CLIENT SATISFACTION AND ASSOCIATED FACTORS AMONG CLIENTS RECEIVING ANTIRETROVIRAL THERAPY SERVICES AT PUBLIC HOSPITALS IN HARAR TOWN, EASTERN ETHIOPIA

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ABSTRACT

Background: The issues of client satisfaction about antiretroviral therapy services needs more attention as indicate the outcome of quality health services. Even though different studies conducted on client satisfaction in different countries, there is no adequate data on client satisfaction with antiretroviral therapy services in Ethiopia including the current study area.

Objective: To assess the magnitude of client satisfaction and associated factors among clients receiving antiretroviral therapy services at Public Hospital of Harar Town, Eastern Ethiopia from February 20 to March 20/2018.

Methods:-Hospital based cross-sectional study design was employed among 413 antiretroviral therapy clients. Structured translated questioner Amharic and Afan Oromo using trained data collectors was used to collect the data. The data were cleaned and entered onto Epi-data version 3.02 and exported to SPSS version 20 for analysis. A five point Likert scales was used to assess client satisfaction with antiretroviral therapy services. Bi-variable analysis and Crude Odds Ratio with 95% CI was used to see the association between each independent variables and the outcome variable by using binary logistic regression. The independent variables with p-value of ≤ 0.25 were included in the multivariable analysis to control confounding factors and finally p-value < 0.05 was considered as statistically significant.

Result: Overall client satisfaction with antiretroviral therapy services was 76.9 %[(95% CI: 72.6, 80.6)].Those not attending formal and attending primary education [(AOR=3.7,95% CI:1.75,8.12)] and [(AOR=3.9,95% CI:1.66,9.32)], low wealth index [(AOR=2.8, 95 % CI: 1.27, 6.28)], longer duration on treatment [(AOR=2.7,95 % CI: 1.46, 5.5.20)], shorter waiting time [(AOR=5.4,95 % CI: 2.52, 11.57)],disclosure [(AOR=3.7, 95 % CI:1.59, 8.49)],seen by the same health care providers [(AOR=2.0, 95 % CI: 1.06, 3.82)], those loss of medical records [(AOR=0.26, 95 % CI:0.13,0.50)] and social supports [(AOR=2.3, 95 % CI:1.12,4.63)] were significantly associated with client satisfaction with antiretroviral therapy services.

Conclusion: The overall client satisfaction with ART services in the two public hospitals were relatively high. Educational status, not attending formal and attending primary education, low wealth index, longer duration on treatment, shorter waiting time, seen by the same health care providers, loss of medical records and social support were an independent predictors of client satisfaction. Therefore, much efforts should be needed to improve the clients waiting time, loss

of medical records, social support and disclosure status to promote client satisfaction with antiretroviral therapy services.
***Key words**: Antiretroviral Therapy, Client Satisfaction, Ethiopia, Harar*

1. INTRODUCTION

Satisfaction can be defined as the personal evaluation of the clients toward antiretroviral therapy services and the extent to which clients feel that their needs and expectations are being addressed by the services providers (Kagashe and Rwebangila, 2011).The concept of client satisfaction is widely used to assess quality of health care services (Vinagre and Neves, 2008).

Client satisfaction had multi-dimensional healthcare impacts towards ART services. A potential link between client satisfaction and compliance with treatment relay on individuals' satisfaction with ART services (Carly et al., 2014).Dissatisfaction can produce barriers and reduce client's willingness to start or to continue ART treatment (Nabbuye et al., 2011).

Both in developed and developing countries the concern of client satisfaction were not an emerging phenomenon, because clients are the main stakeholders of the health care organizations (Yang et al., 2011). On the other hand, satisfaction can be influenced by treatment process and treatment outcomes. Even though, done different activities to ensure client satisfaction still very challenging to achieve universal client satisfaction especially in developing countries like Ethiopia (Reda and Biadiglign, 2012).

In the past many years, different health care researchers reported that the behaviours of clients more satisfied with the ART services adhere to their treatment, maintained follow up schedule, build trust with health care providers, increase retention to care and had good health outcomes than counter parts (Doris, 2010). Thus, ensuring client satisfaction has a great impact on quality of health care services and addressing client needs towards the services (Yang et al., 2011).

