COLLEGE OF HEALTH SCIENCES

SCHOOL OF NURSING AND MIDWIFERY

DEPARTMENT OF NURSING

QUALITY OF CARE FOR SEXUALLY TRANSMITTED INFECTIONS SERVICES ON SYNDROMIC CASE MANAGEMENT AND FACTORS ASSOCIATED WITH QUALITY OF SERVICE AT PUBLIC HEALTH INSTITUTIONS IN ASELLA TOWN, ARSI ZONE, ETHIOPIA, 2022.

By:

KIMEM ESHETU (BSC)

THESIS SUBMITTED TO ADDIS-ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES, SCHOOL OF NURSING AND MIDWIFERY IN PARTIAL FULFILLMENT OF THE REQUIRMENTS FOR DEGREE OF MASTER OF SCIENCE IN MATERNITY AND REPRODUCTIVE HEALTH NURSING.

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DECLARATION

I speak out that the Assessment of Quality of care for sexually transmitted infections services on syndrome case management and factors associated with quality of service at public health institutions in Asella town, Arsi zone, Ethiopia, 2022. It is my own effort that it has not been submitted for any degree or examination in any other university, and that all the sources that I have used, have been indicated and acknowledged by entire references.

Kimem Eshetu

Signed: ……

APPROVAL SHEET

I declare that this thesis is my original work in partial fulfillment of the requirement for the MSc in Maternity and Reproductive Health Nursing to the best knowledge.

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Date of Submission: ------/2023

We, the undersigned Advisors, confirmed that this thesis is ready for defense with our approval as the university advisor.

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This thesis by Kimem Eshetu is accepted in its present form by the board of examiners as satisfying thesis requirement for the degree of masters in Maternity and Reproductive Health Nursing.

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LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	Acquired immune deficiency syndrome
CDC	Center of communicable disease control
DISCA	District STI Quality of Care Assessment
ETB	Ethiopian Birr
HIV	Human immunodeficiency virus
GDS	Genital discharge syndrome
LSA	Local study area
PHC	Primary Health Care
SM	Syndrome Management
STDs	Sexually transmitted diseases
STI	Sexually transmitted infection
UN	United Nations
PDDFD	Patient, drugs, doses, frequency and duration

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ABSTRACT

Background: In most parts of the world, sexually transmitted infections (STIs) continue to be a serious public health issue. Quality of STIs services is key in managing and preventing transmission and more complications of the infection(1).

Objective:- The goal of this study was to evaluate the quality of care provided for sexually transmitted infections related to quality of services on syndrome case management and associated factors in Asella town public health institution, Arsi Zone, Ethiopia.

Method: A cross-sectional study based on an institution was carried out. A total of 129 study participants provided information. The study participants were chosen using a purposive sampling technique. A semi-structured questionnaire was used by trained interviewers to gather the data. The data was gathered between March 1 and April 25, 2022. The collected information was verified for accuracy before being coded and loaded into SPSS. Using descriptive statistics and logistic regression analysis, factors with a P-value of 0.05 or higher were deemed significant.

Results: - surplus half of clinicians treat sexually transmitted infections correctly (78.4%). Good quality sexually transmitted infections services were provided. Being not knowledgeable clinicians (AOR=0.014, 95% CI (0.001, 0.211)), The quality of STIs services was significantly asssociated with health facility (AOR=7.78, 95% CI: (2.24, 26.97) and treatment strategy (AOR=4.23, 95% CI: (1.36, 14.47)

Conclusion:- Over all the quality of care for STIs of Syndrome Management was good by the availability of National STIs syndrome management guidelines, examination lights, adequate availability of STIs drugs, and adequate knowledge of clinicians to treat sexually transmitted infections correctly. The quality of care is affected by some factors, the Clinician's training, and the Speculum examination is the most important ones.

Keywords: - Sexually transmitted infections, Quality of Care, Syndrome management

INTRODUCTION

1.1 Background

According to maternal mortality weekly report Editorial board, 2021.the common STIs other than HIV/AIDS are bacterial vaginalis, herpes, Chlamydia, trichomoniasis, gonorrhea, hepatitis B virus, and syphilis (1). “According to the study conducted in Gonder STIs remain apublic health problem of major significance in most parts of the world. There continues to be an increasing trend because of factors such as many more people living in or traveling to large cities and they are often separated from their families, many people becoming sexually active prior to marriage, the impacts of drug resistance, low level of understanding about STI, lack of behavioral amend among sexually energetic folks & lack of quality services“(2).

Between the ages of 15 and 49, That is estimated that 357 million new cases of four treatable STIs per year: Chlamydia 131 million cases, N. gonorrhea 78 million cases, syphilis 6 million cases, & T. vaginalis 142 million cases. Daily infections are estimated to total close to one million. The dominance of several viral STIs, with an projected 291 million women carrying the human papilloma virus and 417 million persons carrying herpes simplex type 2 (3).

The study conducted in Brazil indicates that 98 % were consider cured after Syndrome management (SM), and 13 (2.0%) remained symptomatic after SM (4). Syndrome of Sensitivity a significant proportion of people who presented with genital discharge syndrome (GDS) due to gonorrhea and Chlamydia were successfully treated, as evidenced by the treatment approaches for N. gonorrhea and C. trachomatis being 91.83% and 96.5%, respectively. Their low specificity 72–76%, however, suggests that many people received incorrect diagnoses and treatments. More patients are exposed to needless antibiotics as a result of this over diagnosis and overtreatment, which could lead to the development of antimicrobial resistance. (1).

