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Anti Retroviral Therapy Adherence and Associated factors among People living with HIV/AIDS in Wolaita Zone, Southern Ethiopia: Institution Based Cross Sectional Study

KassahunTafesse Hidoto*

School of Public Health, College of Health Sciences and Medicine, Wolaita Sodo University, Sodo, Ethiopia

**Corresponding author*

Abstract

Antiretroviral therapy (ART) is a key intervention in the prevention and control of Human Immunodeficiency Virus (HIV/AIDS). Lack of strict adherence to ART is considered to be one of the key challenges to AIDS care providers worldwide. Therefore; the main objective of this study is to assess the magnitude of ART adherence and its determinants among people living with HIV/AIDS at Wolaita Zone selected health facilities, Southern Ethiopia. An Institution based cross-sectional study design was conducted at ART units of the study area from August to September 2017/18. Systematic random sampling technique was employed to select 160 individuals with interviewer administered questionnaire. Both bivariate and multivariate logistic regression analyses were done. In the multivariate analysis, variables with P-value ≤ 0.05 were considered statistically significant between independent variables and the outcome variable (medication adherence). Adjusted odds ratio (AOR) with a 95% confidence interval was used to determine the strength and direction of the association. The study revealed that overall prevalence of ART adherence was 92%. Adherence was found associated with knowledge on ART adherence [COR=16.143(95%CI: 1.086, 240.046], treatment schedule fitting with daily routine activities [COR=56.613(95%CI: 2.592, 1237.000] and medication side effect [COR=0.029(95%CI: 0.001, 0.748]. The adherence rate in this study lower. So it is still to work those Programs and clinical efforts to improve medication taking in the study setups should strive to: increase patients' awareness on adherence to medication, drug side effects and possible remedies and, integrate medications better into patients' daily routines.

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Antiretroviral treatment, Human immune deficiency virus, Acquired Immune Deficiency Syndrome, Adherence, Ethiopia

Introduction

Although the burden of HIV continues to vary significantly across countries, Sub-Saharan Africa remains the most affected with almost 1 in every 25 adults (4.4%) living with it, accounting for nearly 70% of the global burden [1]. Sub-Saharan Africa continues to bear the burden of the global epidemic. AIDS is one of the top three causes of mortality worldwide and the primary cause of death in sub-Saharan Africa. Almost two thirds (67.8%) of all adults and 90% of children with HIV globally live in Sub-Saharan Africa. Of all deaths due to AIDS in the world 1.6 million occurred here. [2, 3, 4].

The introduction of ART has transformed HIV infection into a chronic manageable disease, with major impact on the quality of life and prospects for extended survival in

people living with HIV/AIDS (PLWHA) resulted in that so far many have been able to go back to work and lead full social lives. [5]

Adherence to an ARV treatment regimen involves taking all pills in the correctly prescribed doses, at the right time, and in the right way. [6] Patient adherence to antiretroviral (ART) combination therapy is a critical component to successful treatment outcome because HIV is highly mutable and requires lifelong treatment.

The importance of ART adherence makes accurate compliance assessment essential for effective and efficient therapy and evaluation of treatment regimens. Measurement of adherence is usually based on Paterson's pioneer study found that up to 95% adherence is necessary for effective HIV viral suppressions.[7]

However; lack of strict adherence to ART is considered to be one of the key challenges to AIDS care worldwide. Studies performed in other countries suggested the average rates of non-adherence with ART range from 50% to 70% in different settings, and the risks associated with non-adherence are extensive at both individual and societal levels. Treatment adherence has been closely correlated with viral suppression, while non-adherence has contributed to progression to AIDS, the development of multi-drug resistance and death. Even short term non-adherence (as little as a week) may result in rapid rebound of plasma viraemia, leading to treatment failure. Adherence is perceived as a significant barrier to the delivery of ART in Sub-Saharan Africa. [8]

Although the measurement of ART adherence is critically important in both ART interventions and clinical research, there is no "gold standard" measurement way. While adherence can only be ensured by directly observed treatment, this is not practical for daily therapy by which has to be taken for lifetime. As a result, levels of adherence can only be estimated by using indirect measures. These measures include viral load monitoring, pharmacy refill records, self-report and pill count. However all methods have strengths and weaknesses. [8, 9]

