SELF EFFICACY AND ADHERENCE TO ANTIRETROVIRAL (ARV) DRUG THERAPY AMONG PEOPLE LIVING WITH HIV-AIDS (PLWHA)

Siti Khotimah[1], Rachmat Hargono[2,] Mohammad Zainal Fatah[3]

[1]Student of Health Promotion and Behavioral Science, Master of Public Health Science, Faculty of Public Health, Airlangga University, Indonesia
[2,3]Departement of Health Promotion and Behavioral Science, Faculty of Public Health, Airlangga University, Indonesia

Corresponding author: Siti Khotimah, Jalan Pahlawan III/3 RT.03 RW02 Tulungagung 66224, Tulungagung, Indonesia, email: chitong05bangunjaya@gmail.com

ABSTRACT

Background:
Adherence to Antiretroviral Therapy (ART) is a gold way to achieve maximal suppression of HIV replication for PLWHA. It is improving his health, improving his quality of life, and prolonging his survival. In Tulungagung district, the prevalence of the ART adherence was low. People living with HIV-AIDS (PLWHA) who lost to follow up as much as 14.98%, PLWHA who still do ART as much as 54.31%, and PLWHA who did follow up with adherence rate more than 95% as much as 64.22%. It is because patients can not handle their environmental contraints during ART. Self-efficacy is a way to self-control environmental contraints. The aim of this study was to analyze the association of self-efficacy and adherence to antiretroviral (ARV) drug therapy among people living with HIV-AIDS (PLWHA).

Material and Method:
This study was observational analytic with case control design. Sampling was random sampling and obtained 99 people living with HIV-AIDS (PLWHA) into 2 groups. First group was 33 PLWHA who lost to follow up as a case group (non-adherence group). Second group was 66 PLWHA who did follow up with adherence rate more than 95% as a control group (adherence group). The data was collected at VCT Seruni Clinic in RSUD dr. Iskak Tulungagung. This study also did home visit to collect primary data needed. This study used logistic regression with $\alpha = 0.05$.

Results:
Adherence to antiretroviral (ARV) drug therapy was influenced by self-efficacy (p = 0.000). PLWHA who had low self-efficacy were at risk for not adherence 7.6 times greater than PLWHA who had high self-efficacy (OR = 7.6)

Conclusion:
Adherence to antiretroviral (ARV) drug therapy was influenced by self-efficacy. It is suggested to Health Service Centre to giving intensive counseling to PLWHA during do Antiretroviral Therapy (ART). Intensive counseling serves to increase self-efficacy.

Keywords: Self-efficacy, PLWHA, antiretroviral (ARV) drug adherence

1.0 Introduction

In 2016, there were 36.7 million people who living with HIV-AIDS in the world. Currently there were 1.8 million new infections and 1 million PLWHA died (UNAIDS, 2017). HIV replication is very rapid and the spread of virus is wide will be decreasing immunity. So, they will be more susceptible to infectious diseases (opportunistic infection) and also can be die. Antiretroviral (ARV) drug is a medication to suppression HIV replication and prevent opportunistic infections (MOH Indonesia, 2014)

HIV-AIDS is still a major health problem in Tulungagung district. They reported there were 295 new infections at the end of 2016, and 328 new infections at the end of 2017 (increase 11.19%). The total cumulative number of AIDS patients 1893 cases in 2006-2017. According to the SIHA 2017, there were 1274 PLWHA who did ART and 1055 PLWHA who ever started ART. However, the prevalence of the ART adherence was low. People living with HIV-AIDS (PLWHA) who lost to follow up as much as 158 PLWHA (14.98%), PLWHA who still do ART as much as 573 PLWHA (54.31%), and PLWHA who did follow up with adherence rate more than 95% as much as 545 PLWHA (64.22%).

PLWHA have to do Antiretroviral (ARV) drug therapy for life. There are a lot of environmental contrains during ART. If they can not handle it, they will become lost to follow up ART. It concluds that adherence is influenced self-efficacy. Bandura (2008) said that self-efficacy is an individual belief in performing specific tasks as well as by their actual skill.

Low self-efficacy might significant factor behind the phenomena of nonadherence in PLWHA. The aim of this study was to analyze the association of self-efficacy and adherence to antiretroviral (ARV) drug therapy among people living with HIV-AIDS (PLWHA). Self-efficacy variable of this study refers to maintenance self efficacy or coping self efficacy in the HAPA (Health Action Process Approach) Model.

2.0 Materials and Methods

This study was observational analytic with case control design. Sampling was random sampling and obtained 99 people living with HIV-AIDS (PLWHA) into 2 groups. First group was 33 PLWHA who lost to follow up as a case group (non-adherence group). Criteria of lost to follow up was the PLWHA who did not take ARV drugs at least 3 months. Second group was 66 PLWHA who did follow up with adherence rate more than 95%, at least 3 months, as a control

IJPHCS
Open Access: e-Journal

International Journal of Public Health and Clinical Sciences
e-ISSN : 2289-7577. Vol. 5:No. 5
September/October 2018

group (adherence group). Exclusion criteria of this study was aged 18 years old and mental disorders.

