YFS room	0	0	28 (6.7)	140 (33.3)	253 (60.1)

Regarding variables related to the characteristics of the services most of the clients were satisfied with the cost they have paid for the services 376 (93.5%) with the mean of 4.24 and SD=0.58, being treated in separated YFS room 393 (93.3%) with the mean of 4.53 and SD = 0.62, service working days and opening hours 363 (86%) with the mean of 3.85 and SD= 0.39, and the respect and friendliness of the health care providers 360 (85.5%) with the mean of 4.01 and SD=0.56.

The lower satisfaction was forwarded by the clients on the information given regarding to risk reduction and prevention related to reproductive health 81 (19%) with mean of 2.72 and SD=0.978, adequacy of psychosocial assessment 106 (25%) (like drug abuse, sexual relationship) with the mean of 2.76 and SD=0.923, and opportunities to explain feeling and freedom of asking questions on any unclear ideas 182 (43.2%) with mean of 3.26 and SD=0.93 (Table 6).

Table 6. Mean Score and level of satisfaction of YFS clients, at Sendafa town, Oromia Region, Ethiopia, 2021.

Variables	Mean \pm SD	Level of Satisfaction	
		Satisfied N (%)	Not Satisfied N (%)
Service working days and opening hours	3.85 \pm 0.393	363 (86%)	58 (14%)
Length of waiting time to get YFS	3.96 \pm 0.883	319 (75.7%)	102 (24.3%)
Respect and friendliness of supporting staffs	3.26 \pm 0.785	189 (44.8%)	232 (55.2%)
Respect and friendliness of the health care providers	4.01 \pm 0.556	360 (85.5%)	61 (14.5%)
Comfortableness of waiting area	3.82 \pm 0.381	347 (82.4%)	74 (17.6%)
Privacy given during consultation	3.62 \pm 0.628	293 (69.6%)	128 (30.4%)
Length of consultation time	3.62 \pm 0.636	294 (69.8%)	127 (30.2%)
Opportunities to explain feeling & ask questions	3.26 \pm 0.931	182 (43.2%)	239 (56.8%)
Cost paid for the services	4.24 \pm 0.579	376 (93.5%)	27 (6.5%)
Health information provided was clear	3.49 \pm 0.736	195 (46.3%)	226 (53.7%)
Treatment procedure done by health care provider	3.81 \pm 0.568	309 (73.4%)	112 (26.6%)
Adequacy of psychosocial assessment	2.76 \pm 0.923	106 (25%)	315 (75%)
Information given on risk reduction and prevention	2.72 \pm 0.978	81 (19%)	340 (81%)
Distance of health facility from residence area	3.75 \pm 0.879	219 (52%)	202 (48%)
Availability of drugs and supplies	3.62 \pm 0.699	307 (72.9%)	114 (27.1%)
Cleanness of the waiting area and YFS corner	3.77 \pm 0.472	316 (75%)	105 (25%)
Being treated in separated YFS room	4.53 \pm 0.619	393 (93.3%)	28 (6.7%)

3.5. Overall Quality of Youth Friendly Services

The UNFPA approach was used as bench mark to categorize both the health facility and quality dimensions as good quality or good standard of care ($\geq 75\%$) and poor quality or low quality or below the standard of care ($<75\%$). This study shows that the overall quality of youth friendly services was 76.6%, 28%, and 70.3% for structural quality, process quality

and outcome quality respectively. The process quality was the lowest and the most compromised dimensions when compared with other quality dimensions. By taking the average of the three quality dimensions, the overall quality of YFS at public health facilities of Sendafa town was 58% which was below cut off point (75%). Therefore, quality of youth friendly service at public health facilities of Sendafa town was poor quality or below the standard of care (Table 7).

Table 7. Quality of youth friendly service at public health facilities of Sendafa town, Oromia region, Ethiopia, 2021.