The most common approach is to elicit the information by self-report, in which participants describe their adherence over a specific time interval. It may lead to over estimation but they are often used because they are inexpensive and feasible in a wide variety of settings. [9] Besides accurate measurement, other factors of importance in the study of ART adherence include identification of the factors that affect adherence and effective interventions. Understanding the factors that affect non-adherence could provide valuable information about patients most at risk.[5]

Nowadays there is high rate of morbidity and mortality related to low ART adherence. It is very important to assess magnitude of ART adherence among PLWHA and its determinants, so that it will provide key information for health facilities, policy makers and NGO, relevant data for future planning. Health institution and health personnel's may use the information obtained from the study for education and other intervention program. Therefore, this study aimed to assess adherence status and associated factors of ART among HIV infected adult patients on ART in the study area.

Materials and Methods

Study setting

The study was conducted at Wolaita Zone which is located in the Southern Nations Nationalities and People regional state (SNNPR) in Ethiopia. Located at 378km to south of the capital city; Addis Ababa. The facilities selected randomly were Wolaita Sodo University Teaching and referral Hospital and Tebela Health Center.

Study period

The study was conducted from August to September, 2017/18G.C.

Study design

Institution based, cross-sectional study was conducted. Internal comparison between adherent and non- adherent groups had also been undertaken.

Source population

The source populations were all people living with HIV/AIDS who are enrolled on ART at Wolaita Zone health facilities.

Study population

Are Selected People with HIV/AIDS attending ART clinic for care and follow up at Tebela Health Center and Wolaita Sodo University Teaching and Referral Hospital.

Sample size determination and sampling technique

Sample size was calculated using a single population proportion formula. Taking 88.2% ART adherence prevalence, which is ART adherence prevalence obtained from study at Gondar referral Hospial[10], North West Ethiopia gave 159 individual study units. The final sample size again calculated with correction formula computed and considered non-response rate used 10 % added was 160 individual study subjects. Considering a number of PLWHA enrolled at ART units of the study health facilities proportionally; from Tebela H.C was = 16 and from WSU-TRH was = 144.

The sampling technique used was Systematic random sampling. Lottery method was adopted to select first participant and 2 is selected accordingly.

Data collection technique

By using structured questionnaire face to face interview adopted from different literatures to explore the objective of the study, which were prepared in English and translated in to Amharic and back translated in to English language.

Measurements

Adherence: the number of doses correctly taken divided by the number of doses prescribed for a given period of time. The definition will be based on the number of doses missed in a specified time period by self-report, and on any appointment missed. Adherence was considered good if the patient had taken >95 % of the prescribed doses correctly.

Adverse effect: an unwanted effect caused by the administration of drugs. Onset may be sudden or may develop over time.

Combination therapy: two or more drugs or treatments used to achieve optimum result.

Opportunistic infection: the term applied to infections with bacteria, viruses, fungi or Protozoa to which individuals with a normal immune system are not usually susceptible. These organisms take advantage of the opportunity provided by immunodeficiency.

Good knowledge:- PLWHA who answered more than or equal to four of the six ART adherence knowledge assessment questions.

Poor knowledge:- PLWHA who filed to answered all of the six ART adherence knowledge assessment questions.

Data quality assurance

Data were collected by using a pre-tested questionnaire by group members and continuous supervision was arranged to control the data collection procedure and all the data from both ART sites were checked for completeness, clarity and consistency by group members during the interview day. Data were intensively cross checked before analysis.The statistical soft ware Epi info and SPSS were used to entry and analysis of the data respectively.

Data processing and analysis`

Data were entered into Epi-info version 3 and transported into SPSS version 20.0. Adherence of ART was assessed by using self- report method for last one week of the study period. Internal comparison was made between adherent and non -adherent to examine factors related to adherence. The magnitude of association between the different variables in relation to the out - come variable was measured by odds ratio (OR).