1.2 Statement of the problem

According to the study conducted in Gonder town, one of the top five reasons why individuals use healthcare services in underdeveloped nations is because of the prevalence of STIs and the difficulties that go along with them. Due to their prevalence, potential consequences, and interactions with HIV/AIDS, STIs are significant.(5). "Center for disease control (CDC) states that 86% of the world's burden of STIs occurs in the developing world. The biggest problem is among the poorest nations of the world, many of which are found in sub-Saharan Africa, where the highest rates of new cases per 1000 population are found" (6).

The study conducted in Jima university student because of many STIs are asymptomatic and can result in major and expensive medical problems if left untreated, the STI resurgence is a huge strain (7).

According to Ethiopian health surveillance of STIs based on Syndromic case report, concerning the proportion of STI syndromes, vaginal discharge takes the highest percentage (52.2%) followed by urethral discharge (25.3%). In addition this report indicates that the majority of(62.8%) of STI patients are in the 20–34 age bracket, and more than half (68.2%) of them are female) (8).

According to Ethiopian health surveillance 2011, the "means of reducing the impact of STIs is the management of STIs using the Syndrome approach. Many factors play a part in the success of STIs, including the availability of effective and affordable drug-accessible and acceptable health services, training and supportive supervision of clinicians, and behavioral interventions to prevent new infections by promoting safer sex" (9). Even though there is limited data on the incidence, prevalence, and quality assessment of STIs in Ethiopia (10).

The MOH states that in order to provide high-quality of care for STIs, Ethiopia has been pushing the control of SM since 2001 by adopting the WHO generic recommendations as a national guideline for the management of STIs. Ethiopia has been provided training for healthcare workers on SM, however it is still unknown whether these professionals are acting appropriately.(11).

In addition, as far as my knowledge is concerned, I attempted to review related literature; so far there is a very limited number of studies on assessing quality of care for STIs on SM and factors associated quality of care at public health institutions, especially in Ethiopia. For instance, the Gamogofa zone's public health facilities' 2017 case management quality of treatment for STIs syndrome was subpar (12). Hence, giving priority to this overlooked area is crucial since it provides insight into the quality of care for STIs service in selected institutions. Therefore, the main goal of this study is to evaluate the quality of STI services in all governmental health Institutions in Asella town.

1.3. Significance of the study

STI-related issues place a heavy strain on developing nations like Ethiopia. Comprehensive sexual and reproductive health, including high-quality STIs services, should be made available to everyone in order to combat such issues. Ethiopia has been provide training healthcare professionals in the Syndromic method to deliver high-quality STI care, but there is no proof that the professionals are acting in accordance with the program's recommendations.(11).

Therefore, the purpose of this study is intended to assess the quality of care for STIs service on SM at Asella town, public health institution, in Ethiopia. The results of this study are also expected to strengthen and support the necessity for ongoing evaluation of STI services in the study region as a tool for quality improvement and will help to address issues with identified STI service delivery.

Additionally, the findings will be utilized to give policymakers, program designers, and implementer's baseline data to use when developing an intervention to get better the quality of services for STIs.

2. LITERATURE REVIEW

2.1. Socio demographic factors

Globally, there is a significant public health issue with STIs and HIV/AIDS. A number of broad global health goals and targets are outlined in the UN's 2030 Agenda for Sustainable Development, including the requirement to guarantee healthy lives and advance wellbeing for all people of all ages. The UN member states accepted WHO's global health institution strategy on, viral hepatitis, and STIs in May 2016 to assure the health sector's implementation of this Agenda.(13)

A study conducted in Gamo Gofa Zone indicated that "the overall response rate was 100%. Regarding clinicians, 174(69.6%) were Diploma Nurses, 142(56.8%) were male, and More than half of the clinicians, 141(56.4%) were below the age of 30 years and only quite a small proportion 15(6%) were at the age of 50 and above. 50% of the clinicians have a median of six years of experience" (12).

2. 2. .Structural quality

2.2.1 Availability of STI equipment

A study conducted in Gamo Gofa Zone indicated that "there were no National STI Syndrome management guidelines in health facilities. Client education materials about STI/HIV prevention and treatment were available only in two health facilities and were not written in the local language. The health centers have on average three adult consultation rooms and the hospitals have three and four adult consultation rooms. The twelve health facilities have examination coaches and only one health center has examination lights in the consultation room which itself was not functional. None of the health facilities has vaginal specula in adult consultation rooms" (12).

The research carried out in the Umjindi Local Municipality Syndromic management of STI guidelines was available at 13 sites, and they were kept in the consultation rooms. There were no STI Syndromic management recommendations in any but one location. Only four of the nine institutions had client information, education, and communication (IEC) materials on HIV/AIDS and STIs available in the local language (14).

2.2.2 STI drugs availability

A study conducted in Gamo Gofa Zone indicates that availability of STIs drugs in 12 health facilities were 100% currently in stock were Ciprofloxacillin, Metronidazole, and doxycycline, 91.7% currently in stock were byzantine penicillin and Erythromycin. 66,7%currently in stock were Spectinomycine and Azithromycin(12).

In the study conducted in Umjindi Local Municipality, "there are five main drugs that are used in the management of people with STIs. The record reviews showed that with the exception of Erythromycin which was only out of stock in one facility in September 2004, all STI drugs were available in the facilities"(14).

2.2.3 Human Resources

According to the Ethiopian guideline of the syndrome approach to the management of STI "any patient who presents with STI syndrome have to be managed by the syndrome approach at all level regardless of the expert capacity provided that it is a first visit for the current syndrome" (11).

