

Adherence to Antiretroviral Therapy among Patient Living with Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome (PLHA) Patients Visiting at Anti-retroviral Therapy Center in Pokhara

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Abstract

The main objective of this paper is to assess the status of adherence to Anti-Retroviral Therapy (ART) among patient living with HIV AIDS (PLHA) patients receiving ART therapy. A cross-sectional descriptive design was used to collect data from 326 PLHA patients. Data were collected through face to face interview among the attended in ART clinic western regional hospital, Pokhara. Participants aged 18 years and above and patient receiving ART at least for 12 months or more were included in this study. The collected data entered in Epi-data and analysis was done using SPSS. The age group of the respondents was from 18 to 70 years with the mean age of 40.29±11.84 (SD). Out of 326 respondents 55.2% were male and 59.8% were married. Forty percent of the respondents had no formal education and most of the respondents (60.4%) were unemployed. Majority (86.5%) of respondents were taking ART since more than 2 years of duration. Majority of the respondents (92.9%) had >95% adherence with ART while 7.1% respondents had non- adherence. The majority of the PLHA patients have more than ninety five percent adherences to anti-retroviral therapy. Some of them have still non-adherence to ART and the reason they claimed were forgetfulness during travelling and too long duration of treatment. It is recommended to promote awareness program related to ART therapy and importance of its adherence to their family member and community people.

Keywords: Anti-retroviral Therapy, human immunodeficiency virus/ acquired Immune deficiency syndrome, adherence, patient living with human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS)

Background

The introduction of antiretroviral therapy (ART) and multidrug regimens has substantially improved the survival of persons infected with HIV and has improved the quality of life HIV patients worldwide. A reduction in HIV-related morbidity and mortality has been reduced in those countries where ART has been made widely available. Because of ART, Acquired immune deficiency syndrome (AIDS) is now a manageable chronic illness (Achappa, et. al 2013). High level of sustained adherence is necessary to suppress viral replication and improve immunological and clinical outcomes (AIDS info, 2018). Adherence means a more collaborative process between the patient and provider. It is the term used to describe the act of following a course of medication in exactly the manner it is prescribed (WHO, 2003). Adherence decrease the risk of developing anti-retroviral drug resistance, and reduce the risk of transmitting HIV/AIDS (Murphy et. al, 2000). It is also well understood and documented that HIV/AIDS requires perfect or near perfect adherence to obtain successful treatment outcome. Recent studies have estimated the required level of adherence for sustained virological suppression to be about 95% (Chesney, 2006). Non-adherence is the most common reason for treatment failure with potential risk to develop drug resistance through suboptimal viral suppression. Non-adherent HIV patient on ART triple therapy is 3.87 times more likely to die than an adherent patient on the same therapy. Additionally, benefits associated with ART are reduced when the patient is non-adherent with the treatment as compared with other less active forms of treatment (Kim et.al, 2018). Further, the risk of dying for an adherent patient on ART is nine times lower in comparison with the other types of treatment; this risk is only three times lower when the patient is non-adherent. Adherence to ART is therefore clearly a critical factor in prolonging lives of PLHIV. It has been estimated that at least 95% adherence with therapy is required to maintain HIV viral suppression. As a reflection of global roll-out efforts, the number of people living with HIV and receiving ART has increased by a third since 2013 and in 2015 about 17 million people received ART globally. The Government of Nepal started free ART and counseling services in 2004, ART coverage had increased to 26.1% in 2012 to 53% in 2018 through 74 ART sites and 24 ART Dispensing Centers (ADCs). However

among 22,048 patients living with HIV enrolled on ART only 75% of them were received ART in the year of 2018 (NCASC, 2018). Various studies showed that treatment success requires both a sustainable supply of ART to clinics and lifelong adherence to treatment by patients (Kim et. al., 2018 & Hansana et. al, 2013). Hence, the researcher was interested to assess the status of adherence to Anti-Retroviral Therapy (ART) among patient living with HIV AIDS (PLHA) receiving ART therapy.

Data and Method

A cross-sectional descriptive design was used to assess the status of adherence to Anti-Retroviral Therapy (ART) among patient living with HIV AIDS (PLHA) patients receiving ART therapy in Western Regional Hospital, Pokhara as this hospital is one of the referral and the largest ART dispensing hospital in western region. Non-probability consecutive sampling technique was used for data collection and the data was collected from total of 326 patients living with HIV AIDS, who were attended in the western regional hospital, anti-retroviral therapy (ART) unit and who meet the inclusion criteria during the period of November 2015 to January 2016 through face to face interview schedule. Patients living with HIV AIDS aged 18 years and above and patient receiving ART at least for 12 months or more were included in this study. Structured questionnaire were developed through extensive literature review and translated into Nepali language. Back to back translation was done to maintain the validity. Pre-testing was done among the 10% of the sample. Prior to data collection formal institutional approval was taken from concern authority and informed consent was obtained from the respondents. ART adherence was categorized as more than 95% is adherence if the patient missed doses less than 3 in previous 4 weeks; likewise if missed dose was 3 doses or more it was considered as non-adherence that is less than or equals to 95%. The collected data were reviewed, checked, coded and entered in Epi-data. The data were transferred to SPSS for further analysis and data were analyzed by using descriptive statistics (frequency, mean, standard deviation etc.).