Ethical consideration

Ethical clearance was obtained from Wolaita Sodo University college of Health Sciences and Medicine ethical review committee. Formal letter was taken during data collection to the administrative body of the study area. Oral consent was taken from each participant before interviewing. Information was given about purpose of the study, issues of confidentiality, procedure of data collection and risk and benefit of participation before proceeding to the interview. Additionally, participants were informed that they have a full right to refuse or discontinue participating in the survey at any time. Confidentiality of the respondents was maintained and the information taken from them had been used for the study purpose only.

Results and Discussions

Socio-demographic characteristics of the respondents

A total of 160 HIV infected patients responded after giving informed verbal consent. All of patients from the eligible groups were involved thus the response rate was 100%. The mean age of the study participants was 35.1 years. Sixty four (40%) of the participants were male.

The majority about (78.8%) were Wolaita in ethnic group, and the rest were Amhara, Gurage, Sidama, and other ethnic groups were 10.0%, 4.4%, 3.1%, and 3.8% respectively. In religious group about 64.4% of the participants were protestant, followed by Orthodox (26.2%), Muslim and Catholic each accounting 4.4% and others (0.6%).

Regarding to the marital status of the participants; 89 (55.6%) were married, 31 (19.4%) were single and 28 (17.5%) were widowed. The educational status of the study subjects were 25% of the participants can write and read and 20.6% had a diploma or higher level of education. Regarding their occupation, the majorities 68(42.5%) were private employee and 47(29.4%) were Governmental organization employee with 25% reporting earning less than 500 birr per month income and regarding place of residence about 129(80.6%) resides in Urban area while the rest 31(19.4%) resides in Rural area. *(Table 1).*

Clinical variables distribution of the study respondents

The distribution of personal characteristics shows only 3.8% reported active substance use, 45% of respondents claimed they had no social support; the rest 88 had support with which 83(94.3%) of them were satisfied from the support obtained from an individual or institution. The communication of their status about 85.6% of the participants had disclosed their sero-status to their partners and to other close relatives.

Before starting ART, 58.1% knew the benefits of the regimen, though 41.9% had no knowledge. The regimen had benefited clients in at least on one of the following ways; 88.1% saying it had improved their total quality of life with decreased frequency of morbidity and hospital visits, 49.4% having experienced improvement in maintaining normal body weight, and 22.5% of the participants reported the benefit in terms of psychological satisfaction. (*Table 2).*

Knowledge status of the study participants

Participants with good knowledge about adherence were about 56.2%. In other hand 39.4 had no discomfort when taking their drugs in front of others though 60.6% had some discomfort to take ART in-front of others. For 90.6% of the patients, the regimen was convenient and easy to fit to their daily routine, but 9.4% found it inconvenient and difficult to fit to their daily routine. Most (98.8%) of the patients interviewed stated that they had an excellent relationship agreement and good communication with the HCP at the health facilities. About 98.8% and 97.5% of Patients were satisfied by the ART unit treatment appointment system and levels of confidentiality towards their treatment respectively. (*Table 3).*

Level of follow up and access for ART of the study participants

The majority (80.6%) had regular follow up, visiting the ART unit every month, while 11.2% visit the ART unit every 2 months and the rest 8.1% had irregular visit. Also 94.4% assured they had access to reliable pharmacies any time they wanted.

Side-effect symptoms of the study participants reported

Among patients interviewed for the presence of symptoms of medication side effect in the past four weeks; about 54(33.8%) experienced at least one symptom in the past month. The most common symptoms were nausea and vomiting, headache, GI intolerance, Depression, and others.

Measures taken for symptoms by the study participants reported

When they had the problem 40(74.1%) consulted their HCP immediately, 13(25.9%) of them done nothing since they believe that the condition is self-limiting, and one patient couldn't remember what he did. At the time of interview, 16.2% had been taking additional medicines with their ARVs, which included Anti-TB (6/26), Analgesics (5/26), Anti -malarial (any type) (2/26) and others.

