

# The Effectiveness Meaning of Life and Antiretroviral Therapy (Metart) Modul to Improve Antire to Viral Therapy Adherence among Newly Diagnosed HIV/AIDS: Pre Intervention Survey

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## Abstract

Adherence to ART is the primary determinant of viral suppression. Adherence of at least 95% is needed for optimal suppression. One of relationship with HAART is meaning in life. This study aimed at assessment meaning in life and adherence antiretroviral therapy before intervention about METART book.

This method use descriptive statistic analysis to explain social demographic, meaning in life, and adherence antiretroviral therapy.

**The Result:** Characteristics gender people new living with HIV/AIDS this study is 75,6% is Male with 38,5% homosexual. The age range of respondents is in the adult (65,4%). Single marital status is 74.4%. The total respondent with ARV medication is 30.8% under one year. 74.4% has meaningful life but 65,4% respondent has lack adherence ARV.

**Conclusion:** This research get data pre intervention METART modul about demographic, meaning in life, and adherence ARV.

**Keywords:** Adherence ART, meaning of life, HIV/AIDS.

## Introduction

Adherence to ART is the primary determinant of viral suppression and the risk of transmission it decreases the viral replication and viral load which in turn preserves the CD4 level, decreases the progress of AIDS, and reduces deaths<sup>(1)</sup>. Adherence of at least 95% is needed for optimal suppression<sup>(2,3)</sup>. Antiretroviral

therapy has an impressive clinical effect in that WHO has a target that 90% of People Living with HIV/AIDS (PLWHA) already underwent ART by 2016, but the target realization is only 53%. From year to year, PLWHA who undergo antiretroviral therapy is increasing. In 2016, there are 19.5 million or about 53% of the total number of PLWHA, and in mid-June 2017 the number has progressed to 20.9 million or about 56.9% of the total number of PLWHA<sup>(3,4)</sup>. Although adherence is important to the outcomes of therapy<sup>(5)</sup>.

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Out of 231 respondents in Nepal, 87.4% (95% CI: 83.2–91.6%) of them had an optimal adherence level and 12.6% of the respondents had an adherence level less than the optimal within the last month. i.e. 87.4% of the respondents' attained 95% adherence to

prescribed ART regimen<sup>(3)</sup>. Results of the evaluation of adherence to ART in Brazil using CEAT-VIH indicated that 50% (109/220) of the patients presented good adherence, 36% (79/220) presented strict adherence, and 14% (32/220) presented low adherence<sup>(6)</sup>. Based on the results research in Iran, 30.4% (65) of patients were non-adherent and 69.6% (149) showed good adherence to their medication protocols. The most important reason for discontinuation of medication was the patients' unknown personal reasons (n=60, 61.2%), from the non-adherence group<sup>(7)</sup>. Many determinant factors to present non-adherence; quality of life, distress psychology, meaning in life, self-efficacy, peer group, economy, health worker, stigma, motivation, gender<sup>(3,7-11)</sup>.

Effect of non-adherence ARV increases mortality and morbidities. HIV/AIDS has effect to biological, psychological, social, and spiritual. Thus, prevention of co-morbidities, improving knowledge through health education. Psychoeducation should be conducted at the initial evaluation to reduce negative beliefs regarding antiretroviral therapy. Assessment of anxiety and depression symptoms should be done throughout therapy as both psychological conditions are associated with patient adherence, success of treatment, and ultimately with patients' quality of life. This study researcher will be increasing of meaning in life to increasing adherence ARV people living with HIV/AIDS.

### Material and Method

The study protocol and consent procedures were reviewed and approved by the Institutional Review Boards of Sekolah Tinggi Ilmu Kesehatan Ngudia Husada Madura with number of ethical clearance 709/KEPK/STIKES-NHM-/EC/IX/2020. In accordance with the approved protocol, written informed consent was obtained from all study participants prior to data collection. This study is assessment pre intervention of meaning in life and antiretroviral therapy (METART) to promoting adherence antiretroviral therapy. Researcher use meaning in life questionnaire Indonesian version<sup>(12)</sup> and Morisky 8-scale<sup>(13)</sup> to assessment meaning in life and adherence antiretroviral therapy. Data analysis, descriptive statistic<sup>(14-16)</sup> were used to determine statistical differences in demographic variables (i.e., gender, education, marital status, CD4 status, Viral load status, Sexual orientation), meaning in life and adherence ART.

## Result and Discussion

**Demographic Characteristics:** A total of 78 PLWHAs were invited to participate in the study. Demographic Characteristics Are gender, sexual orientation, age, education level, marital status, ARV medication, CD4 status, and viral load status (Table 1).