Quality Dimensions		Percentage at YFS facilities	
		Sendafa health center (%)	Walgawo healthcenter (%)
Structural quality	76.6%	84.40%	68.80%
Process quality	28%	33.30%	22.60%
Outcome quality	70.30%	69%	72%
Overall quality (%)	58%	62%	54.5%

3.6. Determinants of Client Satisfaction with Youth Friendly Health Service

To limit the number of variables and unstable estimates in the subsequent model, variables with p-value < 0.25 in bivariate logistic regression analysis were taken to a Multivariable logistic regression model. Factors found to be significant in bivariate logistic regression analysis were age, educational status, current schooling status, experience of YFS visit, waiting time to get service providers, HIV service, IEC-BCC material, STI service, medical illness related services, get all services on the day of the visit, and comfortable with the age and sex of service providers. Besides; sex, marital status, current occupation, time taken to reach the facility, reason to choose youth friendly health facility, recommend the service for others and revisit plan were found to be insignificant (p-value ≥ 0.25) in bivariate logistic regression analysis.

Variables significantly associated in binary logistic regression but insignificant in Multivariable logistic regression were waiting time to get service providers, HIV services, IEC-BCC material, STI service and medical illness related services.

The variables that independently predict adolescent and youth client satisfaction negatively were; age (15-19) (AOR=0.34, 95% CI: 0.12, 0.97), education below secondary (AOR=0.041, 95% CI: 0.013, 0.134), and who do not get all services (AOR=0.02, 95% CI: 0.001, 0.36). The variables that independently predict adolescent and youth client satisfaction positively were; current schooling status of in school (AOR=6.7, 95% CI: 2.12, 21.5), experience of YFS visit (AOR=10.86, 95% CI: 4.72, 25.0), and comfortable with age and sex of provider (AOR=9.86, 95% CI: 3.58, 27.12).

Age of the client was significantly associated with YFS client satisfaction, clients within the age group of 15-19 were 66% less likely to be satisfied with YFS compared to those within the age group of 20-24 years (AOR=0.34, 95% CI: 0.12, 0.97) (p=0.043). Educational status was also significantly associated, clients below secondary school were 96% less likely to be satisfied with YFS compared to those above secondary school (AOR=0.041, 95% CI: 0.013, 0.134) (p=0.000). Current schooling status was also independent predictor, clients in-school were 6.7 times more likely to be satisfied with YFS compared to those out-of-school (AOR=6.7, 95% CI: 2.12, 21.5) (p=0.001).

Table 8. Binary logistic regression and Multivariable logistic regression analysis of factors associated with YFS client satisfaction at Sendafa town, Oromia region, Ethiopia, 2021.

Variable	Category	Satisfaction level		COR (95% CI)	AOR (95% CI)
		Satisfied	Not satisfied		
Age	10-14 yrs.	5	25	0.014 (0.005, 0.045) *	0.411 (0.071, 2.36)
	15-19 yrs.	125	88	0.103 (0.054, 0.196) *	0.34 (0.12, 0.97) **
	20-24 yrs.	166	12	1	1
Education	below 2ndry	61	92	0.09 (0.06, 0.20) *	0.041 (0.013, 0.134) **
	above 2ndry	235	33	1	1
Current schooling	in-school	208	69	1.92 (1.25, 2.95) *	6.7 (2.12, 21.5) **
	out-of-school	88	56	1	1
Ever visit YFS	Yes	229	52	4.8 (3.07, 7.50) *	10.86 (4.72, 25.0) **
	No	67	73	1	1
Waiting time	≤ 30 minute	267	90	3.58 (2.07, 6.12) *	3.14 (0.17, 57.07)
	> 30 minute	29	35	1	1
HIV service	Yes	202	57	2.56 (1.67, 3.94) *	1.44 (0.69, 3.02)
	No	94	68	1	1
IEC-BCC material	Yes	107	34	1.52 (0.95, 2.40) *	1.12 (0.51, 2.47)
	No	189	91	1	1
STI service	Yes	19	1	8.50 (1.13, 64.24) *	1.02 (0.10, 10.0)
	No	277	108	1	1
Illness related	Yes	249	119	1	1
	No	47	6	3.7 (1.56, 9.00) *	1.42 (0.41, 4.92)
Get all services	Yes	271	90	1	1
	No	25	35	0.24 (0.14, 0.42) *	0.02 (0.001, 0.36) **
Comfortable with age & sex of provider	Yes	177	17	9.45 (5.34, 16.57) *	9.86 (3.58, 27.12) **
	No	119	108	1	1

* Variables significant at binary logistic regression, ** variables significant at Multivariable logistic regression, COR-crude odd ratio, AOR- adjusted odd ratio, 1-reference group.