The current treatment regimen of the respondents

Based on the clinical record review of patients, the current combination of drugs or treatment regimen, being taken by the patients include 1E (53.8%), 1C (28.1%) while 29 of patients (18.1%) from hospital were on second line regimens. Among all the regimens, 1E is fixed daily combination (FDC) regimen.

Table.1 Socio-demographic and Psychosocial characteristics of the PLWHA at Tebela health center and Wolaita Sodo University teaching and Referral hospital, South Ethiopia, 2018.(n=160)

Characters		requency	ercent (%)
Sex	Male	64	40
	Female	96	60
Age(in Year)	18-25	24	15
	26-30	43	26.9
	31-35	25	15.6
	36-45	51	31.9
	>46	17	10.6
Marital Status	Single	31	19.4
	Married	89	55.6
	Widowed	28	17.5
	Divorced	12	7.5
Educational status	Can't write and read	15	9.4
	Can write and read	40	25
	Primary level	37	23.1
	Secondary level	35	21.9
	ɔloma and above	33	20.6
Ethnicity	Wolaita	126	78.8
	Amhara	16	10
	Gurage	7	4.4
	Sidama	5	3.1
	Others	6	3.8
Occupation	Government employee	47	29.4
	Private employee	68	42.5
	Student	10	6.2
	House wife	24	15
		11	6.8
Income (Birr)	<250	5	3.1
	251-500	35	21.9
	501-999	48	30
	1000-1499	23	14.4
	1500-1999	21	13.1
	2000-2499	13	8.1
	>2500	15	9.4
Residential area	Urban	129	80.6
	Rural	31	19.4
Disclosure of sero-status	Yes	137	85.6
	No	23	14.4
Perceived self-efficacy	Yes/No Doubt	159	99.4
	No	1	0.6
Substance use	Yes	6	3.8
	No	154	96.2

Table.2 Treatment, Clinical, and Health Care System related variables of PLWHA at Tebela health center and Wolaita Sodo University teaching and Referral hospital, South Ethiopia, 2018. (n=160)

Variable		Frequency	Percent (%)
Treatment duration (month)	3-24	24	15
	28-49	32	20
	50-74	51	31.9
	>75	53	33.1
CD4 count (Initial)	<100	26	16.2
	100-200	43	26.9
	201-300	35	21.9
	301-600	54	33.8
	>601	2	1.2
CD4 count (most recent)	<100	5	3.1
	100-200	3	1.9
	201-300	9	5.6
	301-600	70	43.8
	>601	73	45.6

Table.3 knowledge and perceived satisfaction related variables of PLWHA at Tebela health center and Wolaita Sodo University teaching and Referral hospital, South Ethiopia, 2018. (n=160)

Variable		requency	cent (%)
Level of knowledge on ART adherence	d knowledge	90	56.2
	or knowledge	70	43.8
Perceived satisfaction by the relationship with HCP*	Yes	151	94.4
	No	3	1.9
	Not sure	6	3.8
Perceived satisfaction by the service provided	Yes	156	97.5
	No	4	2.5

*HCP=Health Care Provider

Table.4 The level of follow up and access to ART on PLWHA in the past four weeks at Tebela health center and Wolaita Sodo University teaching and Referral hospital, South Ethiopia, 2018. (n=160)

Variable	Frequency	Percent (%)
ery one month(regular)	129	80.6
Every two months	18	11.2
Irregular	13	8.1
Access to pharmacies at any need		
Yes	151	94.4
No	9	5.6

Table.4 Patients who missed at least a dose by Self-report among PLWHA at Tebela health center and Wolaita Sodo University teaching and Referral hospital, South Ethiopia, 2018

Number of days	Yes	No	Total, No (%)
	N (%)	N (%)	
Previous day	2(1.3)	159(99.3)	160(100)
Past three days	5(3.1)	157(98.1)	160(100)
Past seven days	6(3.8)	156(97.5)	160(100)
Total	13(8.2)	147(91.8)	160(100)

Table.5 Reasons of missing at least a dose by Self-report among PLWHA at Tebela health center and Wolaita Sodo University teaching and Referral hospital, South Ethiopia, 2018