Results and Discussion

A total of 326 eligible adult PLHA respondents were interviewed. The age group of the respondents was from 18 to 70 years with the mean age of 40.29 ± 11.84 (SD). Out of 326 respondents 55.2% were male and 48.8% were female. Based on the marital status, 59.8% were married and 20.0% were separated. Regarding educational status 40.2% respondents had no formal education and most of the respondents (60.4%) were unemployed. Majority (86.5%)

of respondents were taking ART since more than 2 years of duration (Table 1).

This study shows regarding currently using ART drugs cent percent of the respondent were taking Lamivudine (3TC) and Nevirapine (NVP) and 73.6% were taking Zidovudine (ZDV or AZT). Among the respondents who were taking ART 86.5% of them started the ART immediately after the diagnosis. All of the respondents received the counseling regarding treatment and they also have the positive prospectus regarding necessity of counseling.

The finding of this study revealed that majority of the respondents (92.9%) had >95% adherence with ART while 7.1% respondents had non-adherence (Table 2). Too long duration of treatment period was reason for non-adherence for the 7.4% of respondents whereas 5.8% blamed for forgot during travelling. Eighty percent of the respondents had got support from family and community for reminding on taking ART drugs and encouraging for ART. Most of them received support from spouse, family member, social worker and health personnel.

Table 1

Background Characteristics of Respondents (n=326)

Characteristics	Frequency	Percentage
Age group		
Less than 40 years	148	45.4
60 years and above	178	54.6
Mean \pm SD	40.29 \pm 11.84years	
Range	18-70years	
Gender		
Male	180	55.2
Female	146	44.8
Marital Status		
Married	195	59.8
Separated	65	20.0
Widow/Widower	66	20.2
Educational Status		
No formal education	131	40.2
Primary education	66	20.2
Secondary education	129	96.6
Previously engaged occupation		
Business/ Self-employed	107	32.8

Pensioner	22	6.7
Unemployed	197	60.4
Duration of treatment		
≥2 years	282	86.5
>3 years	44	13.5

Table 2*Status of Adherence of ART (n=326)*

Characteristics	Frequency	Percentage
Adherence >95%	303	92.9
Non-Adherence ≤95%	23	7.1

Discussion

A total of 326 eligible adult PLHA respondents were included in the study. Out of 326 respondents 55.2% were male and 48.8% were female which in contrast to the study done in South Africa where most of them were female (Peltzer et. al., 2010). Based on the marital status, 59.8% which similar to the study done in Lao People's Democratic Republic (Hansana et al., 2013). The educational status and employment status of the respondents was in contrast with the study done by Hansana et al., 2013 where most of them were literate and were employed. Regarding duration of treatment majority (86.5%) of respondents were taking ART since more than 2 which similar to the study done by Hansana et. al., 2013.

The finding of this study regarding adherence with ART was consistent with the study done in South Africa where 82.9% were >95% adherent (Peltzer et. al., 2010). Similarly, study done in Ghana revealed 91.0% had adherence with ART during last 1 month which is strongly consistent with this study where 92.9% of the respondent were adherent during last 1 month (Obirikorang, 2013) where previous study done in west Nepal found 84% adherence (Bam et. al., 2009). The reason for non-adherence was due to too long duration of treatment period by 7.4% of respondents and 5.8% blamed for forgot during travelling which was contradictory to the study done by Peltzer et.al and Ismail in Nigeria (Peltzer et.al., 2010) where the reason were forgetfulness and being busy.

Regarding regimen of ART drugs cent percent of the respondent were taking Lamivudine (3TC) and Nevirapine (NVP) and 73.6% were taking Zidovudine (ZDV or AZT) in this study which was contrast with study done in Ghana where on 25.9% respondents were

taking Lamivudine (3TC)/ Nevirapine (NVP) (Obirikorang, 2013) Among the respondents who were taking ART 86.5% of them started the ART immediately after the diagnosis. All of the respondents received the counseling regarding treatment and they also have the positive prospectus regarding necessity of counseling.

Conclusion

On the basis of study findings, it can be concluded that majority of the PLHA patients have more than ninety five percent adherences to anti-retroviral therapy. However some of them have still non-adherence to ART and the reason for non-adherence as claimed by respondents were forgetfulness during travelling and too long duration of treatment. Most of them got support from family and community member. Hence, it is necessary to emphasizing the awareness program related to ART therapy and importance of its adherence for better improvement is necessary to their family member and community people who may help and advice to remind them to take medicine regularly.

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