The other independent predictor was experience of YFS visit, clients who had experience of YFS visit were 10.86 times more likely to be satisfied with YFS when compared to their counter parts (AOR=10.86, 95% CI: 4.72, 25.0) ($p=0.000$). Get all services was statistically significant, clients who did not get all services were 98% less likely to be satisfied with YFS when compared to clients who have got all services (AOR=0.02, 95% CI: 0.001, 0.36) ($p=0.008$). Comfortable with the age and sex of service providers was statistically significant, clients comfortable with age and sex of service providers were 9.86 times more likely to be satisfied with YFS when compared to clients not comfortable with age and sex of service providers (AOR=9.86, 95% CI: 3.58, 27.12) ($p=0.000$) (Table 8).

4. Discussion

This study shows that the overall quality of YFS at public health facilities of Sendafa town was 58% which was below cut off point (75%). This finding is consistent with the quality assessment reports from southern Ethiopia and west Gojjam where by quality of YFS was “not good quality” [37, 38].

The level of structural quality of YFS was good (76.6%) and it is in line with the WHO and the National Adolescent and Youth Health Strategy standards [19, 41]. It is higher than the study conducted in Arbaminch and Gojjam whereby the structural quality of YFS was (54.1%) and (61.1%) respectively [37, 38]. The possible reason for the higher findings of the current study as compared to a study conducted in Arbaminch and Gojjam could be due to variation in study settings and presence of NGOs in the study area. The structural quality is compromised by inadequate health workers training, shortage and stock out of essential drugs and supplies, lack of youth waiting room, weak and irregular supportive supervision, and absence of peer educators.

The process quality of the YFS was 28%, which indicates poor quality. The finding is consistent, but lower than the study done at southern Ethiopia (42%). This difference could be due to the difference in technical skill and competency of service providers and also due to inadequate health professionals assigned at YFS corner in this study when compared to study conducted in Arbaminch [37]. This finding is also against the WHO and National Adolescent and Youth Health Strategy of Ethiopia standard set for service effectiveness [19, 41]. The process quality was affected by inadequate privacy and confidentiality issues (related to multiple interruption and absence of screen in examination room and performing physical examination without the permission of client) and poor communication system between the provider and client (low psychosocial assessment, low information provided on risk reduction and prevention, not use audio visual material and job aids).

The outcome quality (client satisfaction) of YFS was 70.3%, which is below the standard of care. This finding is consistent and higher than the study done on youth client satisfaction at southern Ethiopia 49.1%, Dejen district, 60.7%, Dessie town

58.9% and Kerman hospital 49.6% [37, 39, 40, 42]. The difference in satisfaction level might be due to the difference in the study population, study area and expectation of the clients.

Age of the client was significantly associated with YFS client satisfaction, clients within the age group of 15-19 were 66% less likely to be satisfied with YFS compared to those within the age group of 20-24 years. This study is consistent with the study done at Mongolia which shows lesser satisfaction among younger adolescents [43]. This decrease in satisfaction could be related to younger adolescents ashamed and fear to ask services they want, because they are less exposed to reproductive health related issues and there by dissatisfied. In contrary, the study conducted at southern Ethiopia shows, the age group of 15-19 were 3.2 times more likely to be satisfied with YFS compared to those with in age group of 20-24 years [37]. This variation might be due to difference in socio cultural factors.

Educational status was also significantly associated; clients below secondary school were 96% less likely to be satisfied with YFS compared to those above secondary school. This could be due to the fact that as educational status increases, the knowledge and awareness of young people on reproductive health services will increase, which enable them to demand quality YFS. Current schooling status was also independent predictor, Clients in-school were 6.7 times more likely to be satisfied with YFS compared to those out-of-school. The possible reason for higher satisfaction among in-school clients were, due to the fact that school health program implementation and presence of different clubs in school enable them to utilize the SRH services they want.