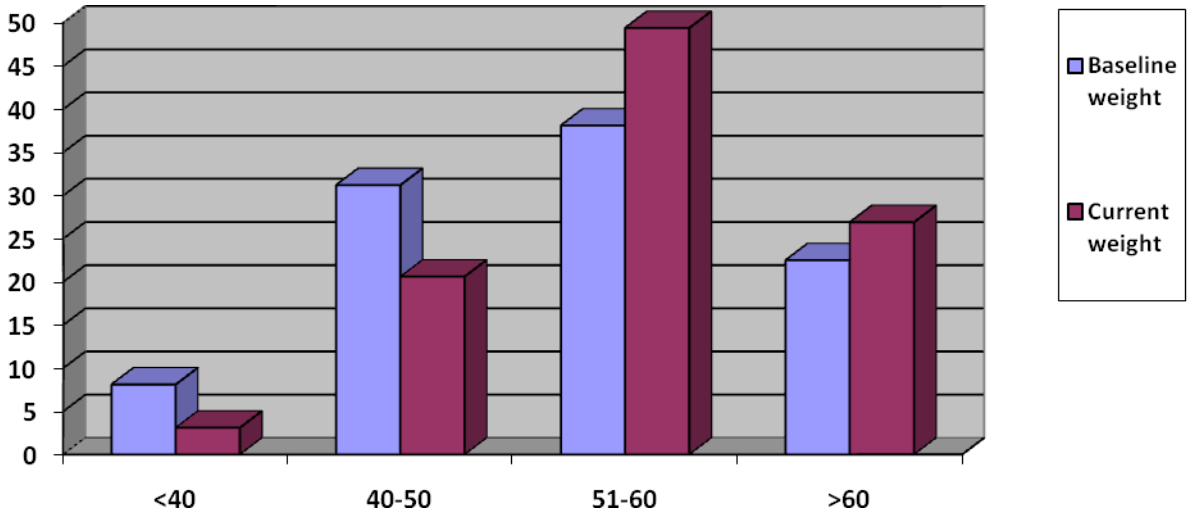
Variable	Frequency	Percent (%)
ing away from home	7	53.9
Having change in daily routine activities	2	15.7
Simply forget	2	15.7
Don't want others to notice taking it	2	15.7

Table.6 Association of variables with adherence among PLWHA on ART follow up, at Tebela health center and Wolaita Sodo University teaching and Referral hospital, South Ethiopia, 2018

Variables		Non-Adherent to ART		Crude OR, 95%CI	Adjusted OR, 95% CI
			No		
Presence of social support	**Yes**	4	84	0.192 (95%CI 0.013, 0.889)	26.895(95% CI 0.679, 1066.000)
	No	9	63		
Knowledge on importance of adherence before initiation of ART	**Yes**	3	90	0.208(95%CI (0.011, 0.776)	*
	No	10	57		
Medication side effects	**Yes**	9	45	10.554(95%CI 1.871, 130.720)	** 0.029(95%CI (0.001, 0.748)
	No	4	102		
FDC treatment regimen	**Yes**	3	83	0.186(95%CI 0.014, 0.938)	13.177(95%CI 0.832, 208.608)
	No	10	64		
Treatment schedule fitting with daily routines	**Yes**	6	139	0.042(95%CI 0.009, 0.203)	**56.613 (95%CI 2.592, 1237.000)
	No	7	8		
Comfort to take ART in-front of others	**Yes**	5	92	0.220(95%CI 0.010, 0.695)	*
		8	55		
Knowledge about adherence to ART	**Good knowledge**	3	87	0.198(95%CI 0.012, 0.842)	**16.143 (95%CI 1.086, 240.046)
	Poor knowledge	10	60		

*This variables were excluded from multivariate logistic regressions. ** Variables those which remained significant after adjustment.

Figure.1 Current and baseline weight at the initiation of ART in Kg among PLWHA on ART follow up, at Tebela health center and Wolaita Sodo University teaching and Referral hospital, South Ethiopia, 2018.