According to the study done in Gamo gofa, the total number of clinicians 250 "participated in the study, only 32(12.8%) were trained on Syndrome management of STIs. In health centers, the number of clinicians ranged from 17 to 41 with an average of 31clinicians in each health center and the total number of clinicians in 10 health centers was 312 where as the number of clinicians in Hospitals was 267. According to the heads, of the clinicians working in health facilities, only 15(4.8%) and 7(2.6%) were trained on Syndromic management of STIs in health centers and hospitals respectively. Of the total trained clinicians, 9(60%) and 3(42.9%) clinicians were working in health centers and hospitals respectively during the study time" (12).

The primary health care (PHC) institutions in Umjindi Local Municipality employed a total of 44 clinicians. None of the clinicians employed by the PHC facilities had completed a formal training program in the management of STI syndrome. However, the in-service training program had provided instruction in STI management to 7 of the clinicians. All 14 professional nurses who were questioned have received HIV/AIDS counseling training. (14).

"Ethiopia has been promoting the Syndrome approach since 2001 by adopting the WHO generic guidelines to serve as a national guideline for the management of STIs: since then, training on the Syndrome approach has been given to healthcare workers. The aim of the Syndrome approach is to recognize and treat a syndrome with grouping therapy which will also take care of the main causative pathogen" (11).

Infertility, congenital abnormality, detrimental neurological condition, cardiovascular hazards, ectopic pregnancy, ano-genital cancer, and even the early death of neonates are just a few of the issues brought on by failing to identify, treat, and provide appropriate care for STIs. Utilizing the syndrome method to manage STIs is one way to lessen their effects. (5).

2.3 Process quality

2.3. 1.Availability of STI service

A study conducted in Gamo Gofa Zone indicated that "the quality of care for STIs syndrome case management at public health facilities of Gamo Gofa Zone was poor including input (structure), process, & output/outcome which may be explained by the lack of National STI Syndromes management guidelines, examination lights, & vaginal specula in health facilities, inadequate knowledge of clinicians, the inability of clinicians to treat STI patients correctly" (15).

According to the study conducted in Umjindi Local Municipality, all facilities, with the exception of Um' Africa Community Health Center, offer STI services Monday through Friday from 8 a.m. to 16 p.m. Regarding privacy, it was discovered that 12 of the facilities permitted private consultations, whereas 4 facilities permitted overhead (14).

"Knowledge of clinicians who correctly mention the name of the drugs for urethral discharge management according to national guidelines for the management of STIs using the syndrome approach was 119 (47.6%) and clinicians who mentioned the name of the drug, dosage, frequency, and duration correctly were 68 (27.2%). Clinicians who correctly mention the name of the drugs for vaginal discharge management were 95 (38%) and clinicians who mentioned the name of the drug, dosage, frequency, and duration correctly were 48 (19.2%). Out of all clinicians, clinicians who correctly mention the name of the drugs for genital ulcer management were 7 (2.8%) and clinicians who mentioned the name of the drug, dosage, frequency, and duration correctly were 5 (2%)" (15). The research done in Windhoek, Namibia, 86% physicians treat the STI patients using Syndromic management. (16)