Minimizing the emergence and transmission of drug-resistant HIV is a critical aspect of the global response to antimicrobial resistance. Increasing prevalence of HIV drug resistance to commonly used antiretroviral drugs poses a threat to the HIV response, with the potential to fuel an increase in HIV incidence, mortality and treatment costs if not adequately addressed and ensured client satisfied toward the delivered ART services (WHO., 2018).

Client dissatisfied with ART services in Europe ranges from 35%-42.2% (Bach and Nhung, 2012; Syed et al., 2017). In Africa, client dissatisfaction with ART services were ranges from 0.4-48% (Oche et al., 2013; Natsayi Ch et al., 2014), whereas client dissatisfaction with ART services in Ethiopia ranges from 10.6%-42.4% (Shewaye et al., 2015: Ashenafi and Yibeltal, 2017; Feleke and Beminet, 2016).

One of the main objectives of growth transformation plan II of Ethiopian Federal Ministry of Health (FMOH) is the creation of good health care systems which satisfies the communities health care needs through the fulfilment of the required inputs, by delivering quality, safety, accessible, effective and responsive health care services by providing client centered equitable and high quality health care services for all that results improvements in health and productivity of the society in general (FMOH.,2015).

To improve the client satisfactions towards ART services, appropriate ART service provision must be taken into account and strengthening ART programs is important to promote quality of life and quality of ART services. Moreover, protecting client satisfaction can enhance the health care services by involving the clients in decision making and creating good relationship with HCPS (Muhammad and Hendry, 2012). In addition to this maintaining client satisfaction had great impact in preventing treatment failure, drug resistance and ultimately death of the client related to HIV/AIDS complications (Carly et al, 2014).

Even though different studies conducted on client satisfaction in different countries, there is no adequate data on client satisfaction with antiretroviral therapy services in Ethiopia including the current study area. Therefore, this study assessed and identified the current magnitude of client satisfaction and factor associated with client satisfaction towards ART services and forwarded possible recommendations to improve client satisfaction towards the ART survives at public hospital in Harar Town, Eastern Ethiopia

3. MATERIALS AND METHODS

3.1. Study Area and Période

This study was conducted in Harar Town at public hospitals from February 20 to March 20, 2018. Which is located 526 km away from Addis Ababa, the capital city of Ethiopia. Based on (CSA, 2008) the total population of Harar Town was 183,415 out of which females' accounts 91, 099 and the rest were male. From the total population 122, 057 (54%) of them were urban dwellers and the rest were rural dwellers. In Harar there are two public hospitals, one other governmental hospital (police). Two private general hospitals, 8 health centers and 26 Health posts. The two public hospitals had 5630 ever started on ART and 3435 currently on ART clients. This study was conducted in two public hospitals (Hiwot Fana Specialized University Hospital and Jugal Hospital), were comprehensive health care services and ART services delivered. The overall health care providers working both hospitals of ART clinics were nine (i.e. Four Nurses and one Doctors) in Hiwot Fana Specialized University Hospital and three Nurses and one Doctors in Jugal Hospital.

3.2. Study Design

Hospital based cross-sectional study design was employed.

3.3. Population

3.3.1. Source Population

All ART clients attending public hospitals in Harar Town

3.3.2. Study Population

All selected ART clients in public hospitals of Harar Town during the study period.

3.4. Inclusion and exclusion criteria

3.4.1. Inclusion

All ART clients who have follow up during the study period and stayed on treatment six and more than six months.

3.4.2. Exclusion criteria

ART clients with terminal illness and those clients not have willingness to participate on the study were excluded from the study.

3.5. Semple Size Détermination

The required Sample size of the first objective was determined using single population proportion formula taken from the study conducted in West Wellega (57.6 %) (Ashenafi et al., 2017)

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

$$n = \frac{(1.96)^2 * 0.576 * (1-0.576)}{(0.05)^2} = 375$$

Where; n = Minimum sample size for a statistically significant survey

z= is the significance level (at 5% significance level its value is 1.96)

p= is proportion of clients satisfied with antiretroviral therapy services.

d= is the margin of error (It has been taken as 5%).