Weight variations of before and after ART of the respondents

By measuring the current weight and reviewing the medical recording the patient's weight at the initiation of ART, the mean weight found is 53.2 and 56.3 Kg respectively.*(Figure 1)*

Level of adherence to ART of the study participants

By using the cross sectional sample of 160 patients, about 92% of patients were adherent by self- report in the week before the assessment, based on the definition outlined in the methods above. If we consider only those patients who missed a dose or more in the past week the level of non -adherence was 8% (Table 4).

Reasons given to not adhere on ART of the study participants

Over the past seven days, different reasons were given for skipping or delaying a dose of ARV drugs. Almost half 7(53.9%) of patients stated that they missed their dose due to being away from home as the primary reason for treatment non-adherence, Having a change in their daily routine activity, simply forget, run out of pills and 'didn't want others to notice that they were taking medicine' were other barriers of adherence to treatment mentioned by the respondents (Table 5).

Distribution of association of variables to adherence of the study subjects

The following variables were significantly associated in the Uni-variate analysis: presence of social support; knowledge on importance of strict adherence before initiation of ART; presence of medication side effects in the past four weeks; FDC treatment regimen; Treatment schedule fitting with daily routine; Comfort to take ART in-front of others and knowledge about adherence to ART. Of these variables, presence of medication side effects in the past four weeks; Treatment schedule fitting with daily routine; and knowledge about adherence to ART remained significant after adjustment in the multivariate analysis.

The odds of adherence among those who have good knowledge on ART adherence is about 16.14 times higher than those with poor adherence knowledge by which knowledge is defined according to defined operational definition. The odds of adherence among those whose ART treatment schedule fit with their daily routine is about 56.613 times higher than those with unfitted treatment schedule daily routine while the odds of adherence among those who had faced medication side effect is about 0.029 times less likely than those with no history of medication side effect to adhere the treatment (Table 6).

In this study, in which adherence was measured using self -report, 92% of patients were adherent with never missing a dose in the past seven days. This is almost in-line with those of studies done at Gondar referral hospital [13], Dessie referral hospital [13], Debre Markos referral hospital [18], Eastern Ethiopia [15], and Global Hospital 19], and Nepal [10], which reported 88.2%, 90, 88.6, 85%, and, 90.8, and 85.5%, respectively. This is higher than the findings in other countries, where rates of adherence by self-report range from 40% to 70% (19, 20, and 21). However, it is higher than there of studies done in Savannakhet and Sethathirath hospitals (60%) [14], Dubti hospital (81.1%) [20], Myanmar (76.24%) [21], China (81.8%) [22], and of Tertiary level care hospital in Aurangabad (78%) [12].This finding is lower than that of another study conducted in Debre Birhan referral hospital and health center (95.5%) [16]. These differences might be due to differences in socio-demographic characteristic, sample size large in this study, and difference in study designs.

This study identified variables which were significantly associated with ART adherence after controlling for socio demographic differences among the respondents. These variables were presence of social support; knowledge on importance of strict adherence before initiation of ART; presence of medication side effects in the past four weeks; FDC based treatment regimen; Treatment schedule fitting with daily routine; Comfort to take ART in-front of others and knowledge about adherence to ART.

Of these variables, presence of medication side effects in the past four weeks; Treatment schedule fitting with daily routine; and knowledge about adherence to ART remained significant after adjustment in the multivariate analysis. Presence of social support; knowledge on importance of strict adherence before initiation of ART; FDC based treatment regimen; Comfort to take ART in-front of others Comfort to take ART in-front of others and was not significantly associated in the multivariate analysis, and only was significant in the univariate analysis. This may be is due to low sample size. And Confounders appear to have masked its real association in the preceding type of analysis.

Presence of medication side effect in the past four weeks was found to be significantly associated with adherence, which agrees with the results from the study done in Yirgalem hospital, and the recent study done at Addis Ababa civil hospitals, where medication adverse effects have been shown to be a significant predictor of adherence (16, 7).