CONCEPTUAL FRAME WORK

Figure 1 Conceptual frame work

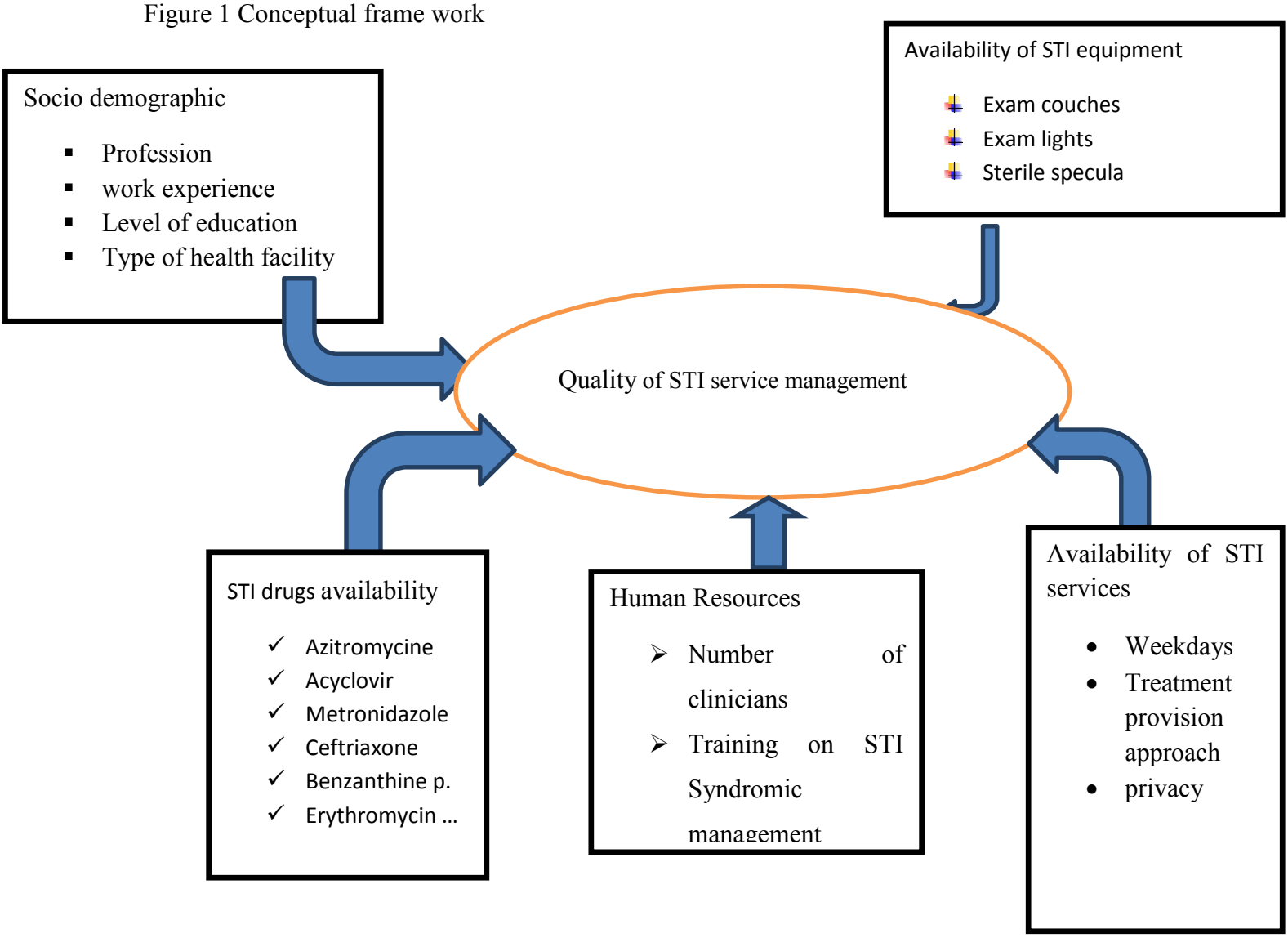

Figure 1 conceptual frame work showing quality of care for STIs on syndromic case management and factors associated among health care providers. Developed by reviewing literatures (15, 21),

3. OBJECTIVES

3.1 Overarching goal

To evaluate the effectiveness of syndromic case management services for sexually transmitted illnesses and associated factors at public health facilities in Asella town, Arsi zone, Ethiopia, in 2022.

3.2. Specific Objectives

- To assess the availability of structural and process on STI services management at Asella Public Health Institutions Arsi zone, Ethiopia.
- To assess professionals' expertise in giving STIs service management at Asella Public Health Institutions Arsi zone, Ethiopia.
- To identify factors associated to the quality of STI services management of Syndromic approach at Asella Public Health Institutions Arsi zone, Ethiopia.

4. METHODS AND MATERIALS

4.1. Study area and period

In the Arsi zone of the Oromia Regional state's Asella town, this study was conducted. The distance between Asella and Addis Abeba city is 175 kilometers. There are one teaching public hospital, two public health centers, two private hospitals, a youth clinic run by the Family Guidance Association of Ethiopia (FGAE), and one teaching public hospital in the town. Data was collected from March. 1 - April 15/2022.

4.2. Study design

An institutional-based cross-sectional study design was used..

4.3. Population

4.3.1. Source of population:- All Asella town public health institutions.

4.3.2. Study populations:-All clinicians who are responsible for STI clinics and STIs client cards

4.3.1. Study unit:- All clinicians who are responsible in STI clinics and STIs client cards

during the data collection period .

4.3.4. Eligibility criteria

Inclusion: - The study comprised medical professionals who work in STI clinics and who get written permission to participate.

Exclusion:- Health care practitioners who did not actively engage in the study and professionals who are not willingly participating in the study were excluded.

4.4. Sample Size Determination and Sampling procedure

The following presumptions were used to compute sample size using the single population proportion formula: Where: - n= necessary sample size

Z = 1.96, which is the essential value for a normal distribution at a 95% confidence level (z value at 0.05, two tailed).Expected proportion (P) = 8.3% of the clinicians correctly follows the guideline in previous study conducted in Gamo gofa(12).

Desired precision (d) = 0.05 (5+% margin of error)

Substituting in single population proportion formula, gives:

$$\mathbf{n = \frac{z^2 p(1-p)}{d^2} + 10\% \text{ Non-response rate}}$$

$$n = \frac{(1.96)^2 \times 0.083(1-0.083)}{(0.05)^2} = =117$$

Contingency (for non-response & incompletes=10%) =12.

The total sample size is = 129.

4.5. Data collection procedure and measurement

The data collection was conducted through interviews and observation by using a -structured questionnaire adapted from the literature (17). This consists of socio-demographics, such as accessibility, provision of safe treatment, staff training, and STI drugs. The sampling technique of this study was from all public health institutions found in Asella town i.e. 1 hospital and 2 Health Centers. The study area was chosen using a censes sampling method. Because of a small # of clinicians, all clinicians 37 who were employed by the chosen healthcare facilities of the STIs clinic throughout the time of data collection were included in the study. Systematic random sampling was used to select 89 STI patient-held files/patient records.

Based on 1 hospital and 2 health centers, 245 STI patients were attended each month on average. Then Kth Interval was computed every 3 patient records until they will be 89 the study also took data from the filing cabinets into account.

The questionnaires were prepared in English only because of all participants and data collectors are well educated. Four interviewers (two BSc midwives and two MSc midwives) and one supervisor (MPH in public health) were engaged in data collection. The interviewers were from another health facility. The lead investigator trained data gatherers for two days on the study's goal, how to treat study participants, and other ethical concerns. The principal investigator was in charge of overall oversight.

The responsibility of data collectors was to make definite the questionnaire was filled out after obtaining consent from the study participants. The supervisors provided all things necessary for the data collection on each data gathering daytime. The questionnaires were pre-tested on 5% of participants out of the study participants 1week ahead of actual data collection and further refined based on the results. The questionnaire was examined for completeness and consistency and solved difficulties throughout data collection. Any doubt about the data collecting technique was handled by the lead investigator quickly.