Therefore the calculated sample size was 375 and by adding 10% of non-response rate the final sample size was =413

3.6. Sampling Technique and Procedures

In Harar Town, there are two public hospitals. Both of them were selected purposively based on service provision to the public and provision of comprehensive ART services. The total sample size was allocated proportionately for each hospital according to their client load of ART clinics. The average monthly trained of clients seen by health care provider for six months prior to data collection at Hiwot Fana Specialized University Hospital 1200 and Jugol Hospital 500. The sampling frame of this study was the list of clients selected from ART register. The study participants in each hospital were selected using systematic sampling methods. The first client was selected by lottery methods and the interval of the respondents for the interview was determined by dividing the average total number of clients per month receiving ART services at the two public hospitals from the previous month data. In Hiwot Fana specialized University hospital (k=N/n, 1200/266=5) and in Jugal hospital (k=N/n,

500/147 =3) then every 5th and 3rd were selected from two public hospitals respectively until the desired sample size of the study was achieved.

3.7. Data CollectionMethods

3.7.1. Data collection instruments

The data collection instruments were developed by reviewing different kinds of literatures to increase comparability of the finding and consistency. The different published articles were searched from varies search engines like Google, Google Scholar, Hinari and Pub Meds. Data were collected using pre-tested structured interviewer administered questionnaire. The questionnaire contains socio-demographics characteristics, Health facility and health care provider's related characteristics. The questionnaires first developed in English and then translated to Amharic and Afan Oromo language then back translated to English to maintain its consistency (Oche et al., 2013; Ashenafi and Yibeltal, 2017*)*.

3.7.2. Data collectors and data collection procedures

Four data collectors and two supervisors who were fluent both in Amharic and Afaan Oromo and who do not working in the study sites were recruited for the data collection. Two days (one day theoretical and one day practical) training about the objectives of the study and the procedure to be followed were given for data collectors and supervisors by the principal investigator before starting the actual data collection.

The data collection was conducted in an institution based exit interview by using structured interviewer administered, pre-tested (on 5% of the sample size from Dilchora hospital one month prior to the actual data collection period to identify gaps on the designed questionnaires), Amharic and Afaan Oromo questionnaires. Those ART clients who fulfil the inclusion criteria and willing to participate were interviewed for an average duration of 30 minutes after they get necessary services from the ART clinics of the hospitals. On site supervision was carried out during the whole period of data collection on daily basis by the supervisors and principal investigator.

3.8. Variables

3.8.1. Dépendent variable

Client Satisfaction with ART services

3.8.2. Independent variables

Socio-demographics factors: Age, sex, educational status, marital status, occupational status, ethnicity, residence and wealth index.

Client related factors:

Duration on ART treatment, disclosure, social support, maintained follow-up schedule and willingness to visit and recommend for others.

Health facility and Health care Provider related Factors:

Waiting time, attended by the same health care providers, provision of supportive kits, health education, cleanness of waiting area and toilet and loss of medical records

3.9. Opérationnel Définitions

Assessing Client Satisfaction: A five-point Likert scale ((1) very dissatisfied, (2) dissatisfied, (3) neutral, (4) satisfied and (5) very satisfied) were used. All five measuring items on the likert scale to measure satisfaction together yield a maximum score of 25 and a minimum score 5. Five item were recoded as satisfied and dissatisfied then summed and transformed to give satisfaction score from 0 % to 100% (Tayelgn et al., 2011).

Overall client satisfaction: Clients who were satisfied in greater or equal to 75% of the items after satisfaction question computed to gathers were categorized under “satisfied” and those who were satisfied less than 75% of the items were categorized as “dissatisfied” (Kurabachew et al., 2015).

3.10. Data Quality Control

A structured interviewer administered questionnaire was first prepared in English and translated to Amharic and Afaan Oromo language and then translated back to English by independent language expert in order to ensure its consistency questionnaire was pre-test was conducted on 5% of the sample size to ensure the validity of the tool, then correction was made before the actual data collection. Principal investigator and supervisors were checked to ensure completeness and consistency of the information collected and immediate action was taken accordingly.

3.11. Data processing and analysis

The completed questionnaires were checked for completeness and consistency by the principal investigator and supervisors .The cleaned data were entered on to Epi-Data version 3.02 then the data were exported to SPSS version 21 for analysis. The descriptive data were presented

using numerical summary measures, frequency tables, and figures for analysis. All variables were taken into the multivariable model by considering a p-value of ≤ 0.25 to see the correlation between independent variables. Finally, the results of bivariate and multivariable logistic regression analysis were presented in a COR and AOR with 95% confidence intervals and P – value ≤ 0.05 was considered statistically significant. To observe the internal consistency of the items loaded on each factor reliability test was performed and reliability coefficient (Cronbach's Alpha) greater than 0.7 was used as cut off point (0.847 in this study)

3.12. Ethical Considérations

Before conducting the study, first the ethical approval letter was obtained from Haramaya University Institutional Health Research Ethical Review Committee (IHRERC) and the official letter of cooperation was given for the two public hospitals administrative offices. Informed, voluntary, written and signed consent was obtained from the medical directors of the hospitals.