Amongst the commonest faced medication side-effects Nausea and vomiting and Headache was the highest frequent drugs reaction occurred in half of the respondents and depression was the least frequent drugs reaction among PLWHA with history of drug side effect. The finding is consistent with many other researches, and typical for the side effects nausea and vomiting, Headache, and anemia are highly prevalent with high probability linked with the ART ‘’3TC back bone ’’ regimens and other typical drugs known for such side effects as AZT, TDF and EFV.(12, 3, 4, 16)

In the same manner to the study done in Addis Ababa, convenience or perceived “fit” of medication regimens with daily routine was significantly associated with improved adherence in our study[OR = 56.613 (95%CI: 0.009, 0.203]. PLWHA whose treatment schedule not fitting with their routine may forget to take pills at the right time due to being busy or because of the stress of caring for their daily routine (indirect effect).Regimen convenience can be improved by identifying and resolving conflicts between daily routine and scheduled medication.

Knowledge on importance of adherence before initiation of ART has showed association in the univariate analysis this is similar to the results of studies done in Nepal [10] and China [22] but in this study did not show in the multivariate. This may be is due to low sample size. The other variable that was associated with adherence in the multivariate analysis in this study was knowledge on ART adherence [OR = 16.143 (95%CI: 0.012, 0.842] which is consistent with the study done in Yirgalem hospital (9)., it is easy to infer the importance of knowledge on treatment adherence is directly linked with level of adherence, the more knowledgeable a patient is the better to have practical adherence.

The reasons patients cited for missing ARV doses were almost identical to those found in other studies. The most frequently given reason in our study is being away from home without medication which accounted for 50% of all non-adherent responses. Among participants in the adult ART OPD in Yirgalem Hospital, 8.3% of patients cited being away from home without medication as the main reason for non-adherence (16).

Other reasons cited by patients in the above study included being having difficulty with the timing of

medications, feeling too ill or tired to take medication, feeling depressed or overwhelmed, and having too many medications or too many pills to take, access problem, and invasion of privacy, (9). In another studies other barriers to adherence to treatment as reported by the patients included; feeling sleepy, patients not wanting others to notice that they were taking medicine, being reminded of HIV infection, too many pills to take, feeling sick or ill at that time, feeling healthy, other people's influence quarreling with any one of the family member, fasting or going to "*tebel*" (holy water) and other reasons and suggested providing more social support and using reminders may reduce the problem, by reducing busyness or the tendency to forget. (18, 19, 20).

Limitations of the study

This study used self- report adherence assessment method and it may overestimate the magnitude of adherence and not studied the adherence of age less than 18 years individuals.

Hence concluded in this study, antiretroviral therapy adherence was found low compared to the WHO standard. Knowledge on ART adherence, treatment schedule fitting with daily routine activities and medication side effect were factors significantly associated with good ART adherence. The main problems mentioned by the participants for missed dose were being away from home without medication, simple forgetting, run out of medication, having a change in their daily routine activity, and 'didn't want others to notice that they were taking medicine'.

Since adherence is a dynamic process and patient's behavior can change over time, there is also a need to have a follow up design, which would yield a more valid average measure of adherence as well as its determinants than a cross-sectional self-reported adherence assessment.

Recommendations

Hence, the following specific recommendation has been made based on the finding of the study so as to give a clue about the possible direction to follow and focus to alleviate the existing problems of adherence.

Health care providers need to: Provide accessible health information to the patients about their treatment plan and medication adherence on the way along the ART treatment, Involve the patients in the treatment plan so that it fits into their daily routine easily, and provide of patients with health information on possible medication side effect and progress monitoring and with providing possible interventions accordingly. Advices on using of memory aids and other reminder supporting mechanisms to support timely adherence towards medications. Need to provide psychological support for PLWHA to develop confidence with taking medications.

The health care system also needs to: Improve patients' confidence, trust, and satisfaction with their relationship with health care providers, and eliminate the problem of access to the assistance and service patients need. Also they should work with different collaborating organizations as NGOs to provide multifaceted support for PLWHA. Provide HCP with updated training on the issue and make them capable on case management and proper referral.

Competing interests

The author declare that he has no competing interests

Role of investigator in this research work

The author developed research proposal, data analyzed, report prepared, manuscript prepared.