4.6. Data management and analysis

Before analysis, the structured questionnaire's collected data was assembled, examined, coded, and entered into SPSS version 25. Then it was reviewed and cleaned for accuracy in the coding and entry as well as for completeness. Frequency charts and text were utilized to explain the study population in relation to the pertinent variables. The data that was serene through the structured questionnaire was compiled, reviewed, hinted, and entered into SPSS version 25 before analysis. Then it was checked and cleaned for its completeness, and errors in coding and entering it. To explain the study population in relation to relevant variables, frequency tables, and text was used.

4.7. Variables

Dependent variable

- Quality of care for STIs service.

Independent variable

- Socio-demographic characteristics like (profession, work experience, types of health facility,and educational level)
- Availability of essential STI drugs,
- Availability of STIs Equipments,
- Human recourse.(# of clinicians and trained clinicians on SM), and
- Availability of STIs services and treatment provision approach.

4.8. Operational definition:

Sexually transmitted infections: - The term "STI" refers to a category of infections that are spread through sexual contact. STI-causing organisms can also be transmitted non-sexually, for as by blood products. (18)

Quality of care:- "quality measurement stuff for structure, and process, if >75 it classified as "Good quality" and if the score is less than 75%, it classified as "Not good quality" of care" (19).(20)

Syndromic management:- These are easily identifiable groups of symptoms and signs and provide treatment for the most common organisms causing the syndrome. "Syndromic management is simple, assures rapid, same-day treatment, and avoids expensive or unavailable diagnostic tests" (21).

Health care providers: In this study, those professionals providing STIs services, as well as the staffs directly involved in this work are Doctors, Nurses, midwives, HO, and Residents.

4.9. Ethical consideration

Formal support letter was taken from Addis Ababa University Department of Midwifery to Asella public health institutions. The purpose of the study was clearly informed for service providers. An information sheet was given to all the participants outlining the study purpose and process to be followed. Informed consent was sought from every of the clinicians to participate in the study.

Confidentiality and privacy was maintained during the study by keeping the names of the respondents unnamed. Permission was granted by the Department of Midwifery to conduct the study. The Research and Ethics Committees of the Addis Ababa University approved the research protocol and gave ethics clearance, respectively. The result of the study was reported back to the clinicians and together with the LSA health management team an action plan was developed to correct the identified problems.

4.10. Dissemination of the result

Following achievement of the study result of the study was presented to Addis Ababa University College of Health Sciences School of Nursing and Midwifery department. Result of the document will submitted to Asella public health institutions for planning and interventional purpose. The result will also be submitted for the concerned governmental body and NGOs working on STI at city and national level as well for those individual who want to conduct further research on it. An attempt for publication was through at scientific journals.

5. RESULTs

5.1. Socio-demographic Information

Thirty-seven clinicians out of the total of one hundred twenty-nine were interviewed for this study, eighty-nine 89 cards were evaluated, two health clinics, and one hospital were observed. 10 (27%) were doctors of medicine.

Table 1 Socio demographic characteristics of clinicians in public health facilities of Arsi Zone, Asella town, Ethiopia, 2022.

Variables		N	Percent
Age of clinicians	≤ to 29	13	35.1%
	30 to39	13	35.1%
	40 to 49	5	13.5%
	≥ 50	6	16.2%
Religion	Orthodox	10	27.0%
	Muslim	17	45.0%
	Protestant	10	27.0%
Marital Status	Single	23	62.2%
	Married	12	32.4%
	Divorced	2	5.4%
Level of Education	Diploma	7	18.9%
	BSC	14	37.8%
	HO	4	10.8.4%
	Medical Dr.	10	27.0%
	Gynacologist	2	5.4%
Work Experience	<one year	16	43.2%
	1 to 5 years	11	29.7%
	6 to 10 years	6	16.2%
	≥10 years	4	10.8%
Health Facility	Asella Referal Hospital	48	51.7%
	Halila HC	28	31.5%
	Asella H/C	15	16.9%
Gender	Female	59	66.3%
	Male	30	33.7%

5.1. Structural Quality

5.1.1. Availability of Equipment's

There the structural quality by the availability of Equipment was 77.78%. From the observation, the 3 health facilities have examination coaches and functional examination lights in the consultation room 100%. All of the health facilities have no vaginal speculum in STI consultation rooms. STI/HIV prevention and treatment client education materials are absent from all but one healthcare facility. However, none of the client education materials were written in the regional tongue. The hospital contains five adult consultation rooms, compared to an average of three in health facilities, however there is no special space for STIs.

5.1.2 Health personnel

The number of clinicians working at the STI clinic in the Hospital was 21. Whereas the number of clinicians in health centers was 17. Only 12 (71%) and 8 (38%) of the clinicians employed by health institutions, respectively, received training on the care of STI syndromes in health centers and hospitals, according to the heads of those facilities. Of the 37 doctors, 7 (58%) and 4 (50%) received training in the care of STI syndromes in hospitals and health facilities, respectively, throughout the study period.

5.1.3. STI drug availability

As mentioned in Table 2 below, the study revealed that the availability of drugs like Azitromycinein, metronidazole, and ceftriaxone was 100%. Whereas 33.3 % of Acyclovir was found in the stock. The total drug availability currently in stock was 83.3%.

Table 2 The drug supply for syndrome management of STIs in 3 public health facilities of Arsi Zone, Asella town, Ethiopia 2023

Drugs	Currently in stock		Currently out of stock		LM in stock		LM out of stock	
	#	%	#	%	#	%	#	%
Azitromycinein	3	100%	0	0	1	33.3%	2	66.7%
Metrendazole	3	100%	0	0	1	33.3	2	66.7%
Erythromycin	2	66.7%	1	33.3	0	0	3	100%
Ceftriaxone	3	100%	0	0	1	33.3%	2	66.7%
Byzantine.	3	100%	0	0	2	66.7%	1	33.3%
Acyclovir	1	33.3%	2	66.7	3	100%	0	0%

Key: LM- last month

5.2. Processes quality of STIs Services

In general, the process quality of service was 85.5%. Only 67 (75.3%) of the 89 STI patient cards that were assessed as a whole were granted for Right Patient, drugs, doses, frequency, and duration, meaning that the physicians appropriately treated the patients and that the cards matched the national recommendations. Due to the lack of private clinics inside the facilities, all medical facilities did not offer services to STI patients on a private basis. RPR testing was carried out 100% on-site in all healthcare facilities. Every medical facility has a penile model, and in their STI departments, they teach STI patients how to use condoms.