After getting permission from the medical directors of the hospitals, it was given a clear description about the study title, duration, procedure and possible risks and benefits of the study for each study participants. Hence, after assured the issue of confidentiality, voluntary, written and signed informed consent was obtained from each selected study participants to confirm willingness to participate in the study. For participants age less than 18 years informed, voluntary, written and signed consent was obtained from their parents or guardians. Moreover, it was ensured and respected that all clients' have the right to self-determination and autonomy.

Participation on this study was fully voluntary and clients can withdraw from the study at any time.

RESULTS

Socio-Demographic Characteristics of Study Participants

In this study, 413 interviews were secured in two public hospitals. However, only 407 questionnaires were completed and included in the analysis making a response rate of 98%. The mean (±SD) age of the participants was 33.1 (± 12.2) years. From out of the total study participants, nearly three fifth 233 (57.2%) of the participants were female and 145 (35.6%) found within the age group of 31-40 years.

Regarding religions about 131(32.2%) of them were Muslims and almost fifty percent 203 (49.9%) of the participants were Orthodox by religions. Nearly forty percent 159 (39.1%) of the participants were Amhara and more than one third 145 (35%) of them were Oromo by ethnicity. Nearly half 196 (48.2%) of the participants were married. Related to residence majority of the participants were from urban 384 (94.3%)**.(Table-1)**

Characteristics of Clients and Health Facilities

From the total out of 407 study participants, more than half 290 (53.9%) of them stayed on treatment for less than four years and the majority of the participants about 250 (61.4 %) receives ART services less than 30 minutes from the hospital ART clinics. Nearly ninety percent of the study participants 363 (89.2%) were disclosed their HIV/AIDS sero status. From participants who had disclosed their serostatus 260 (63.9 %) of them were disclosed to their parents**. (Table 2)**

Magnitude of Client Satisfaction with Antirétroviral Therapy

The magnitude of client satisfaction with antiretroviral therapy services was [76.9% (95% CI: 72.7, 81.1)]. Client satisfaction with the main client satisfaction items includes, with clinical triage 368(90.4%), courtesy and respect of health care providers 321 (78.9%), location of ART clinics 341(83.8%), explanation given by health care providers about ART treatment 374

(91.9%), maintaining privacy 355 (87.2%),relationship with health care providers 375 (92.1%),counselling services 380 (93.4%) and convenience in getting medical services 344 (84.5%) were clients respectively satisfied. Whereas, with help fullness of medical record room staff only 151 (37.1%) of clients were satisfied.

Factors Associated with Satisfaction among Clients Receiving ART

Those variables with P- value ≤ 0.25 in the bivariable analysis were entered to multivariable analysis using enter method to identify the independent factors of client satisfaction. Clients who had not attend formal and completed primary education were 3.7 and 3.9 times [(AOR=3.7, 95%CI: 1.75, 8.12)] and [(AOR=3.9, 95% CI: 1.66, 9.32)] more likely to be satisfied with antiretroviral therapy services compared to clients who had college and above educational levels. Clients who had low wealth index levels were 2.8 times [(AOR=2.8, 95 % CI: 1.27, 6.28)] more likely to be satisfied than client's who had high wealth index levels.

Related to duration to stayed on ART treatment, clients who had stayed on antiretroviral treatment more than four years were 2.7 times [(AOR=2.7, 95 % CI: 1.46, 5.20)] more likely to be satisfied than clients who had stayed on treatment less than four years. Waiting time, those participants seen by health care provider less than 30 minutes were 5.4 times [AOR=5.4,95 % CI: 2.52, 11.57)] more likely to be satisfied compared clients seen by health care providers more than 30 minutes.

The odds of client satisfaction with ART services was more than three times [(AOR=3.7, 95 % CI: 1.59, 8.49)] more common among clients who disclose their HIV/AIDS sero status to their parents than clients who didn't disclosed to their sero status for their parents. Related to clients seen by the same health care providers, clients who had seen by the same health care providers were 2.0 times [(AOR=2.0, 95 % CI: 1.06, 3.82)] more likely to be satisfied compared to clients seen by different health care providers.

