

Long-term adherence interventions are needed for durable effect, particularly in chronic diseases such as HIV in which it poses a unique challenge due to its rapid replication and mutations rate; hence, very high level of adherence is required to achieve long-term suppression of viral load [7].

In the area of Gondar town specifically in the health centers, there is no enough and organized research done on the issue of nonadherence to ART and its challenges though there are HIV patients who are not properly taking the tablet.

Therefore, the main aim of this research is targeted at filling those gaps especially the social dimensions of nonadherence through addressing the following research question; what are the major socio-economic situations and challenges of ART non-adherence among HIV patients in the health center?

METHODS

Research design

The research design for this study was cross-sectional, which was conducted once at a time from October 2012 up to May 2013. In realizing, the objectives of this study both qualitative and quantitative (mixed method) research methods were used. Mixed method research was used because this method is very important for (i) validation of the finding in terms of accuracy, (ii) checking for bias in research methods, (iii) compensating strengths and weaknesses, and (iv) for comprehensive explanation (complete picture) of the issue [8]. Hence, since this research employed mixed-method approaches it was realized with concurrent procedures. This was applied since it is used when the researcher converges quantitative and qualitative data to provide a comprehensive analysis of the problem. In this design, the investigator collects both forms of data at the same time during the study and then integrates the information in the interpretation of the overall results [9].

Therefore, for this research mixed method was very important in clearly explaining the issue through triangulating the two research methods (qualitative and quantitative). Specifically, for the quantitative research survey research design and from qualitative research individual in-depth interviews and focus group discussions (FGDs) were employed.

Study area

The study was conducted in North Gondar administrative zone, Gondar town, which is located 742 km North of Addis Ababa and 12°36'00.00" N 37°28'00.00" E and has an elevation of 7220 ft. According to information gathered from the city municipality, the inhabitants of the town are predominantly from the Amhara ethnic group and Tigre. It has a total population of more than 200,000 and is a center of business and tourism. At present, the town is strategically important to connect the country with Sudan.

Sampling techniques

In this study, both nonprobability and probability sampling techniques were used. From non-probability method purposive sampling techniques were employed since I have chosen non-adherent HIV patients purposively from all patients and hence it was used to select non-adherent patients since the study is mainly revolves around the challenges of nonadherents and from probability method random sampling was used to select actual non-adherent respondents from the center.

As the exploratory study and the document analysis in the health center, there are 1478 HIV-positive individuals and out of these 322 individuals are nonadherent in which 147 of them are returned to attend the ART drug in the health center. Hence, out of the total 322 nonadherence, 68 (21%) individuals were the sample of this research to collect the quantitative data which were selected randomly through lottery method.

Data collection instruments

To collect data from primary and secondary sources, both qualitative and quantitative data collection instruments were employed.

Primary data collection instruments

In this study, the researcher primarily used in-depth interview, FGD, and questionnaires to grasp primary data from the people being investigated. Five detail in-depth interviews with some selected non-adherent HIV patients and health experts were conducted. One FGD was conducted with six health workers. The researcher administered close- and open-ended questionnaires to 68 respondents for collecting quantitative data.

Sources secondary data

For this study, secondary sources were used to substantiate primary data and to have insight about the topic and methods which have been used by previous researchers which include books, previous researches, magazines, and articles.

Method of data analysis, presentation, and interpretation

The data collected by questionnaires were entered into SPSS version 16 and presented using tables, charts, and figures and analyzed using descriptive statistics. On the other hand, the data collected from interview and FGD were analyzed thematically as per the information collected from the respondents.

Ethical consideration

In doing research considering ethical issues is important. Especially, researches are done on human beings highly require ethical approval from the concerned body. In general to get ethical acceptance, all concerned bodies at all levels were informed of the aims and objectives as well as expected advantages of the study. Written consent was requested from the respondents before the instruments are administered. The researcher tried to keep confidentiality of the information and the privilege of privacy to them.

RESULTS AND DISCUSSION

Socio-economic situation of respondents

This section of the report revealed the major socio-economic condition of respondents which comprised age, sex, marital status, source of food, their level of education, and main occupation.

Table 1 shows sex of respondents and out of the total 53 (78%) and 15 (22%), respectively, were females and males. Hence, the majority of respondents were females.

Table 2 shows the age of respondents in which majority of them lies between the age of 30–39 (43%), 40–49 (24%), and 20–29 (22%) years. This implies most of the respondents are the active member of the productive labor force who can potentially produce for them and the mass.

