

## EFFECTS OF LATIHAN PASRAH DIRI ON THE IMPROVEMENT OF DEPRESSIVE SYMPTOMS

A study on Human Immunodeficiency Virus (HIV)/ Acquired Immune Deficiency Syndrome (AIDS) patients at RSUP Dr. Sardjito, Yogyakarta

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### ABSTRACT

**Background.** Depression is more prevalent in persons with chronic illnesses such as diabetes, epilepsy and infection of Human Immunodeficiency Virus (HIV). Depression can make HIV even. Antidepressant may be needed, interaction and side effect may occur when using Antiretroviral (ARV) and antidepressant in combination. Complementary and alternative medicine (CAM) include Latihan Pasrah Diri (LPD) may seem safe to treat depression in HIV patients.

**Methods.** This is a quasi experimental study, participant include outpatient dan inpatient at RSUP Dr. Sardjito, Yogyakarta. They were aged >18 years. After scoring with Zung Self Rating Scale for depression, participants allocated into two groups, with dan without Latihan Pasrah Diri program. Zung Self Rating Scale for depression was evaluated after 1 cycle of program.

**Result.** The means of Zung Self-Rating Depression Scale score before and after LPD were  $42,21 \pm 9,3$  and  $35 \pm 10,73$  ( $p 0,003$ ). While in control group (without LPD / brief psychotherapy) the means of Zung Self-Rating Depression Scale score before and 3 weeks after brief psychotherapy were  $42,93 \pm 7,45$  and  $39,36 \pm 7,69$  ( $p 0,019$ ). Statistically there was no significancy in the means of delta Zung Self-Rating Depression Scale in LPD group and control group.

**Conclusion.** It was concluded from this study that there is an influence on the improvement of depressive symptoms post- Latihan Pasrah Diri program to people with HIV/AIDS.

**Key words:** depression, HIV, Latihan Pasrah Diri, Zung Self-Rating Scale

### INTRODUCTION

Depression is more common in people with chronic diseases such as diabetes and epilepsy and post live events related to stress such as loss of friends, parents and family<sup>1</sup>. Depression in HIV / AIDS can be used to predict the acceleration decreased levels of lymphocyte Cluster of Differentiation 4 (CD4) in HIV patients<sup>2</sup>. Depression can affect the function of killer lymphocytes in HIV patients, and suspected depression causes increased activation of CD8 + and viral load<sup>3</sup>.

Depression that occurs in people with HIV and other conditions can aggravate the clinical patients. This happens because depression will cause a patient tends not to adhere to schedule consultations, not adhere to therapeutic dose, drug abuse and alcohol, eat irregularly, eat unhealthy food and withdraw from relationships and social activities<sup>4</sup>.

Treatment consist of pharmacotherapy and psychotherapy. Existing studies prove that psychotherapy gives similar clinical response compared to medication, so that one of two things can be justified empirically based physician and patient preference<sup>1</sup>.

Meditation for medicinal purposes is a practice that includes body and soul and classified as a complementary and alternative medicine (CAM). There are several types of meditation, generally from religious and spiritual traditions use certain techniques such as focusing attention on a word, object, or breathing, with a specific posture and being open to divert the mind and emotion<sup>5</sup>.

The Mindfulness meditation and stress reduction programs to prevent the decline of CD4 + T lymphocytes in adults infected individuals HIV-1<sup>6</sup>. Depression in people with HIV, 35.2% was treated with relaxation and spiritual approach<sup>7</sup>. In fact only few clinical evidences to recommend methods of

relaxation and spiritual approach to improve depression syndrome in patients with HIV, so this is very interesting to study to become a clinical footing or alternative treatment modalities of depression in people with HIV / AIDS. Latihan Pasrah Diri was an example of relaxation and spiritual approach that easily adapted, less expensive compared to other method of relaxation or spiritual approach.

### METHOD

#### Research Subjects

Subjects were HIV / AIDS patients who experienced symptoms of depression, hospitalized in internal medicine wards Dr. Sardjito General Hospital, and maintained in the outpatient clinic of psychosomatic and edelweiss Dr. Sardjito Yogyakarta. Inclusion criteria for research subjects: aged > 18 years, signed informed consent, had tested positive for HIV / AIDS, showed symptoms of depression. Exclusion criteria: not suffering from kidney failure, chronic heart failure, stroke, diabetes mellitus, bronchial asthma, COPD, cancer, and epilepsy.