Regarding loss of medical records, clients who were lost their medical records from the medical room during their follow up visits were 74% [AOR=0.26, 95 % CI: 0.13-0.50)] less likely to be satisfied than clients not lost their medical records. Moreover, related to social

supports, clients who had got social supports were 2.3 times [(AOR=2.3, 95 % CI: 1.12, 4.63)] more likely to be satisfied than client who didn't got social supports.

DISCUSSION

In this study, the overall client satisfaction with antiretroviral therapy services was more than three fourth [76.9% (95% CI: 72.7, 81.1)]. Regarding predictors not attending formal and attending primary education, low wealth index levels, longer duration on ART treatment, shorter waiting time, disclosure, seen by the same health care provider, loss of medical records and social support were an independent factors of client satisfaction with antiretroviral therapy services.

The overall client satisfaction with antiretroviral therapy services of this study is higher than studies conducted in South Africa (52%) (Natsayi et al., 2014) and in Ethiopia, Wellega (57.6%) (Ashenafi et al., 2017), Hosana (70.1%) (Feleke & Beeminet, 2016) and Tigray (75.2%) (Kiflay et al., 2018). The possible explanation for higher than other studies might be due to accessibility of good health care service and better health care coverage in the study areas and also the presence of different support giving stake holders in the study areas. Moreover, might be due to sample size variation and transportation accessibility.

The finding of this study is lower than the studies conducted in Vietnam (84.4%), (Bach and Nhung, 2012) and (92.3%), (Bhagat et al., 2011), South Africa (98%),(Selente et al., 2014) and (93%), (Muhammad and Hendry, 2012), Cameron (91.2%), (Buh et al., 2016), Nigeria (99.6%) ,(Oche et al., 2013) and Ethiopia in Tigray Region (89.6%) (Shewaye et al., 2015).The possible explanation for lower than other studies might be due to the countries had improved health care systems and the socioeconomic status of the countries. Moreover, might got supports from different non-governmental organizations which gives invaluable improvements on service quality and client satisfaction towards ART services.

Clients who had not attending formal education and completed primary education were nearly four times more likely to be satisfied compared to who had college and above educational levels. This is in consistence with studies conducted in Vietnam (Bach and Nhung, 2012), Nigeria (Kayode et al., 2013), South Africa (Natsayi et al., 2014) and Ethiopia Tigray Region (Shewaye et al., 2015). The possible reason for in lined with this study might be due to the fact that clients who had not attend formal and completed primary education might have low expectation towards the delivered ART services due to this might have more satisfied than clients completed college and above educational levels. Moreover, the client satisfied with minimal service provisions they got from the health facilities and give more attention for counselling services which is delivered by health care providers during their follow up visits.

Clients who had low wealth index approximately three times more likely to be satisfied when compared with high wealth index status. This is in lined with the studies conducted in Vietnam (Bach and Nhung, 2012; Bach et al., 2015). The possible reason might be due to the fact that ART services are delivered free of charge and easily accessible for all clients who had ART follow up in hospitals and health centers.

The odds of client satisfaction was very common among clients stayed on ART treatment longer duration. Clients who had stayed on ART more than four years were nearly three times more likely to be satisfied than clients stayed on ART less than four years. However, the study done in Nigeria by (Oche et al., 2013; Kayode et al., 2013) and Kenya (Obinna et al., 2015) are inconsistant with this finding which stated that shorter duration on ART treatment makes the client more satisfied than stays long duration on ART treatments. The possible explanation might be clients who stayed on ART treatment longer duration they got access of important information, frequently counselled about the importance ART services by health care providers and adherence supporters. In addition to this, client might have good understanding about the importance of ART services and may have good adherence to ART treatment which leads to good treatment outcomes. Moreover, while the client stayed on ART treatment longer duration might build trust and good relationship with health care provider as well as with hospital staffs due to the fact that clients will be more satisfied with the delivered ART services.

Another important predictors of client satisfaction was waiting time. Clients seen by health care providers with less than thirty minutes were more than five times more likely to be satisfied than clients seen greater than thirty minutes. This is consistence with the studies conducted in Vietnam (Bach et al., 2015), Nigeria (Kayode et al., 2013) and Ethiopia Tigray Region (Shewaye et al., 2015). The possible explanation might be due to avoided unnecessary wasting of their time in the health facilities and the client might got more time to perform their daily activities in their work place. Moreover, clients not boredom with the hospital environment due to the fact that might be more satisfied if they get necessary ART services on time.