Similarly, the study of Anthony shows that age of respondent influences adherence to ART in which adherence to treatment. According to major

Table 1: Sex of respondents

Sex	Frequency	Percent	Valid percent	Cumulative percent
Male	15	22.1	22.1	22.1
Female	53	77.9	77.9	100.0
Total	68	100.0	100.0	

Table 2: Age of respondents

Age	Frequency	Percent	Valid percent	Cumulative percent
18–20	1	1.5	1.5	1.5
20–29	15	22.1	22.1	23.5
30–39	29	42.6	42.6	66.2
40–49	16	23.5	23.5	89.7
50–59	3	4.4	4.4	94.1
>60	4	5.9	5.9	100.0
Total	68	100.0	100.0	

findings of this study, nonadherence is high (81%) among respondents in the age bracket 30–39 years. The trend showed that adherence to ART increased with increasing age and decreased as the age advanced beyond 60 years. This was because the youth suffered most from stigma and denial while the elderly had difficulties understanding and following ART instructions [10].

Table 3 indicates the main occupation of respondents which include students, full-timer, part-timer, self-employed, unemployed, and daily laborer. From the total of 68 respondents, the majority of them are daily laborers, self-employed, and unemployed which, respectively, comprise 28% (n=19), 25% (n=17), and 25% (n=17) and the remaining shares the least which, respectively, are part-timer 15% (n=10), employed, and students 6% (n=4).

Hence, this result ensures occupation as one of the factors that affect respondents' adherence to ART drugs. That means since most of the respondents are unemployed and daily laborer in which they faced shortage of food, time to take the drug accordingly.

In line with this result, the study done by Carter shows that lack of employer support greatly influenced nonadherence to ART because those patients suffered not only from psychological torture but also felt rejected and discriminated. This finding indicates that respondents who were employed adhered much more than unemployed respondents [11].

Table 4 shows the respondent main source of food that includes by purchasing, from household farms, relatives and friends, and others (begging, etc.). From this, the majority of them access their food by purchasing and from relatives/friends which, respectively, comprises 52% (n=35) and 24% (n=22).

Similarly, the result of an in-depth interview found that those who got food from their farm were able to adhere to ART than those who mainly purchased food because they were food secured.

Fig. 1 shows the respondents' level of education, which are illiterate, primary education, secondary education, and university and above. From the total respondent's, majority of them are illiterate 46% (n=32) and at the level of primary education 32% (n=22). The remaining shares the least and are above secondary education 22% (n=14).

Similarly, studies found that high levels of education increased the patient's adherence to ART. The likely reason is that those patients could easily understand and follow ART. These findings are supported by studies on HIV patients in South Africa and the USA among whom those who lacked education did not adhere to ARV treatment properly [10].

Major challenges of ART nonadherence

This section of the research dealt with description and exploration of major challenges of nonadherence to ART for HIV patients.

Table 5 reveals the SPSS cross-tabulation result of respondents' status of nonadherence and its major reasons for failing to take ART drug properly. Hence, irrespective of the number of times they missed to take drugs properly due to the challenges of the drug (toxicness/its negative side effect), forgetting, and feel better, fear of stigma/disclosure, taking other drugs, pill burden, and shortage of food and using spring water. Hence, from those factors majority of the respondents were influenced due to fear of stigma and disclosure 44% (n=30), toxicness of the drug or its negative side effect 21% (n=14) and forgetting 16% (n=11). With regard to the status of respondents' nonadherence to drugs per 2 weeks, majority of them failed to take ART drugs 3 times and twice due to the above-mentioned reasons.

Similarly, the result of the qualitative data collected with in-depth interview, and FGD revealed that there are multiple factors that challenge respondents while taking ART drugs and are basically includes personal, the situation of family, socio-economic challenges,

the presence of high stigma and avoidance from their colleagues, families, neighbors' and friends, and relatives.

Personal challenges

According to the interviewees and discussants those challenges include; lack of awareness about the drug, lack of interest to take the

Table 3: Respondents main occupation

Occupation	Frequency	Percent	Valid percent	Cumulative percent
Student	2	2.9	2.9	2.9
Fully employed	2	2.9	2.9	5.9
Part time employed	10	14.7	14.7	20.6
Self-employed	17	25.0	25.0	45.6
Unemployed	17	25.0	25.0	70.6
Daily laborer	19	27.9	27.9	98.5
Others	1	1.5	1.5	100.0
Total	68	100.0	100.0	

Table 4: Main source of food

Source of food	Frequency	Percent	Valid percent	Cumulative percent
Purchase	35	51.5	51.5	51.5
Household Farm	2	2.9	2.9	54.4
Relatives/Friends	16	23.5	23.5	77.9
Others	15	22.1	22.1	100.0
Total	68	100.0	100.0	

Table 5: Cross-tabulation of nonadherence to drugs and major reasons

Major reasons for not taking drugs	Nonadherence to drugs				Total
	Once	Twice	Three times	More than 3 times	
Its side effect /toxicness	3	1	4	6	14
Forgetting	3	3	4	1	11
Feel better	1	2	1	0	4
Fear of stigma /disclosure	6	13	9	2	30
Taking drugs	0	0	2	0	2
Pill burden	1	0	1	1	3
Shortage of food	0	1	0	1	2
Using spring water	0	0	2	0	2
Total	14	20	23	11	68