#### Research Design

The research was conducted with the design quasi experimental study. Research subjects who fulfilled the inclusion criteria were divided into two groups each of 32 people without randomization. One group was given Latihan Pasrah Diri program to one cycle (21 days) and the other group acted as control. Both Latihan Pasrah Diri and control groups were measured depression status using a questionnaire rating symptoms of Zung Self-Rating Scale (Self-Assessment Scale) depression at baseline and after the program is completed<sup>8,9</sup>.

Latihan Pasrah Diri (LPD) is a training given twice a day for 21 consecutive days. This training is the combination of relaxation with mental dzikir [carry the Quran s. al-A'raf (7): 205 and al-Ahzab (33): 41] and control of regulate breath of 16-20 times per minute, which performed in the morning and afternoon<sup>8</sup>.

#### Measurement

Assessment of depressive symptoms using a questionnaire Zung Self-Rating Scale (Self-Assessment Scale) had been already validated in Indonesian language. The maximum value of this questionnaire is 80, and the patient is categorized as having symptoms of depression when the obtained

value  $\geq 40$ <sup>9</sup>. Determination of the status of HIV / AIDS carried out by examination with anti-HIV ELISA method<sup>10</sup>.

#### Hypotheses and Statistical Analysis

The hypothesis of this research is the improvement of depression symptoms post-Latihan Pasrah Diri program to people with HIV / AIDS. Data characteristics of study subjects are presented in the mean number and percentage. Normal distribution of variables is determined by Shapiro-Wilk test. To determine differences in mean score of Zung Self-Rating Scale (Self-Assessment Scale) depression in the group treated with the group without treatment used Independent t-test. To determine differences in mean score of Zung Self-Rating Scale (Self-Assessment Scale) depression in groups with LPD and without LPD were compared between the beginning and end of the study used Paired t-test. Difference of mean score of Zung Self-Rating Scale depression (Self-Assessment Scale), between smoking and nonsmoking groups at the end of the study in groups LPD and without LPD used independent t-test. Statistically significant differences determined by the value of  $P < 0.05$  and confidence interval (CI) 95%.

### RESULT

The study was conducted in October and November 2010. Basic characteristics of study subjects are shown in table 1. The total sample in the treatment group where 16 people, but 2 people (1 male and 1 female) were lost to follow-up, 1 person declined to be evaluated after 1 cycle of LPD and 1 person could not be contacted, in the control group, initially there were 15 persons but 1 person (Male) was eventually not willing to participate in the evaluation.

The mean age in this study is younger than previous studies, ie 27.4 years in the treatment group and 29.8 years in the control group. Age of HIV patients with depression in a study by Lyketsos et al. is 33.2 years old<sup>11</sup>. Older age reported for HIV group was 35.2 +5.8 years and 36.2 +6.0 with depression in the HIV group with affective depression<sup>2</sup>. Creswell et al. reported an older age of 40<sup>6</sup>. Age on the research findings are consistent with national data where most AIDS patients aged 20-29 years later followed by 30-39 years (MOH, 2009)<sup>12</sup>.

Table 1. Basic Characteristics of Study Subjects

Characteristics	LPD(%) (n=14)	Without LPD(%) (n=14)
Age	27,4	29,8
Sex		
Male	2(14,3)	10(71,4)
Female	12(85,7)	4(28,6)
Education		
SD	2(14,3)	1(7,1)
SMP	3(21,4)	2(14,3)
SMA	7(50)	8(57,1)
D3		2(14,3)
S1	2(14,3)	1(7,1)
S2		
Risk factor		
NAPZA	3(21,4)	6(42,9)
Non NAPZA	11(78,6)	8(57,1)
ART		
In therapy	11(78,6)	14(100)
With Evarirenz	4(28,6)	8(57,1)
Smoking history		
smoking	7(50)	10(71,4)
Non smoking	7(50)	4(28,6)

Poupard et al. states that 18% of the use of efavirenz-based antiretroviral experienced depression<sup>13</sup>. Ribs et al. stated 19% of patients receiving efavirenz experienced severe to very severe stress compared with not getting efavirenz (p = 0.014)<sup>14</sup>.