The odds of client satisfaction with ART services was more common among clients who had disclose their sero status to their parents. Clients who disclose their sero status of HIV/AIDS to their parents were nearly three times more likely to be satisfied when compared with clients doesn't disclose their sero status to their parents. This is consistence with the study conducted in Southern part of Ethiopia, Hosana (Ashenafi et al., 2017). The probable explanation might be those clients who disclose their serostatus can freely discuss about their treatments with their parents and others. In addition to this, clients might got supports from their parents and from different support giving organizations. Moreover, might develop good relationship with their family members and others due to this might be more satisfied with the delivered ART services from the hospital ART clinics.

The odds of client satisfaction was more common among clients who had seen by the same health care providers. Clients who had seen by the same health care providers were two folds more likely to be satisfied than clients seen by different health care providers. The possible explanation might be clients who had seen by the same health care providers will build trust on the health care provider and develop strong relation with them. In addition to this, it might create conducive working environment and freely discuss what they fill without any fear. Moreover, when the client and health care provider stay to gather for longer duration might be addressed their health problems due this clients more satisfied with the delivered ART services.

Regarding medical records, clients who had lost their medical records were seventy four percent less likely to be satisfied than clients who did not lost their medical records during

their follow up visits. The possible reason might be due to the fact that clients get their medical records during follow up visits not waste their time to get ART services and not create conflict with medical record room staffs, so that they might have good relationship with medical record staffs and with health care providers due to the fact that clients more satisfied with the delivered ART services. In addition to this, the probability of missing their ART drug will be low and might have good health outcomes.

Related to social support those clients got social supports from their family and other non-governmental organization were more than two times more likely to be satisfied than clients who had not got social support. This study is consistent with the study conducted in Nigeria by (Obinna, 2015).The possible reason might be due to get social supports that address their social problems which is incapable to solve by themselves. In addition to, this client who had social support might have good understanding about ART services. Moreover, clients who had got social support from support giving organization like, nutritional, economic, spiritual and legal supports might solve their immediate problem due to the fact that clients might satisfied more with ART services delivered in the hospital ART clinics.

Generally, this study tried to assess client satisfaction with antiretroviral therapy services and factors associated with client satisfaction with ART services and it can be an input for health facilities to provide client centered health care services. Regarding the strength and limitation of the study, data were collected from the client immediately before leaving the compound of the hospitals which helps clients to clearly remember about the delivered ART services to be asked and used to minimize recall bias. But, the study might have faced some limitations; such as generalization to the overall health facilities in Harar Town was not possible because the data collection was restricted to clients found in public hospitals of the Harar Town. Since the interview was taken place within the hospital setting, study subjects might refrain to express their dissatisfaction which leads to social desirability bias and also it is difficult to know the accurate value of each five measurement scale effects. Moreover, there is also limited related literature especially for some variables like, loss of medical records and clients seen by the same health care providers.

Table 1:- Socio-Demographic characteristics of study participants in public Hospitals, Harar Town, Eastern Ethiopia, 2018 (n= 407

Variables		Frequency	Percentage (%)
Sex	Male	174	42.8%
	Female	233	57.2%
Age	<20	57	14.1%
	20-30	123	30.2%
	31-40	145	35.6%
	41-50	82	20.1%
Religion			
	Muslim	131	32.2%
	Orthodox	203	49.9%
	Protestant	54	13.3%
	Others*	19	4.7%
Ethnicity			
	Oromo	152	37.2%
	Amhara	159	39.1%
	Harari	31	7.6%
	Tigray	39	9.6%
	Gurage	26	6.4%

Marital status		
Married	196	48.2%
Single	102	25.1%
Widowed/ Divorced	109	26.7%
Residence		94.3%
Urban	384	5.7%
Rural	23	
Educational status		
Unable to read and write	53	13%
Read and write	47	11.5%
Primary education (1-8)	176	43.2%
Secondary education	109	26.8%
College and above	22	5.4%
Occupational		
Farmer	13	3.2%
House wife	90	22.1%
Merchant	82	20.1%
Governmental	52	11.5%
Daily laborar	121	30.1 %
Student	49	12.0%
Family size		
< =4	366	89.9%
< 4	41	10.1%
Wealth index		
Low	126	31.4%
Middle	132	32.4%
High	149	36.6%