Condoms are available in family planning, and Volunter counceling units at all healthcare facilities, however they are not available for use by anyone within the facility's grounds. Partner notification cards are present in 2 (66.7%) of the healthcare facilities.

5.3 Overall quality of service

According to the aforementioned statistics, process quality was 85.5% and structural quality was 72.36% for services. The overall service quality for treating STIs syndromically in three public health facilities was 78.9%.

5.4. Knowledge of Clinicians

As mentioned in the table3 below, the overall clinicians' knowledge of the treatment of STIs syndrome approach was 78.4%. Regarding each knowledge assessment on vaginal discharge 34(91.9%), use of appropriate drugs 26(70.3%), and the knowledge of clinicians on the right Patient, drugs, doses, frequency, and duration was 75.3%

Table 3 Clinicians knowledge on Treatment of SM at public health facilities of Arsi Zone, Asella town Ethiopia 2023

		N	Percent
Vaginal Discharge	Correct	34	91.9%
	Incorrect	3	8.1%
Urethral Discharge	Correct	32	86.5%
	Incorrect	5	13.5%
Genital Ulcer	Correct	29	78.4%
	Incorrect	8	21.6%
The drugs in place of Azithromycin	Correct	26	70.3%
	Incorrect	11	29.7%
Knowledge of clinicians	Knowledgeable	29	78.4%
	Not knowledgeable	8	21.6%
Right Patient, drugs, doses, frequency, and duration from patient card of secondary data	Yes	67	75.3%
	No	22	24.7%

5.5. Associated Factors with quality of STI service

As shown in Table 4, a binary logistic regression analysis, the work experience of clinicians was (COR=4.66, 95% CI: (0.96, 22.46)), Knowledge of clinicians was (COR=, 0.016, 95% CI (0.001, 0.18)), level of Education of clinicians (COR=0.214, 95% CI. (0.045, .032)) was with the quality of STI services at the p-value. In addition, the health facility and treatment strategy had a strong correlation with the caliber of STI services (COR = 0.132, 95% CI (0.040, 0.435) and COR =0.236, 95% CI (0.082, 0.68) respectively, according to secondary data. In order to control the confounding impact, all previously indicated variables as well as those with a P-value of < 0.25 in crude analysis were once more added to the multivariate logistic model.

Therefore, based on primary data, there was a significant association between not knowledgeable clinicians and the caliber of STI services (AOR=0.014, 95% CI (0.001, 0.211)). The quality of STI services was strongly correlated with health facility (AOR =7.78, 95% CI: (2.24, 26.97) and treatment technique (AOR =4.23, 95% CI: (1.36, 14.47) from secondary data. The clinicians who work in Hospitals provide quality of STIs services 8 times more likely than health centers to provide quality of STIs services.

Table 4 Predictors for quality of STIs service, at Asella town , Arsi Zone, Ethiopia 2023

Variables		quality of STI service		COR (95% CI)		AOR (95%CI)		P-Value
		Not	Yes					
Work experience	< 5 years	18	3	4.66	(0.96, 22.46)	0.168	(0.001, 23.02)	0.72
	>/= 5years	9	7	1		1		
Level of Education	Diploma &BSC	3	18	0.214	(0.045, 1.032	1.607	(0.015, 17.76)	0.72
	Msc and above	7	9	1		1		
Knowledge	Not knowledgeable	3	26	0.016	(0.001, 0.18)	0.014	(0.001, 0.211)	0.002
	Knowledgeable	7	1	1		1		
Health Facility	Hospital	4	42	0.132	(0.040, 0.435	7.78	(2.24, 26.97)	0.001
	Health centers	18	25	1		1		
Treatment Approach	Syndromic	12	56	0.236	(0.082, 0.68)	4.43	(1.36, 14.47)	0.014
	Etiologic	10	11	1		1		

Key = COR= Crud Odd Ratio, AOR= Adjusted Odd ratio

6. DISCUSSION

The results of this study demonstrate that all healthcare facilities followed national standards for the management of STI syndromes. This is better than the results of a study done in Gamo Gofa, where it was discovered that none of the medical facilities had National STI Syndromes Management Guidelines. Clinicians should receive training on the management of STI syndromes in order to adhere to the guidelines and treat patients effectively. But just 54% of the clinicians in this study had formal training. This result is greater than that of the study conducted in Gamo Gofa, which included doctors who treat STIs at public health institutions and found that 12.8% of them had specialized training in Syndromic management. (12).

In addition, this finding was higher than the study conducted in Western Cape., almost 50% of the professional nurses got in-service training in Syndromic management of STIs. Generally, in this study the knowledge of clinicians varied by syndrome type. The clinicians treating vaginal discharge correctly were 91.9%, Urethra discharge at 86.5%, and Genital ulcer at 78.4%. The number of professionals who correctly identified the treatment for male urethral syndrome, vaginal discharge, and genital ulcers was almost all 13; this result was lower than that of the study conducted in Umjindi. (14). This deference is may be due to study time and places.