Clifford et al. reported that the patients often complained of subjective neurologic effects on the use of efavirenz, but generally not severe and the patient remains safe to continue the use of drugs and the symptoms will soon disappear<sup>15</sup>.

At the beginning of the study, both groups showed a mean score of Zung Self-Rating Scale depression more than 40 which means that in both groups experiencing symptoms of depression. At the end of the study, Zung Self-Rating Scale of the both groups was significantly depressed, as seen in table 2.

Table 2. Comparison of the mean score of Zung Self-Rating Depression Scale at the beginning and end of the study

Variabel	baseline	End of study	P
LPD (n=14)	42,2±9,25	35±10,72	0,003 <sup>#</sup>
Without LPD (n=14)	42,9±7,49	39,6±7,68	0,019 <sup>#</sup>

<sup>#</sup>paired t-test

Decrease in the mean score Zung Self-Rating Depression Scale in the LPD group was significant. Although a significant decrease was also observed in the group without LPD, but a greater decrease was shown in score on the LPD group. This shows the benefits of LPD as a treatment modality of depression in people with HIV/AIDS.

Oman et al. found that subjects who received therapy Mindfulness-based stress reduction (MBSR) after 8 weeks on the program showed significant benefits in reducing stress (P <0.05)<sup>17</sup>. Studies on the benefits of transcendental meditation for reducing depression are also shown in studies conducted at Charles Drew University in Los Angeles and University of Hawaii at Kohala, including African American and Native Hawaiian, 55 years and older, the risk of cardiovascular disease. Participants in both studies who practice the Transcendental Meditation program showed significant reductions in symptoms of depression compared with controls. The most significant decrease was found in participants who have indicated a significant clinical depression, and those who practiced the Transcendental Meditation show an average reduction in depression symptoms by 48%<sup>18</sup>.

Woolery et al. showed a decrease in depression scores at the end of the study compared to baseline in the yoga group than in controls (P <0.001). This randomized study showed that practicing yoga could provide therapeutic benefit in mild depression, reduce anxiety, improve feelings and affects the work cortisol<sup>19</sup>.

Although there is improvement of symptoms of depression based on scores decreased Zung Self-Rating Depression Scale LPD group, but the decline was also observed in the group without LPD. The most reasonable explanation to show the explicit decrease in the score of the group without LPD was the fact that at the beginning of the study, both group with LPD or without LPD were given short psychotherapy (brief psychotherapy) to raise their enthusiasm, motivation and positive thinking in facing their illness. The other reason that may cause the explicit decrease in the score that encouraged the patients to be more obedient to their therapy and pay more attention to the things that could affect their health was the information that there would be an evaluation given at the end of the study.

At the beginning of the study both groups of LPD and without LPD showed depressive symptoms (score of Zung Self-Rating Depression Scale > 40), and at the end of the study both group

also showed decreased scores Zung Self-Rating Depression Scale <40. Thus there is no significant difference in the mean Zung Self-Rating Depression Scale between both groups at the beginning and at the end of the study. It is shown in table 3 below.

Table 3. Comparison of the delta score of Zung Self-Rating Depression Scale between the groups with LPD and without LPD

Variabel	LPD	Without LPD	P
Delta Zung Self Rating Scale score (baseline – end of study)	7,21±7,33	3,57±5,00	0,137*

\*Independent t-test

The results of previous studies and the results of this study provide clinical evidence that meditation, yoga or any exercise for *Latihan Pasrah Diri* can improve depression symptoms in people with HIV/AIDS.

Limitations of this study are: First, the research subjects who can not follow the evaluation at the end of the study (lost to follow-up) either in the LPD group and the group without LPD. Second, the small sample size. A larger sample size would certainly add the strength of this research. Third, a quasi experimental research design to ensure implementation of the LPD did not really fit the guidelines. Fourth, factors that may affect the depression such as the use of antiretroviral drugs and antidepressants can not be controlled.

**CONCLUSION**

In conclusion there is an influence on the improvement of depressive symptoms post-Exercise *Latihan Pasrah Diri* on HIV/AIDS. We suggest a research design should be selected randomized controlled clinical trials with larger sample size. Randomized controlled clinical trials can be done by dividing the study subjects by simple random allocation.

