

Using Spiritual Relaxation as a Nursing Intervention to Improve Quality of Life and CD4 Cells in HIV/AIDS Patient

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ABSTRACT

There is a correlation between biopsychosocial condition and the severity of HIV/AIDS patient. Using spiritual relaxation as nursing intervention aims to improve quality of life and their immune respond. The purpose of this research is to confirm that spiritual relaxation can improve quality of life and the number of CD4 cells of HIV/AIDS patient. Research design used was *Quasy-experimetal* with *pre test post test control group design*. The sample was 20 respondents of HIV/AIDS patient. At the moment they are active in non-profit organization Jombang Care Centre. The research sample were divided into control and treatment group with *simple random sampling* technique. Quality of Life was measured by (WHOQoL-Bref) for four domains, meanwhile CD4 cells were taken from patient condition at VCT RSUD Jombang. Statistic analysis used *independent t-test* and *paired t-test* with significance level $P < 0.05$. Result showed that the score of $P < 0.05$ for quality of life and the number of CD4 cells. P value for four quality of life domain was $P=0.00$, while the number of CD4 cells $P=0.044$. It means that spiritual relaxation improved quality of life and immunity of HIV/AIDS Patient.

KEYWORDS: Spiritual Relaxation, Quality Life, CD4, HIV / AIDS

INTRODUCTION

HIV and AIDS are emergency global issues which need serious handling. They become the greatest threats to socio-economic development, stability and security in developing countries⁽¹⁾. Based on UNAIDS data, in 2013 there were 35 million people with HIV around the world. In Indonesia, the cumulative number of HIV / AIDS by the year 2014 was 206 095 people. Whereas for the number of HIV / AIDS in the East Java province was 19 249 cases by the year 2014⁽²⁾. According to data of Jombang District Health Office (2015), year by year the number of cases continues to rise. The timeframe of the last seven years ie 2008 to 2014 there was 640 cases of HIV/AIDS in Jombang. However HIV/AIDS patients were survived at this time only 314 people.

The patient have psychological problem since the diagnosed of HIV/AIDS appear. The stress sources of HIV/AIDS patient are stigma and discrimination of environment⁽³⁾. The environment views them (HIV/AIDS patient) in negative point of view. Stigma also contribute to psychological condition such as depression, social isolation and anxiety⁽⁴⁾, poor quality of life^(5,6,7).

Physiological state, stigma and discrimination often caused a decline in life spirit of HIV/AIDS patient, which contribute more to the decreased of their quality of life⁽⁸⁾. When their stress attain the stage of fatigue (exhausted stage), it can lead to failure of immune function resulting in exacerbation of their condition.

The exposure of various stressors may lead to increased of cortisol in the blood, saliva and urine. This cortisol is immunosuppressive covering a decrease APC (macrophages), Th-1 (CD4), plasma cells and HIV antibodies. A progressive decline in the immune system has led to the failure of the immune system, which is marked by clinical deterioration of the patient and the occurrence of opportunistic infections⁽⁹⁾. Several studies have described that chronic stress will increase biomarkers of inflammatory responses such as IL-1, IL-6 and TNF- α ⁽¹⁰⁾. Nursing modality therapy may be used as the alternative management of non-pharmacological treatment in overcoming psychological problems for patients⁽¹¹⁾. One of the interventions presented by Ayad⁽¹²⁾, is through religious activities (mediation, prayer) which help the body to relax and calm the mind. Benson explained in his research that when someone is deeply engaged with their prayer repeated (repetitive prayer), it will bring a variety of physiological changes, including a reduction in heart rate, decreased breathing rate, decreased blood pressure, slowing of brain waves and the overall reduction in metabolic rate. Relaxation therapy for 10 weeks were able decrease the number of salivary cortisol, while relaxation yoga able to reduce stress and levels of IL-6, a marker of inflammation and HIV patients⁽¹⁰⁾. Besides spiritual relaxation response was already shown to reduce pain for patients postoperative⁽¹³⁾ and reduced the blood pressure⁽¹⁴⁾. It is hoped that spiritual relaxation can be effectively improve the quality of life of HIV patient. As has been investigated by Basavaraj *et al.*,⁽¹⁵⁾ that spirituality is an important contributor to prosperity for people living with HIV, regarded as a bridge between despair and meaningfulness in life. Makes the meaning and purpose of life are

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more religious in achieving psychological wellbeing⁽¹⁶⁾. Based on the introduction above, the researcher wants to verify whether the intervention of nursing spiritual relaxation can improve the quality of life and CD4 patients with HIV/AIDS.

RESEARCH METHODS

Research design

The study design used Quasy Experimental. Design approach randomized pretest-posttest control group design. This study analyzed the effect of spiritual relaxation therapy on quality of life and CD4 cell for HIV/AIDS patient in Jombang.

Research location and time

The research was held at Jombang care Centre with ethical approval recomendatiaon Reg.No.:099/KEPK-POLKESMA/2015.

Population, sample and sampling

Research design used was *Quasy-experimetal* with *pre test post test control group design*. The sample was 20 respondents of HIV/AIDS patient. At the moment they are active in non-profit organization Jombang Care Centre. The research sample were divided into control and treatment group with *simple random sampling* technique.