**Table 1.1: Demographic Characteristics people new living with HIV/AIDS n=78**

Demographic data	Frequency (n)	Percent (%)
<b>Gender</b>		
Female	16	20.5
Male	59	75.6
Other	3	3.8
<b>Total</b>	<b>78</b>	<b>100</b>
<b>Sexual-orientation</b>		
Heterosexual	26	33.3
Homosexual	30	38.5
Bisexual	15	19.2
Other	7	9
<b>Total</b>	<b>78</b>	<b>100</b>
<b>Age</b>		
Adolescent	24	30.8
Adult	51	65.4
Elderly	3	3.8
<b>Total</b>	<b>78</b>	<b>100</b>
<b>Education-level</b>		
Middle-elementary school	7	9
High school	50	64.1
Undergraduate	20	25.6
Postgraduate	1	1.3
<b>Total</b>	<b>78</b>	<b>100</b>
<b>Marital status</b>		
Single	58	74.4
Married	16	20.5
Widow/windower/divorce	4	5.1
<b>Total</b>	<b>78</b>	<b>100</b>
<b>ARV-Medication</b>		
0-6 months	18	23.1
7-12 months	24	30.8
13-18 months	17	21.8
19-24 months	19	24.4
<b>Total</b>	<b>78</b>	<b>100</b>

Demographic data	Frequency (n)	Percent (%)
<b>Cd4-Status</b>		
<200	13	16.7
200-300	13	16.7
300-400	20	25.6
400-500	14	17.9
>500	11	14.1
I don't know	7	9
<b>Total</b>	<b>78</b>	<b>100</b>
<b>Viral load status</b>		
Detections	16	20.5
Un-detections	22	28.2
I don't know	40	51.3
<b>Total</b>	<b>78</b>	<b>100</b>

Characteristics gender people new living with HIV/AIDS this study is 75,6% is Male with 38,5% homosexual. Homosexual is romantic sexual attraction, behavior with same sex<sup>(17)(18)(19)</sup>. The age range of respondents is in the adult (65,4%) age range which is above 25-45 where this age is a productive to developmental task of choosing a job and marriage. This time is also a time to build the peak structure of life<sup>(20)</sup>. Siglemerital status is 74.4%. the total respondent with ARV medication is 30.8% under one year. Almost respondent have CD4 under 500, a normal CD4 cell count is about 500 until 1.500 cells/mm<sup>3</sup>. Clinicians use this test to monitor the destruction of CD4 cells, and it also monitors the effectiveness of the antiretroviral treatment (ART). For a physician, the CD4 cell count has become the best indicator of disease progression and is used to stage disease and guide medical therapy. Per the Center for Disease Control and Prevention (CDC), one of the indications for the diagnosis of AIDS is when CD4 cell count drops below 200 cells/mm<sup>3</sup>. The decline of CD4 T cells can lead to opportunistic infections, and it increases mortality. The results of a viral load test are described as the number of copies HIV RNA in a milliliter of blood, when somebody has undetected of viral load is described if the copies of HIV RNA of blood in very low and its good for healthy<sup>(10,11)</sup>.

**Meaning of Life:** The result showed 74.4% people with newly diagnosed HIV/AIDS had meaningful life (Tabel 2).

Meaning of life is comprehended from every event that occurred and experienced both pleasant and distressing events. It will bring a person into a meaningful

life so that the feeling of happiness will emerge, on contrary it can lead one to a meaningless empty life if they unsuccessful<sup>(23-25)</sup>. Meaning of life had a different function for each individual, but according to Mackenzie & Baumeister (2014), the function of meaning in life could be divided into three function themes<sup>(26)</sup>. The first function was to help someone in recognizing and discussing signs and patterns in the environment. The second function was for communication. The third function was for self-control. The meaning of life according to Starck (2014), was said to be the phase where a person reached his life goal<sup>(27)</sup>. The meaning of life have correlations with adherence ARV<sup>(11)</sup>.

**Table 2: Meaning of life people living with HIV/AIDS n=78**

Meaning of Life	Frequency (n)	Percent (%)
Meaningfull life	58	74.4
Low meaning in life	20	25.6
<b>Total</b>	<b>78</b>	<b>100</b>

**Adherence antiretroviral therapy:**

**Table 3: Adherence antiretroviral therapy n=78**

Adherence antiretroviral therapy	Frequency (n)	Percent (%)
High adherence	27	32.6
Middle adherence	26	33.3
Low adherence	25	32.1
<b>Total</b>	<b>78</b>	<b>100</b>

From the research results obtained that 59 respondents or 57.8% were adherence to antiretroviral therapy and the rest did not comply as much as 43 respondents or 42.2%. This level of adherence was seen from the accuracy of the dosage and the frequency of time-consuming ARV. The non-adherence of respondents based on the questionnaires due to forgetting to take the drugs by 26.5% and difficult to remember to consume the drugs by 28.4%.

ART treatment has the potential to reduce mortality and morbidity that associated with HIV infection, and improve the quality of life<sup>(28,29)</sup>. A person is said to be adherent in undergoing an optimal antiretroviral therapy if (>95%) never forgets to take the drug, but it is recommended that the adherence is (100%). According to Bangsberg, Kroetz, & Deeks, (2007), ART adherence should be observed to discern the compliance level of the

treatment, as some studies indicate that with treatment adherence of (95%) or more indicates the effectiveness of antiretroviral therapy<sup>(30)</sup>, but on adherence (75%) shows a rise of viruses with retention against drugs<sup>(31)</sup>. Some patients fail to maintain ART adherence<sup>(32)</sup>. Optimal ART adherence was significantly associated with being virally suppressed<sup>(1,7,9,10)</sup>.

Many factors to associate ART is motivation on the relationship between HIV stigma and ART adherence<sup>(10)</sup>.

### Conclusion

Characteristics of participants ages from 18 to 54 years, 75,6% identified as Male, 64,1% had completed high school, 74,4% single, 38,5% identified as homosexual and 30,8% participants had ART medication under one year. The participant reported 74,4% was having meaningful life and 65,4% reported had lacked ART Adherence.

**Conflict of Interest:** The Authors declare that there is no conflict of interest.

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