**REFERENCES**

1. Brent, D.A., and Birmaher, Adolescent Depression, *N Engl J Med* 2002; Vol. 347, No. 9: 667-671.

2. Burack, J.H., Barrett, D.C., Stall, R.D., Chesney, M.A., Ekstrand, M.L., Coates, T.J. Depressive Gejalas and CD4 Lymphocyte Decline Among HIV-Infected Men, *JAMA*. 1993;270:2568-2573.

3. Evans, L.D., M.D., Ten Have, T.R., Douglas, S.D., Gettes, D.R., Morrison, M., Chiappini, M.S., et al. Association of Depression With Viral Load, CD8 T Lymphocytes, and Natural Killer Cells in Women With HIV Infection. *Am J Psychiatry* 2002; 159:1752–1759.

4. Hourston, S.H. HEAL GUIDES, HIV/AIDS & Depression: Keys to Healing, *Health Education Advocacy & Leadership*, A project of AIDS & Disability Action Program/Wellness & Disability Initiative, BC Coalition of People with Disabilities 2010.

5. National Center for Complementary and Alternative Medicine. What Is CAM?, *U.S. Departement of Health and Human Services*, 2007, D347

6. Creswell, J.D., Myers, H.F., Cole, S.W., Irwin, M.R. Mindfulness meditation training effects on CD4+ T lymphocytes in HIV-1 infected adults: A small randomized controlled trial. *Brain, Behaviour, and Immunity* 2009, 23; 184-188.

7. Ernst, J. Alternative Treatment Modalities in Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome. *Clinical Infectious Diseases* 2003; 37(Suppl 2):S150–3.

8. Asdie, A.H. Penatalaksanaan Hipertensi pada Diabetes Mellitus, *Update Management of Hypertension*, Pustaka Cendekia Pres bekerjasama dengan Panitia Pelantikan Dokter FK UII 2008.

9. Mc Dowell, I., and Newel, C. *Measuring Health, A Guide to Rating Scales and Questionnaires*, 2<sup>nd</sup> ed., New York, Oxford University Press, 1996.

10. Nasronudin. *HIV&AIDS Pendekatan Biologi Molekuler, Klinis dan Sosial*, Surabaya, Airlangga University Press. 2007.

11. Lyketsos, C.G., Hoover, D.R., Guccione, M., Senterfitt, W., Dew, M.A., Wesch, J., et al. Depressive Symptoms as Predictors of Medical Outcomes in HIV Infection, *JAMA* 1993, 270;2563-2567.

12. Komisi Penanggulangan AIDS. Situasi HIV & AIDS di Indonesia. *Ditjen PPM & PL Depkes RI*. 2009

13. Poupard, M., Ngom Gueye, N.F., Thiam, D., Ndiaye, B., Girard, P.M., Delaporte, E., *et al.* Quality of life and depression among HIV-infected patients receiving efavirenz- or protease inhibitor-based therapy in Senegal, *HIV Med.*, 2007 Mar;8(2):92-5.
14. Ribs, T.A., Begley, K., Smith, D.E., Sarangapany, J., Callaghan, A., Kelly, M., *et al.* Efavirenz and Chronic Neuropsychiatric Symptoms: Results, *HIV Medicine*, 2006 ; 7(8):544-548.
15. Clifford, B.D., Evans, S., Yang, Y., Acosta, E.P., Pham, D., Goodkin, K., *et al.* Impact of Efavirenz on Neuropsychological Performance and Symptoms in HIV-Infected Individuals, *Ann Intern Med.*, 2005; 143:714-721.
16. Seidman, D. Depression, Smoking, and Quitting, [www.danielfseidman.com](http://www.danielfseidman.com). 2010
17. Oman, D., Shapiro, S.L., Thoresen, C.E., Plante, T.G., Flinders, T. Meditation Lowers Stress and Supports Forgiveness Among College Student: A Randomized Controlled Trial, *Journal of American College Health*, 2008; Vol. 56, No.5.
18. Nidich, S., and Myers, H. New studies show reduced depression with Transcendental Meditation, [www.eurekalert.org](http://www.eurekalert.org). 2010
19. Woolery, A., Myers, H., Sternlieb, B., Zeltzer, L. A Yoga Intervention for Young Adults with Elevated Symptoms of Depression, *Alternative Therapies*, Vol.10, No.2. 2004.