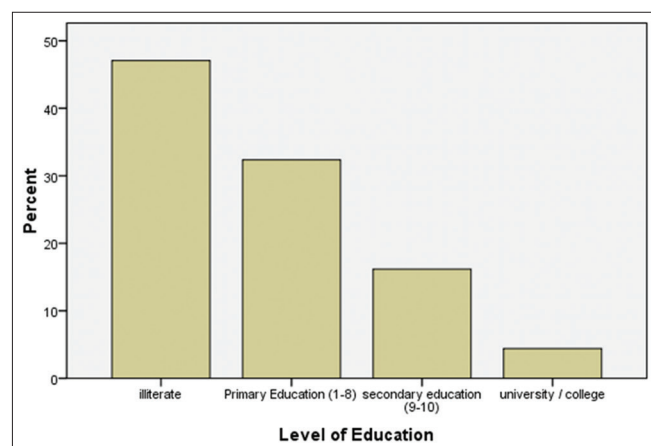


Fig. 1: Respondents' level of education

Table 6: Counseling services

Response	Frequency	Percent	Valid percent	Cumulative percent
No	11	16.2	16.2	16.2
Yes	57	83.8	83.8	100.0
Total	68	100.0	100.0	

drug, and using other options such as spring water, being hopeless, being addicted to other drugs and alcohols, and self-stigma.

Family level factors

Those factors include fear of divorce, challenging behavior of one’s partner, and taboo nature of the issue within the family and others.

Socio-economic challenges

As per the response of qualitative data those factors includes unable to get supports, the presence of societal and neighborhood stigma and discrimination, remoteness of health centers, shortage of health professionals to treat patients, and shortage of professional counseling given to them, and shortage of food and income are some of the factors that challenge patients adherence to ART.

In line with this finding studies found that personal, financial, clinical setting and service delivery, socio-cultural factors, and characteristics of the drug are responsible for the nonadherence of patients to ART. More specifically, patient factors include fear of disclosure and wanting to avoid taking medication in public places, feeling depressed, hopeless, or overwhelmed, having a concurrent addiction, and forgetting to take medication at the specified time are some of the factors that challenge patients adherence to ART [12].

Social support like living alone and a lack of support have been associated with an increase in nonadherence, and social isolation is predictive of nonadherence. Not living alone, having a partner, social or family support, peer interaction, and better physical interactions, and relationships are characteristics of adherent patients (Holzemer and Nokes, 1998) [13].

Table 6 shows the prevalence of counseling services given by health care providers in and outside the health center and majority of respondents explained the prevalence of dominantly private and group-based counseling services given to them.

Similarly, the qualitative data from in-depth revealed that though there are not enough professional counseling services, it is given in the health center by health-care providers and volunteers. More specifically, the service is mostly delivered in open group discussion which can affect their privacy.

In line with this studies argued that it is rare that a physician is able to address all the concerns of a patient during the standard clinic visits. Optimal care should be capable of meeting both the medical and psychological needs of a patient. However; in reality, studies have shown that care that meets all medical needs may fail to meet a client’s emotional or social needs and vice versa (Aldana et al, 2001) [10]. It is, therefore, important that adequate time is set aside for counseling so that appropriate and informed decision on therapy and its implications are made by the patient [14].

CONCLUSION

The main objective of this study is to investigate the major socio-economic conditions and challenges of ART nonadherence among HIV/AIDS positives in Gondar town health center. Hence, the main findings of the research in line with this objective are summarized below:

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The information collected from respondents revealed that majority of them are females (78%) whose age lies between 39 and 49 and socio-economically most of them are daily workers and unemployed which, respectively, comprised 28% and 25%. As a result of their occupation, majority of them access their food and livelihood by purchasing and from their relatives/friends and have low level of education even most of the respondents are illiterate and at primary level.

Both the qualitative and quantitative data collected from respondents revealed that they are not properly adhering to ART drug due to their personal, family, and socio-economic challenges. More specifically, their level of education, occupation, poor health treatment, counseling services, negative attitude of their neighbors, and self and social discrimination highly contributed for the nonadherence of respondents to the drug.

RECOMMENDATIONS

To enhance ART adherence, the researcher recommended the following important points;

- i. Gondar town bureau of health at different levels has to develop strategies to ensure food security in households with PLHIV and AIDS
- ii. Amhara regional MOH is recommended to intensify health education campaigns against stigma and promote family and community support for PLHIV and AIDS
- iii. The health center has to develop adequate and appropriate pediatric ARV drug formulations that are palatable
- iv. Health practitioners, the health center, and others have to use the available health facilities, and health-care practitioners who are working with nonadherents have to provide proper counseling to patients.

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