

SOCIO-ECONOMIC SITUATIONS AND DETERMINANTS OF ANTIRETROVIRAL THERAPY NON-ADHERENCE AMONG INDIVIDUALS LIVING WITH HUMAN IMMUNODEFICIENCY VIRUS/ACQUIRED IMMUNE DEFICIENCY SYNDROME IN GONDAR TOWN HEALTH CENTER, NORTH WEST ETHIOPIA

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ABSTRACT

Objective: The main objective of this study is to investigate the major socio-economic situations determinants of ART non-adherence among HIV/AIDS positives in Gondar Town Health Center.

Methods: To do so I have conducted a cross-sectional study with mixed method research that is both quantitative and qualitative methods. More specifically, I have employed questionnaires, focus group discussion, and in-depth interview to collect the actual data from respondents.

Results: Based on the information gathered from respondents', the majority of them are females (78%) whose age lie between 39 and 49 and socio-economically their major occupation is daily laborer and unemployed. As to the major challenges of taking ART drug personal, socio-economic situation that is being poor, lack of food, family level factors, shortage of professional counseling services, and others are responsible.

Conclusion: ART non-adherence is associated with the socio-economic condition of patients' personal, family, and community level challenges.

Keywords: Human immunodeficiency virus/acquired immune deficiency syndrome non-adherence, Antiretroviral therapy, Socio-economic challenges.

INTRODUCTION

Human immunodeficiency virus (HIV) is shattering individual lives and devastating communities; affecting and reversing developmental gains. Furthermore, HIV/acquired immune deficiency syndrome (AIDS) has posed great challenge for our world in since its existence in early 1980's soon after it has spreaded to all over the world causing drastic social, economic and demographic crisis on humankind [1]. Its spread has not been halted and in 2007 alone an estimated 2.5 million individuals were newly infected and about 2.1 million died due to AIDS [1].

Similarly, the UNAIDS 2005 global report shows that in 2004 almost five million people become newly infected with HIV [2]. At the Global level, the number of people living with HIV (PLHIV) continues to grow from 3.5 million in 2001 to 40.3 million in 2005. In sub-Saharan Africa is by far the worst affected region in which the rates of infection in the area are rising and according to the UNAIDS in 2005, an estimated 3.2 million people in the region become newly infected and 2.8 million people are living with HIV [2].

Specifically, in Ethiopia, according to recent estimates by Ministry of Health (MOH), the overall prevalence of HIV is 4.4%, with urban and rural estimates being 12.6% and 2.6%, respectively. The report estimates the number of adults and children living with HIV/AIDS in 2003 as 1.5 million and 95,000, respectively, and the prevalence of HIV also reported to be higher in females (5%) than in male (3.8%) [1].

It was estimated that in 2003, in Ethiopia there were about 24,000 HIV positives in need of antiretroviral treatment (ART) but only a few accessing it. The number of people who are in need of the treatments and the number of people accessing treatments demands a thorough look in to the existing challenges and call for work towards possible solutions to expanding the services to all those who need it [3].

The introduction of ARTs is considered a remarkable step forward in the whole set of HIV/AIDS responses serving both as a means of prevention and a provision of care and creation of a conducive environment for PLHIV to access these life-saving drug to be just as addressing one of their basic rights.

In Ethiopia, more than 1.3 million people were living with HIV and out of which 277,757 in need of ART [3]. All those who qualify for ART should be able to get access to and used these drugs though achieving this huge target is a very complex issue and posed additional challenges in most developing countries where free access to this lifetime drug is ensured. The significant challenges may directly related to the nature of treatment drug itself, existing social, cultural, and economic problems in developing countries [4].

For example, a survey study done Stone indicated that 21% of AIDS patients who were on ARV drugs had missed a dozen in 24 hrs while 34% had skipped a dozen in 3 days. In which there are different determinant factors for the non-adherence of the ART which ranges from one's personal failure to serious external socio-economic challenges [5]. Similarly, ART adherence report conducted by Zuurmond [6] revealed that stigma and discrimination, problem accessibility, affordability, cost (lab test, transport and registration), hunger and nutrition, the need for on-going support, for people on treatment, information and misinformation and the quality of health services given are some of the multi-faceted challenges of ART users for their adherence.