The data was collected by self-administered questionnaire that consists of favourable and unfavourable questions, with likert-scale 1 to 5. There were 12 questions about convinced adherent although limited access transportation, limited cost, got discrimination and stigma, no family support, unpleasant side effects, arise boredom, and frustrated. If the total scor was less than 48, it was categorized below self-efficacy. Besides, if the total scor was more than 48, it was categorized be high self-efficacy. This study used logistic regression with α = 0.05.

The study used questionnare and indept-interview to get the data. For control group, it conducted at VCT Seruni Clinic in RSUD dr. Iskak Tulungagung. For case group, it conducted at respondent's home. This study was conducted for 2 months, May until June 2018. This study was received ethical approval from the Health Research Ethics Committee, dr. Iskak Tulungagung Hospital, Number 070/2606/407.206/2018.

3.0 Result

3.1 Characteristics of respondent

Table 3.1 Characteristics of respondent based on sosio-demography variables

No.	Socio-demography	Non-adherence		Adherence	
		n	%	n	%
1	Age				
	≥ 20 years - 30 years	6	18.2	12	18.2
	≥ 30 years - 40 years	17	51.5	22	33.3
	≥ 40 years - 50 years	6	18.2	30	45.5
	≥ 50 years	4	12.1	2	3.0
2	Gender				
	Male	18	54.5	23	34.8
	Female	15	45.5	43	65.2
3	Education level				
	Under elementary school	1	3.0	0	0
	Elementary school	3	9.0	7	10.6
	Junior high school	21	63.6	40	60.6
	Senior high school and above	8	24.2	19	28.8
4	Occupation				
	Not work	10	30.3	19	28.8
	Work	23	69.7	47	71.2
5	Salary				
	< 1.5 million rupiahs	12	36.4	29	43.9
	1.5 – 2.5 million rupiahs	16	48.5	31	47.0

No.	Socio-demography	Non-adherence		Adherence	
		n	%	n	%
	2.5 – 3.5 million rupiahs	4	12.1	6	9.1
	≥ 3.5 million rupiahs	1	3.0	0	0
6	Distance between home and ART clinic				
	< 5 km	16	48.5	16	24.2
	5 – 15 km	13	39.4	26	39.4
	5 – 30 km	4	12.1	21	31.8
	≥ 30 km	0	0.0	3	4.6
7	Got information about HIV-AIDS and ART				
	Never	0	0	0	0
	Ever	33	100	66	100

Table 3.1 shows that PLWHA who did not adherence was mostly male (54.5%), between 30-40 years old (51.5%), graduated from junior high school (63.36%), go to work (69.7%), and had salary between 1.5 – 2.5 million rupiahs (48.5%). Otherwise, PLWHA who did not adherence was mostly living in a house closer (5 km) to the dr. Iskak Tulungagung Hospital (48.5%).

Socio-demography characteristics might significant factor behind the phenomena of nonadherence among PLWHA. Based on gender, females were more able to adherence because they want to having a family and caring of them. Based on other characteristics, the distribution of respondents between adherence group and non-adherence group almost the same. It could be concluded that adherence to antiretroviral (ARV) drug therapy was not influenced by socio-demography characteristics.

Table 3.2 Cross-tabulation between self-efficacy and adherence to ARV drug therapy

Self-efficacy	Adherence to ARV Drug Therapy			
	Non-adherence	%	Adherence	%
Low	28	84.8	28	42.4
High	5	15.2	38	57.6

Table 3.2 shows that most of PLWHA who did not adherence were had low self-efficacy (84.4%). In contrast, most of PLWHA who did adherence were had high self-efficacy (57.6%). It could be concluded that adherence to ARV drug therapy was more in high self-efficacy.

IJPHCS
Open Access: e-Journal

International Journal of Public Health and Clinical Sciences
e-ISSN : 2289-7577. Vol. 5:No. 5
September/October 2018

Table 3.3 Summary of logistic regression

No.	Variable	β	P *value*	OR	
1.	Self-efficacy	2.028	0.000	7.6	Significant

Table 3.3 shows that adherence to antiretroviral (ARV) drug therapy was significantly influenced by self-efficacy (p < 0.05). Logistic regression also showed OR value i.e. 7.6. It means that PLWHA who had low self-efficacy were at risk for not adherence 7.6 times greater than PLWHA who had high self-efficacy (OR = 7.6)

4.0 Discussion

Adherence to antiretroviral (ARV) drug therapy was significantly influenced by self-efficacy. Health Action Process Approach (HAPA) theory explains that the volition phase was influenced by maintenance self-efficacy. It can be called coping self-efficacy. This phase would help patient to control environmental constraints during long-term therapy (Schwarzer, 2016). A person who had high maintenance self-efficacy would be able to behave what he wants (Schwarzer, 2008).