The other independent predictor was experience of YFS visit. Clients who had experience of YFS visit were 10.86 times more likely to be satisfied with YFS when compared to their counter parts. This might be due to the fact that clients who had frequent and repeated visit and contact with the facility and service provider have got a new information and knowledge, and creates a sense of trust and friendship with the service provider.

Another predictor variable that shown significant association in this study was, get all services on the day of the visit. Accordingly, clients who did not get all services were 98% less likely to be satisfied with YFS when compared to clients who have got all services. This is supported by the study done in Dejen district, 69.8% of adolescents who got the health services they want were satisfied [39].

Comfortable with the age and sex of service providers was statistically significant. Clients who were not comfortable with age and sex of service providers were 90% less likely to be satisfied with YFS when compared to clients comfortable with age and sex of service providers. This finding is almost similar with the study done in Southern Ethiopia, clients who were not comfortable with providers sex were 93% less likely to be satisfied with YFS compared to those who were comfortable [37], and at Dessie town, clients not comfortable with care providers were 99% less satisfied when compared to

their counterparts [40]. This could be due to the fact that clients who do not meet their sex and age preferences will be not happy and encounter problem to freely discuss their issue with the service providers.

Strength and Limitation of the Study: Considering all quality dimensions as per Donabedian model of quality assessment and using different approach for different objectives made the study strong. However, due to the cross sectional nature of the study design causal relationships between dependent and independent variables could not be determined. In addition social desirability bias was likely, as the clients were interviewed in the health facilities compound.

5. Conclusion & Recommendation

5.1. Conclusion

The study findings indicates that, the overall quality of youth friendly health services was 58% which categorized as not good quality, by considering all quality dimensions i.e., Structural (input), process and output (client satisfaction).

The study also shows that, age, educational status, current schooling status, get all services they want, experience of YFS visit and comfortable with the age & sex of service providers were independent predictors of client satisfaction on youth friendly health services.

5.2. Recommendation

Based on the findings of this study, the following recommendations were forwarded:-

To FMOH, RHB, Zonal health office, Sendafa town health office and NGOs:

- i. They should work together to strengthen the YFS corners, build youth waiting rooms and avail IEC-BCC materials.
- ii. Should have a regular and constructive supportive supervision on YFS
- iii. Should work on capacity building of service provider, to increase their competency and technical skills, especially on how to communicate and approach the young people clients at YFS corners.
- iv. Work together to minimize and avoid shortage and stock out of supplies and drugs.
- v. Work together on involvement of adolescents and youth in planning, implementing and evaluation of youth friendly health programs and services.

To Youth friendly service providers:

- i. They should adhere to different YFS standards, and guidelines
- ii. They should maintain privacy and confidentiality related issues of the clients
- iii. They should give a due attention for the clients regarding the consultation time, psychosocial assessment, and accurate & precise information on risk reduction and prevention, medical condition and treatment options.
- iv. They should make the clients part of decision making on

treatment options.

To the Researchers:

This study has certain limitation, and quality improvement is never ending journey, therefore further studies will be valuable for the improvement of youth friendly health services.

Author Contributions

Enguday Demeke and Wassie Negash designed the study and supervised the work in all phases. Adugna Amenu conducted the statistical analysis and drafts the manuscript. Enguday Demeke and Adugna Amenu critically revised the manuscript. All authors read and approved the final version of the manuscript.

List of Acronyms

AIDS: Acquired Immune Deficiency Syndrome
AYSRH: Adolescent and Youth Sexual and Reproductive Health
HIV: Human Immune Virus
ICPD: International Conference on Population and Development
MOH: Ministry Of Health
NGO: Non-Governmental Organization
PHCU: Primary Health Care Unit
RHB: Regional Health Bureau
SPSS: Statistical Package for Social Science
SRH: Sexual and Reproductive Health
STI: Sexually Transmitted Infections
UNFPA: United Nations Population Fund
WHO: World Health Organization
YFS: Youth Friendly Service
YFSRH: Youth Friendly Sexual and Reproductive Health