Table 2 Medical Characteristics of the study participants in public Hospitals, Harar Town, Eastern Ethiopia, 2018 (n= 407)

Variable		Frequency (N)	Percent
Duration on treatment	>= 4 years	188	3.9%
	< 4 years	269	66.1%
Waiting time	<30minutes	352	86.7%
	> = 30minute	55	13.3%
Disclosure	Yes	363	89.2%
	No	44	10.8%

Seen by same HCPS	Yes	284	69.8%
	No	123	30.2%
Provision of supportive kits	Yes	391	96%
	No	16	4%
Perceived stigma and discrimination	Yes	33	8.2%
	No	374	91.8%
Home based care services	Yes	127	31.2%
	No	280	68.8%
Loss of medical records	Yes	188	46.1%
	No	227	53.9%
Social supports	Yes	268	65.8%
	No	139	34.2%
Health education	Yes	326	80%
	No	81	20%
Maintained follow up schedule	Yes	301	74%
	No	106	26%
Cleanness of waiting area and toilet	Yes	301	74%
	No	106	26%
Willingness to visit and recommend	Yes	388	95.3%
	No	19	4,7%

Figure 3: Magnitude of client satisfaction with major health care dimensions before computing to gathers in public hospital Harar Town, Eastern Ethiopia, 2018 (n=407)

Table 3: Bi-variable and multivariable logistic regression analysis of factors associated with client satisfaction with antiretroviral therapy services in Harar Town. 2018 (n=407)

Variables	Satisfied No (%)	Dissatisfied No (%)	COR(95% CI)	AOR(95%CI)
Educational status				
Not formal education	49(60.5)	32(39.5)	0.8(0.33,2.32)	**3.7(1.75,8.11)****
Primary education	158(80.6)	38(19.4)	2.3(1.54-4.79)*	**3.9(1.66,9.31)****
Secondary education	92(85.2)	16(14.6)	3.2(1.88-7.51)*	0.7(0.21,2.49)
College and above	14(63.6)	8(36.4)	1.00	1.00
Wealth index				
Low	102(81)	24(19)	1.5(0.82,2.59)	**2.8(1.27,6.28)****
Middle	100(75.8)	32(24.2)	1.1(0.62,1.84)	0.90(0.48,1.94)
High	111(74.5	38(25.5)	1.00	1.00
Duration on ART Rx				
>=4 years	163(86.7)	25(13.5)	2.9(1.80,4.98)	**2.7(1.46,5.20)****
<4 years	150(68.5)	69(31.5)	1.00	1.00
Waiting time				
<30 minutes	282(80.1)	70(19.9)	3.1(1.72,5.65)*	**5.4(2.52,11.57)****
>=30 minutes	31(56.4)	24(43.6)	1.00	1.00
Disclosure				
Yes	297(81.8)	66(18.2)	7.8(4.03,15.4)*	**3.7(1.59,8.49)****
No	16(36.4)	28(63.6)	1.00	1.00
Seen by the same HCPs				
Yes	236(83.1)	48(16.9)	3.2(1.94,4.74)*	**2.0 (1.06,3.82)****
No	77(62.6)	46(37.4)	1.00	1.00
Loss of medical records				
Yes	123(68.3)	57(31.7)	0.42(0.26,0.67)*	**0.26(0.16-0.56)****
No	190(83.7)	37(16.3)	1.00	1.00
Social support				
Yes	235(86.7)	36(13.3)	4.8(1.94,5.10)*	**2.3(1.12,4.63)****
No	78(57.4)	58(42.6)	1.00	1.00
Maintained follow-up				
Yes	234(81.5)	53(18.5)	2.3(1.42-3.71)*	1.1(0.52,1.98)
No	79(65.8)	41(34.2)	1.00	1.00

Conclusion

In conclusion, the percentage of clients who expressed satisfaction with HIV treatment services at the Harar public Hospital was high. There was a relationship between client satisfaction with Educational status, wealth index, longer duration on ART treatment, shorter waiting time, loss of medical records and social supports

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Conflict of Interests

I declare that there is no conflict of interest associated with the publication of this manuscript

Authors' Contributions

Taye M.Wrote the proposal, participated in data collection, analysis, interpretation, drafted the paper and reviewing of the manuscript. Yadeta. D and Biftu. G also participated in data analysis, technical support and subsequent revision of the paper.

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