Of the 89 cards of STI patients assessed in this study 67 (75.3%) were completed accurately by the clinicians. Using the national criteria and properly treating the patients, the treatment was given for the appropriate patient, right medicine, right dose, right frequency, and right duration. This result is significantly higher than that of the study conducted in Gamo Gofa, where 120 STI patient cards were analyzed in total. Of those 120 cards, only 10 (8.3%) appropriately followed the national recommendations and used the syndromes approach to treat the patients.(12).
However, this result is significantly worse than that of the study done in Umjindi, Western Cape. Despite the fact that the record reviews revealed that all STI patients received the appropriate medication for their diagnosis, (14).

In this study, hospital-based physicians were 8 times more likely to offer high-quality STI care than physicians at health centers (AOR =7.78, 95% CI: (2.24, 26.97) . Contrary to the results of the Gamo Gofa study, this conclusion indicates that health center employees are 5 times more likely to be familiar with urethral discharge than hospital employees (12).

But the study of this finding is lower than the study conducted in Namibia 86% of the doctors follow syndrome management in treating STI patient (16). All these discrepancies may be due to the provision of training on syndrome management of STIs as well as study time.

Strength of the study

The results of the study have significant theoretical and practical ramifications for determining the level of quality for STIs service.

limitation of the study

There are several limits that merit consideration when interpreting the results. 1st. the absence of qualitative data on STIs client interviews. 2nd. The absence of private hospitals and clinics. Future research should consider all of the above.

7. CONCLUSION AND RECOMMENDATION

CONCLUSION

The study found that, generally speaking, the availability of National STI syndrome management guidelines, examination lights, adequate availability of STI drugs, and adequate knowledge of clinicians allowed for proper treatment of STI patients at public health facilities in Arsi Zone Asella town. To develop a setting where PHC facilities can offer high-quality STI care, more effort needs to be done. Drugs like Acyclovir and Erythromycin, as well as other essential supplies, equipment, and training for clinicians in the syndrome approach, were, however, in low supply at some clinics.

RECOMMENDATION

Therefore depending on the finding, the researcher suggested the following for the federal and regional health bureau, NGOs, and health management teams. The regional health bureau and federal health bureau should work aggressively by separating STI clinic available in the health facilities. NGOs should provide continuous training for clinicians on STI Syndromic approach. The health management teams should work strongly on adequate availability of STI drugs, equipments, and supplies.

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8. APPENDIX

ADDIS ABEBA UNIVERSITY

COLLEGE OF MEDICINE AND HEALTH SCIENCES

DEPARTMENT OF MIDWIFERY

8.1. Information sheet for interviewee

Topic: assessing quality of care for sexually transmitted infections on syndromic case managementand factors associated among health care providers at public health institutions in Asella town, arsi zone Oromia regional state, Ethiopia, 2022 .quantitative study.

Investigator:- Kimem Eshetu

The intention of this research is to conduct a baseline assessment that will be used as a point of reference for future assessment in improving the quality of care in STI services. Permission to conduct this study will be obtained from the Addis Ababa University College of Medicine And Health Sciences Department Of Midwifery to ensure confidentiality.

Confidentiality

Your name will not be written on any of the questionnaires forms. Your responses are completely confidential. You do not have to answer any questions that you do not want to response .It is true that the achievement of this study depend on your answer. So, thank you .**Contacts**

If you have any question, suggestion comments or anything that is not clear; please contact me;

Phone number: +251-920181604 Email: et328ekimem@gmail.com.

Finally, I would like to express appreciativeness for taking time to hear the information given and willing to participate in the study. If you are clear with the information provided and agree to participate, please sign the next page on the consent form. If you have any questions, please feel free to ask me at any time. Thank you very much.

CONSENT FORM

I have read the above information sheet, and give my consent to be interviewed. I understand that any comments that I make, or answers that I give, will be used as the basis for the improvement of the quality of care for the STI management program in Asella town.

This consent is given on the condition that no comments was directly attributed to me, nor can they be traced back to me, and that the interview was be treated in strictest confidence by the research team.

Signature:…… Date:……...

8.2. STI QUALITY OF CARE ASSESSMENT QUESTIONNAIRE

INSTRUCTIONS:

Please fill out this evaluation by:

1. Interviewing a clinician and the head of health facilities
2. Observing the facilities, equipment and supplies, and
3. Examining patient medical records

Region: ……

Zone: ……

Health facility name: ……..

Telephone: …….Fax: ……..

Date of visit: ……../ ……../ ……/ Time of visit: ..…h……

Day /month /year

Interviewer: _____ sign_____

Supervisor _____ sign _____please follow the instructions strictly

Part 1. Socio demographic characteristic of clinicians:

S.N	Question	Response	Skip
1	Age(in years)	1. Less than or equal to 29 2. 30 to 39 3. 40 to 49 4. 50 to 59 5. 60 and above	
2	Marital status	1. Single 2. Married 3. Divorced 4. Widowed 5.separated	
3	Religion	1.Orthodox 2. Muslim 3. Protestant 4. Catholic 5. Other specify-----	
4	Profession	1.Diploma Nurse 2.BSc Nurse and above 3.Health officer . 4.Medical Doctor 5.Gynecologist 6.General practitioner	
5	work experience	1. Less than 1year 2. 1 to 5years 3. 6 to 10years 4. greater than 10years	
5	Health facilities type	1.Hospital 2.Health center	