The results showed that most of PLWHA who did not adherence were had low self-efficacy and most of PLWHA who did adherence were had high self-efficacy. Logistic regression also showed that adherence to antiretroviral (ARV) drug therapy was significantly influenced by self-efficacy. Adefolalu, *et al.,* (2014) also agreed that there was a correlation between self-efficacy and adherence to antiretroviral (ARV) drug therapy.

During the in-depth interview, PLWHA who had low self-efficacy said that they did not want to feel unpleasant side-effect of ARV drug again, they tired of taking medicine everyday, and then they felt frustrated. Actually all of contraints can be handled. PLWHA who did ART adherence said that there were some strategies to handle it, such as take medication before sleep so they would not feel the side effects and consider medication as a suplemen vitamin. If other people ask related to your ARV drug, then say that it is a suplemen of multivitamin. According to the Walter (2010), PLWHA in Peru also said that consider medication as a suplemen of multivitamin is an effective way to make PLWHA become more adherence during do ART. It means that people who had high self-efficacy will try to find ways to control environmental constrains.

Schwarzer (2008) said that self-efficacy helps to overcome incompatible goals, urges, interfering emotions, and environmental constrains that occur during the execution of the planned behavior. PLWHA who had high self-efficacy are expected to envisage more positive opportunities to act, have more elaborate plans, and persevere more.

Non-adherence makes a failure of ARV drug therapy goals. Highly Active Antiretroviral Therapy (HAART) is a term of all combinations of ARV drugs that should be taken exactly dose on the right time. Adherence to Antiretroviral Therapy (ART) is a gold way to achieve maximal suppression of HIV replication and prevent to drug resistant among PLWHA. It is to improving his health, improving his quality of life, and prolonging his survival (MOH Indonesia, 2011).

Otherwise non-adherence to Antiretroviral Therapy (ART) can increase drug resistant and increase the risk of death (Zhou, *et al*, 2014).

From findings, self-efficacy is an important things that should be improved for patient who have to do drug therapy for along time, especially for PLWHA. Patient with higher self-efficacy are expected to envisage more positive opportunities to act, have more elaborate plans, and persevere more. Hence, it is suggested to Health Service Centre to giving intensive counseling to PLWHA during do Antiretroviral Therapy (ART). Intensive counseling serves to increase self-efficacy.

5.0 Conclusion and recommendation

Adherence to antiretroviral (ARV) drug therapy was influenced by self-efficacy. PLWHA who had low self-efficacy were at risk for not adherence 7.6 times greater than PLWHA who had high self-efficacy. It is suggested to Health Service Centre to giving intensive counseling to PLWHA during do Antiretroviral Therapy (ART). Intensive counseling serves to increase self-efficacy. Future qualitative study is needed to conseptualitation how self-efficacy works, as well as increasing adherence.

Acknowledgement

Declaration

Authors declare that there is no conflict of interest regarding publication of this article.

Author's contribution

Author 1: information gathering and preparation
Author 2 and 3: data analysis and review of manuscript

Reference

UNAIDS. (2017). UNAIDS Report on the Global AIDS Epidemic 2017. Retrieved December 27, 2017, from http://www.unaids.org.

Minister of Health of Indonesia. (2011Guidelines for Clinical Management of HIV Infection and Antiretroviral Therapy in Adults. Jakarta: Secretary General of the Ministry of Health of the Republic of Indonesia.

Minister of Health of Indonesia, (2014). Minister of Health of Indonesia Regulation Number 87 Year 2014 about Antiretroviral Treatment Guidelines. Jakarta: Secretary General of the Ministry of Health of the Republic of Indonesia.

SIHA. (2017). Application Report HIV-AIDS Infromation System Tulungagung District. Retrieved February 10, 2018, from http://www.siha.depkes.go.id.

Bandura, A., (2008). Self efficacy. New York: Stanford University.

Schwarzer, R., (2016). Health Action Process Approach (HAPA) as a theoretical framework to understand behavior change. Actualidades en Psicología,Volume 30(121), pp. 119-130.

Schwarzer, R., (2008). Modeling health behavior change: how to predict and modify the adoption and maintenance of health behaviors. International Association of Applied Psychology, Volume 57(1), pp. 1-29.

Walter, H., Deanna K., Robinson, C., Patricia, S., Ann, E., (2010). Understanding the facilitators and barrieres of antiretroviral adherence in Peru: A qualitative study. BMC Public Health 2010, 10:13

Zhou, J., Tanuma, J., Chaiwarith, R., Lee, C.K.C., Law, M.G., Kumarasamy, N., et al. (2012). Lost to follow up in HIV-Infected patients from Asia Pasific Region: Result from TAHOD. Hindawi Publishing Corporation AIDS Research and Treatment, 2012: 1-10.

Adefolalu, A., Nkosi, Z., Olorunju, S., Masemola, P., (2010). Self-efficacy, medication beliefs and adherence to antiretroviral therapy by patients attending a health facility in Pretoria. Retrieved May 28, 2018, from https://doi.org/10.1080/20786190.2014.975476