References

- [1] WHO. Adolescent Health and Development in the Africanregion: WHO regional office for Africa. Brazzaville; 2003.
- [2] UNFPA. ICPD beyond 2014 issue Brief: Investing in the capabilities of Adolescent and youth. 2014.
- [3] Federal Democratic Republic of EthiopiaMinstry of Health. National adolescent and Youth Sexual and reproductive health strategy 2006-2015. Addis Ababa, Ethiopia; 2006.
- [4] WHO. Maternal, Newborn, Child and Adolescent Health. WHO; 2017.
- [5] Abajobir AA, Seme A. Reproductive health knowledge and services utilization among rural adolescents in east Gojjam zone, Ethiopia: a community-based cross-sectional study. BMC Health Services Research. 2014 Mar 29; 14 (1): 138.
- [6] Dida N, Darega B, Takele A. Reproductive health services utilization and its associated factors among Madawalabu University students, Southeast Ethiopia: cross-sectional study. BMC Research Notes. 2015 Jan 17; 8 (1): 8.

- [7] WHO. Adolescents: Health Risks and Solutions. WHO; 2017.
- [8] Patton GC, Coffey C, Sawyer SM, Viner RM, Haller DM, Bose K, et al. Global patterns of mortality in young people: a systematic analysis of population health data. *Lancet*. 2009 Sep 12; 374 (9693): 881–92.
- [9] WHO. Health for the World's adolescents: a second chance in the second decade. Geneva; 2014.
- [10] WHO. Adolescent Friendly Health Services: An Agenda for change,. Geneva, Switzerland; 2003.
- [11] Barroso C. Beyond Cairo: Sexual and reproductive rights of young people in the new development agenda. *Global Public Health*. 2014 Jul 3; 9 (6): 639–46.
- [12] World Health Organization, Department of Maternal N Child and Adolescent Health. Making health services adolescent friendly: developing national quality standards for adolescent friendly health services. 2012.
- [13] Kempers J, Ketting E, Lesco G. Cost analysis and exploratory cost-effectiveness of youth-friendly sexual and reproductive health services in the Republic of Moldova. *BMC Health Serv Res*. 2014 Jul 21; 14: 316.
- [14] Denno DM, Hoopes AJ, Chandra-Mouli V. Effective Strategies to Provide Adolescent Sexual and Reproductive Health Services and to Increase Demand and Community Support. *Journal of Adolescent Health*. 2015 Jan; 56 (1): S22–41.
- [15] Fikree FF, Abshiro WK, Mai MM, Hagos KL, Asnake M. A simple twist to strengthening youth friendly health services. Expanding method choice for all young Ethiopians. *African Journal of Reproductive Health*. 2017 Dec 22; 21 (3).
- [16] Path finder international Ethiopia. Bringing Youth-Friendly Services to Scale in Ethiopia. Pathfinder International. 2012.
- [17] Holley C. Adolescent Reproductive Health in Ethiopia. 2011.
- [18] Ministry of Health federal democratic Republic of Ethiopia. standards on Youth friendly reproductive health services service delivery guideline minimum service delivery package on YFRH services. Addis Ababa, Ethiopia; 2007.
- [19] Federal Democratic Republic of EthiopiaMinstry of Health. National Adolescent and Youth Health Strategy 2016-2020. Addis Ababa, Ethiopia; 2016.
- [20] Path finder international Ethiopia. Youth friendly services: piloting to scaling up in Ethiopia. 2016.
- [21] WHO. Quality of care: a process for making strategic choices in health systems. Geneva: WHO; 2006. 38 p.
- [22] Donabedian A. The Definition of Quality and Approaches to Its Assessment. Vol 1. Explorations in Quality Assessment and Monitoring. MI: Health administration press. 1980.
- [23] World Health Organization. Global standards for quality health-care services for adolescents: a guide to implement a standards-driven approach to improve the quality of health-care services for adolescents. 2015.
- [24] Shivaram K, Nandini C, Malleshappa I. Knowledge and attitude about reproductive health among rural adolescent girls in Kuppamandal: an intervention study. *BioMed Research Notes*. 2011; 22 (3): 305–10.