Knowledge questions of clinicians

1	Is speculum examinations are done on all women with STIs?	1.Yes 2. No	
2	.. Is there dildo?	1.Yes 2. No	
3	Is that shown how to use condoms/	1.Yes 2. No	
4	Is syphilis RPR testing done ?	1.Yes 2. No	
5	For Urethral discharge	Drugs---------- Dosage---------- Frequency---------- Duration----------	
6	For Urethral discharge	Drugs---------- Dosage---------- Frequency---------- Duration----------	
7	For Genital Ulcer	Drugs---------- Dosage---------- Frequency---------- Duration----------	
8	For Discharge management alternative drugs?	Drugs---------- Dosage---------- Frequency---------- Duration----------	

THANK YOU FOR YOUR COOPERATION

PART -2. ACCESSIBILITY

from OPD unit leader from health institution

1. Does this facility offer STI treatment **at all times** during working time?

   Yes ☐ No ☐

2. Does this facility offer STI treatment as part of **after clinic hours** services?

   Yes ☐ No ☐

3. Are there consultation rooms in this facility? Yes ☐ No ☐

4. If Q. 3 is yes how many **consultation rooms** are there in this facility? _____

   b. If no, how many consultation rooms are used for STI care? _____

5. Are the following pieces of equipment available in all adult consultation rooms? Fill accordingly

	Total number in this facility:	How many are in working order?
I) Examination couch	_____	_____
a) Yes b) No		
II) Examination light	_____	_____
a) Yes b) No		
III) Vaginal specula	_____	_____
a) Yes b) No		
IV) Examination gloves	_____	_____
a) Yes b) No		

STAFF TRAINING

6. a. The total number of professionals working at this clinic_____ .

   b. How many clinicians working here have been on a formal training course in STI SM-----?

c. How many clinicians (doctors or nurses who examine and treat clients)are working today? ----

THANK YOU FOR YOUR COOPERATION!

PART 3. PROVISION OF SAFE TREATMENT: BY OBSERVATION

1. Are there current STI Syndromic management guidelines at this facility? Yes ☐ No ☐

2. Are STI Syndromic management guidelines available? Yes ☐ No ☐

3. Are there client education materials about STIprevention and treatment? Yes ☐ No ☐

4. Are these educational materials written in a local language?Yes ☐ No ☐

5. Is condom is available in this clinic? Yes ☐ No ☐

6. **Partner Notification**

Are Partner Notification letters available in all adult examination rooms? Yes ☐ No ☐

b. Are the cards written in a local language? Yes ☐ No ☐

STI DRUGS AND TREATMENT

7. Visit the pharmacy or drug store and ask the pharmacist or nurse the availability of essential drugs the following for STIs treatment.

Drugs	Currently in stock		Currently out of stock		LM in stock		LM out of stock	
	Yes	No	Yes	No	Yes	No	Yes	No
Azitromycinein								
Metrendazole								
Erythromycin								
Ceftriaxone								
Byzantine.								
Acyclovir								

Key: LM- last month

THANK YOU FOR YOUR COOPERATION!

Part-5 The following are for Secondary data from patient file.

The practice assessment that consisted of closed-ended questions and the answers were assessed according to the guidelines of syndromic management of STIs or not after reviewing the physicians' report in each patient's file as follows.

The patient sex Female ☐ Male ☐

(NB if female answer Q.1 and Q.3 but if Male answer Q. 2 and Q.3)

1. Is a women complained vaginal discharge? Yes ☐ No ☐

i.If yes What was the symptom? _____-

ii .What was the drug? _____

iii.What was the dose?? _____-

iv.What was the frequency of the drug?? _____

v.What was the duration?? _____

2 . Is a man complained urethral discharge? Yes ☐ No ☐

i. If yes What was the symptom? _____-

ii .What was the drug? _____

iii.What was the dose? ? _____-

iv.What was the frequency of the drug? ? _____

v.What was the duration? ? _____

3 . Aman or a woman with a genital ulcer? Yes ☐ No ☐

i. If yes What was the symptom? _____-

ii .What was the drug? _____

iii.What was the dose? ? _____-

iv.What was the frequency of the drug? ? _____

v.What was the duration? ? _____

4. This patient is treated by Syndromic Approach ☐ Laboratory Investigation ☐

5. If the answer of Q.4 is SA is the patient is treated correctly according to guideline?

Yes ☐ No ☐

6. Is laboratory request is done first before starting the treatment?

Yes ☐ No ☐

7. If Q.6 is yes fill the following

7.1.Study Number

7. 2.Clinic Name_____

7. 3.Registration Card Number/Record Number----------

7. 4.Date Specimens Collected Day//Month/Year----------

7. 5.Date Report Sent OutDay//Month/Year----------

7. 6.T.vaginalis (wet mount) Positive ☐ Negative ☐

7. 7.T. vaginalis PCR (tampon) Positive ☐ Negative ☐

7.8. N. gonorrhea PCR (urine) Positive ☐ Negative ☐

7. 9.N. gonorrhea PCR (cervical/tampon)Positive ☐ Negative ☐

7. 10.Chlamydia PCR (cervical/tampon)Positive ☐ Negative ☐

7. 11.Chlamydia PCR (urine) Positive ☐ Negative ☐

7. 12.Syphilis RPR Positive ☐ Negative ☐

7. 13.Syphilis TPHA/TPA Positive ☐ Negative ☐

7. 14. If other specify it _____

8. a. What was the Lab. Result _____

b. What was the drug? _____

c. What was the dose? ? _____-

d. What was the frequency of the drug? ? _____

e. What was the duration? _____

9. Is the Q. 8 for right patient, right drug, right dose, right frequency and right duration of the treatment is given correctly? Yes ☐ No ☐

10.Is the patient appointment was given for follow-up ? Yes ☐ No ☐

11. If Q.10 is yes, is the patient was attends follow-up? Yes ☐ No ☐

12. If Q. 11 is yes What was the final outcome of the treatment?