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References

1. WHO. Global Health Observatory (GHO) data. 2018. http://www.who.int/ gho/hiv/en/.
2. Longo, Kauci, Kasper, Harrison's Principles of Internal Medicine 18th edition, 2012.
3. Silenat Biressaw, Woldaregay Erku Abegaz *et al.,* Adherence to Antiretroviral Therapy and associated factors among HIV infected children in Ethiopia: unannounced home-based pill count versus caregivers' report, BMC Pediatrics 2013, 13:132, January 2012.

4. Woinshet Melese, Assessment of Adherence among Children on Antiretroviral Therapy in Addis Ababa, June 2008.
5. Tefera Girma, personal factor influencing patient ART adherence in Addis Ababa, Ethiopia, June 2012.
6. Report on progress towards the implementation of UN declaration of commitment on HIV/AIDS, March 2010
7. Endrias Markos, Adherence to ART in PLWHA in Yirgalem Hospital, SNNPR, Ethiopia, 2006.
8. National comprehensive HIV care and treatment training for health care providers, training manual, Federal Ministry of Health, June 2014.
9. Hoa Mai Do MD, MPH, Antiretroviral therapy adherence among PLWHA in North of Vietnam,2011
10. NAIDS. GLOBAL AIDS UPDATE. 2016 http://www.unaids.org/en/resources/documents/2016/Global-AIDS-update-2016.
11. National comprehensive HIV care/Antiretroviral therapy (ART) training course for nurses and health officers, manual for the basic chronic HIV care, Antiretroviral Therapy and Prevention, Federal HIV/AIDS prevention and control office, ministry of Health, April 2008.
12. FACT SHEET on GLOBAL HIV Statistics In: UNAIDS, editor. 2017. http://www. unaids. org/en/resources/fact-sheet.
13. GLOBAL HIV AND AIDS STATISTICS. 2016. http://www.unaids.org/sites/default/files/media_asset/global-update-2016_en-pdf. Molla *et al.*, BMC Infectious Diseases (2018) 18:266 Page 7 of 8.
14. WHO. Ethiopia | HIV/AIDS. WHO regional office for Africa, 2015. http://www.afro.who.int/countries/ethiopia.
15. Foundation THJKF. The Global HIV/AIDS Epidemic. 2017. http://files.kff.org/attachment/Fact-Sheet-The-Global-HIV-AIDS-Epidemic.
16. National guidelines for comprehensive HIV prevention, care and treatment, Federal Ministry of Health, June 2014.
17. National comprehensive HIV care/Antiretroviral therapy (ART) training course for nurses and health officers, manual for the basic chronic HIV care, Antiretroviral Therapy and Prevention, Federal HIV/AIDS prevention and control office, ministry of Health, April 2008.
18. Jean B, Nachega MH, Dowdy DW, Chaisson RE, Regensberg L, Maartens G. Adherence to nonnucleoside reverse transcriptase inhibitor–based HIV therapy and Virologic outcomes. Ann Intern Med. 2007;146:564–73.
19. Robert S, Hogg KH, Bangsberg D, Yip B, Press N, O'Shaughnessy MV,Montaner JSG. Intermittent use of triple-combination therapy is predictive of mortality at baseline and after 1 year of follow-up. An official international. AIDS society. 2002; 16(7):1051–8.
20. Oguntibeju OO. Quality of life of people living with HIV and AIDS and antiretroviral therapy. HIV/AIDS - Research and Palliative Care. 2012;4:117–24.
21. David L, Paterson M, BS, FRACP, Swindells S, Mohr J, MSW, Brester M, RN, Emanuel N, Vergis, MMW CS, Singh N. Adherence to protease inhibitor therapy and outcomes in patients with HIV infection. Ann Intern Med. 2000; 133(1):21–30.
22. Sharon Mannheimer GF, Matts J, Child C, Chesney M. The consistency of adherence to antiretroviral therapy predicts biologic outcomes for human immunodeficiency virus–infected persons in clinical trials. Clin Infect Dis. 2002; 34(8):1115–21.

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