Hence, despite patients' understanding about the consequences of non-adherence to medication, adherence rates were suboptimal [5]. 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 are 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 non-adherence to ART and its challenges though there are HIV patients who are not properly taking the tablet.

Therefore, the main aim of this research was targeted at filling those gaps specially the social dimensions of non-adherence via addressing the following research question; what are the major socio-economic situations and determinants of ART non-adherences 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 uses 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 the information gathered from the city municipality, the inhabitants of the town are predominantly from Amhara and Tigre ethnic groups. It has a total population of more than 200,000 and is a center of business and tourism. Currently, the town is strategically important to connect the country with Sudan.

Sampling techniques

In this study, both non-probability and probability sampling techniques were used. From non-probability purposive sampling techniques was employed since I have chosen non-adherent HIV patients purposively among other patients, and hence, it was used to select non-adherent patients since the study is mainly revolves around the challenges/determinants of non-adherents 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 non-adherent in which 147 of them are returned to attend the ART drug in the health center. Hence, out of the total 322 non-adherents 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 6 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 was entered to Statistical Package for Social Sciences (SPSS) version 16 and presented using tables, charts, and figures and analyzed by descriptive statistics. On the other hand, the data collected from interview and FGD was analyzed thematically as per the information collected from the respondents.

Ethical consideration

In doing research considering ethical issues are important. Especially, researches 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 of 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%). 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 findings of this study, non-adherence 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 in understanding and following ART instructions [10].

Table 3 indicates the main occupation of respondents which includes; students, full timer, part-timer, self-employed, unemployed, and daily laborer. From the total of 68 respondents 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).

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	

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 laborers in which they have faced with a 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 non-adherence 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 respondent main source of food that includes; by purchasing, from household farms, relatives and friends and others (begging, etc.). From this 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 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 respondents 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 revealed 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 non-adherence

This section of the research dealt with description and exploration of HIV patients' major challenges of non-adherence to ART.

Table 5 reveals the SPSS cross tabulation result of respondents' status of non-adherence 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 following challenges, they are not taking their ART

drugs timely and properly; (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' non-adherence to drugs per 2 weeks majority of them failed to take ART drugs three 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 drug, and using other options such as spring water; being hopeless, being addicted with other drugs, and alcohols and self-stigma.

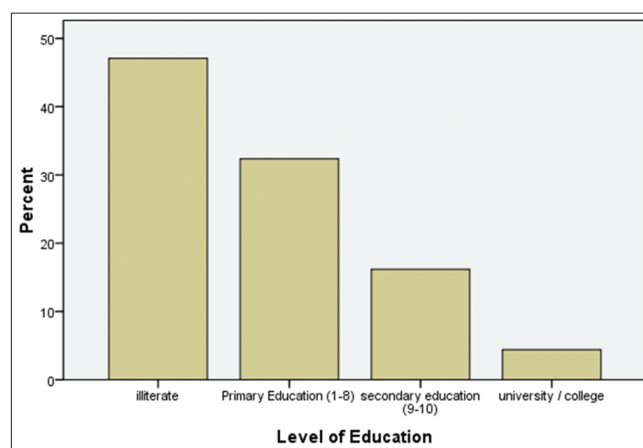


Fig. 1: Respondents' level of education

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 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	

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 5: Cross tabulation of non-adherence to drugs and major reasons

Major reasons for not taking drugs	Non-adherence to drugs				Total
	Once	Twice	Three times	More than three 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

Family level factors

Those factors include fear of divorce, challenging behavior of one's partner, 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, 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 non-adherence of patients to ART. More specifically, Patient-related factors including; fear of disclosure and interested to avoid taking medication in public places, feeling depressed, hopeless, or overwhelmed, having a concurrent addiction, 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 non-adherence and social isolation is predictive of non-adherence. Not living alone, having a partner, social or family support, peer interaction, and better physical interactions and relationships are characteristics of adherent patients [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 no 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* [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 non-adherence among HIV/AIDS positives in Gondar town health center. Hence, the main findings of the research in line with this objective are summarized as following section.

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.

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	

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, self and social discrimination highly contributed for the non-adherence of respondents to the drug.

RECOMMENDATIONS

To enhance ART adherence the researcher recommended the following important points:

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

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