- [25] Hughes J, Mccauley AP. Improving the Fit: Adolescents needsand future programs for sexual and reproductive health in developing countries studies in family planning. 1998; 29 (2): 233–45.
- [26] Bernstein S, Ryan WA, United Nations Population Fund. Making 1 billion count: investing in adolescents' health and rights. New York: UNFPA; 2003.
- [27] Sen G G. Sexual and reproductive health and rights in the post-2015 development agenda. *Global Public Health*. 2014 Jul 3; 9 (6): 599–606.
- [28] Villalobos A, Allen-Leigh B, Salazar-Alberto J, Castro FD, Barrientos-Gutiérrez T, Leyva-López A, et al. Quality of reproductive healthcare for adolescents: A nationally representative survey of providers in Mexico. *PLOS ONE*. 2017 Mar 8; 12 (3): e0173342.
- [29] Ambresin A-E, Bennett K, Patton GC, Sanci LA, Sawyer SM. Assessment of youth-friendly health care: a systematic review of indicators drawn from young people's perspectives. *J Adolesc Health*. 2013 Jun; 52 (6): 670–81.
- [30] Kavanaugh ML, Jerman J, Ethier K, Moskosky S. Meeting the contraceptive needs of teens and young adults: youth-friendly and long-acting reversible contraceptive services in U.S. family planning facilities. *J Adolesc Health*. 2013 Mar; 52 (3): 284–92.
- [31] Ghafari M, Shamsuddin K, Amiri M. Barriers to utilization of health services: perception of postsecondary school malaysian urban youth. *Int J Prev Med*. 2014 Jul; 5 (7): 805–6.
- [32] Schriver B, Meagley K, Norris S, Geary R, Stein AD. Young people's perceptions of youth-oriented health services in urban Soweto, South Africa: a qualitative investigation. *BMC Health Services Research*. 2014 Dec 5; 14 (1): 625.
- [33] Motuma A, Syre T, Egata G, Kenay A. Utilization of youth friendly services and associated factors among youth in Harar town, east Ethiopia: a mixed method study. *BMC Health Services Research*. 2016 Jul 17; 16 (1): 272.
- [34] Woog V, Singh S, Browne A, Philbin J. Adolescent Women's Need for and Use of Sexual and Reproductive Health Services in Developing Countries: 63.
- [35] Mauerhofer A, Berchtold A, Michaud PA, Suris JC. Female Adolescents views ona youth-friendly clinic. 2010; 140 (1–2): 18–23.
- [36] Darroch JE, Woog V, Bankole A, Ashford LS. Adding it Up: Costs and Benefits of Meeting the Contraceptive Needs of Adolescents. 2016.
- [37] Mulugeta B, Girma M, Kejela G, Meskel FG, Andarge E, Zerihun E. Assessment of Youth-Friendly Service Quality and Associated Factors at Public Health Facilities in Southern Ethiopia: A Facility-Based Cross-Sectional Study. *BioMed Research International*. 2019.
- [38] Munca AM, Alene GD, Debelew GT. Quality of youth friendly sexual and reproductive health Services in West Gojjam Zone, north West Ethiopia: with special reference to the application of the Donabedian model. *BMC Health Serv Res*. 2020 Mar 24; 20 (1): 245.
- [39] Dagnew T, Tessema F, Hiko D. Health service utilization and reported satisfaction among adolescents in Dejen district, Ethiopia: A cross-sectional study. *Ethiopian Journal of Health Sciences*. 2015 Feb 10; 25 (1): 17–28.

- [40] Sharew Y, Amano A, Zeleke H, Mekonnen M. Satisfaction with Youth Friendly Reproductive Health Services among Youth in Dessie Youth Friendly Clinics, North East Ethiopia. *Ethiopian Journal of Health Sciences*. 2015; 25 (1).
- [41] World Health Organization. *Quality assessment guidebook: a guide to assessing health services for adolescent clients*. Geneva: World Health Organization; 2009. 104 p.
- [42] Zolala F, Bahrampour A. Patient Satisfaction and related factors in Kerman Hospitals. *Eastern Mediterranean Health journal*. 2005; 11.
- [43] Sovd T, Mmari K, Lipovsek V, Manaseki S. Acceptability as a key determinant of client satisfaction: Lessons from evaluation of adolescent friendly health services in Mongolia. *Journal of Adolescent Health*. 2006; 38: 519–26.