Research variable

The independent variable is the intervention of nursing spiritual relaxation. While the dependent variable is the quality of life and CD4 cells number. Spiritual relaxation of nursing intervention was performed by researchers once a week every Friday with a frequency of 5-20 minutes in two months. It would be carried by the patient on a daily basis before sleeping. The quality of life was measured by a questionnaire (WHOQOL-Bref), according to the WHO as seen from the domain of physical, psychological, social and environmental. CD4 cell number is a check list that is drawn from the examination of the data in the VCT at RSUD Jombang.

Data Processing and Analysis

The quality of life and the number of CD4 measured before and after treatment. Data were analyzed by using t-test to determine differences in the provision of nursing actions relaxation. Statistical analysis with a number of significant $P < 0.05$

RESULTS

The general characteristics of respondents can be seen in Table 1 below.

Table 1. The Distribution of General Characteristic Data of HIV/AIDS patients

NO	Characteristics	Control		Treatment	
		N	%	N	%
1	Gender =	3	30	6	60
	• Male - Male	7	70	4	40
	• female				
2	Age	1	10	3	30
	17-25 years	2	20	3	30
	26-35 years	5	50	4	40
	36-45 years	1	10	0	0
	46-55 years	1	10	0	0
	≥55 years				
3.	Education	5	50	2	20
	SD	2	20	5	50
	SMP	2	20	3	30
	High School	1	10	0	0
	PT				
4.	Marital status	3	30	1	10
	marry	2	20	5	50
	Single	5	50	4	40
	Widower/ widow				
5.	Occupation status	1	10	0	0
	farmer	4	40	8	80

Private	1	10	0	0
PNS	2	20	0	0
Housewife	2	20	2	20
Does not work				
6. ig-suffering	1	10	3	30
<1 year	6	60	6	60
15 years	3	30	1	10
6-10 years				

The differences quality of life before and after intervention can be seen in Table 1

Table 2: Differences of quality of life between control and treatment group of HIV/AIDS patients
(Wilcoxon test)

Domain	Group	Control			p	Treatment			p
		N	Mean	SD		N	mean	SD	
Physical	pre	10	26.3	8.06	0.005	10	28.4	11.1	0.005
	Post	10	3.3	0.48		10	4.6	0.5	
Psychological	pre	10	14.4	8.9	0.007	10	12.5	10.6	0.024
	Post	10	1.5	0.5		10	3.2	1.01	
Social	pre	10	14.3	11.8	0.012	10	15	11.1	0.028
	post	10	1.9	0.7		10	3.7	0.8	
Environment	pre	10	15	11.1	0.007	10	20.2	6.2	0.005
	Post	10	1.9	0.3		10	4.2	0.9	

Average value of the group after the intervention showed the significant declined. It shows that the patient quality of life increased. Besides, there were significant differences between pre and post intervention of treatment and control group with a value of $P < 0.05$.

Table 3: The Effect of nursing intervention of spiritual relaxation on the quality of life
HIV/AIDS patients (Mann Whitney test)

Domain	Group	Control			p
		N	Mean	SD	
Physical	Control	10	3.3	0.4	0.00
	Treatment	10	4.6	0.5	
Psychological	Control	10	1.5	0.5	0.001
	Treatment	10	3.2	1.03	
Social	Control	10	1.9	0.7	0.00
	Treatment	10	0.7	0.8	
Environment	Control	10	1.9	0.3	0.00
	Treatment	10	0.3	0.9	

In Table 2 above, it is known that there is a difference between before and after the intervention of the control and treatment groups with the Wilcoxon test where $P < 0.05$ in all domains of physical, psychological, social and environmental. Meanwhile, the influence of the nursing intervention of spiritual relaxation on the quality of life on HIV/AIDS patients (Mann Whitney) is obtained $P < 0.05$ in all domains of physical, psychological, social and environmental.

Table 4: Differences Value of CD4 levels before and after intervention between the control and treatment groups (paired t-test)

Group	N	Mean \pm SD	P
Control	10	221.9 \pm 51.02	.117
• Before	10	242.4 \pm 38.75	
• After			
Treatment	10	329.5 \pm 146.0	.004
• Before	10	388.5 \pm 145.28	
• After			

Table 5: Differences in value CD4 levels after treatment between the control and treatment groups with *independent t-test test*

Group	N	Mean \pm SD	P
Control: After	10	242.4 \pm 38.75	.04
Treatment: After	10	388.5 \pm 145.3	4

In Table 4 above it can be understood that there was no difference of the CD4 cell number before and after the intervention of the control group, with $P = 0.177$, while the treatment group differences before and after nursing intervention of spiritual relaxation with $p = 0.004$. While there are differences in CD4 cell number after intervention between control and treatment group with $P = 0.044$.

DISCUSSION

The results of this study stated that there is a spiritual relaxation effect on quality of life and CD4 cell the control and treatment groups of HIV/AIDS patients. Relaxation can release of tension or relaxation techniques, eg deep breath and slowly. Relaxation is one of the techniques in behavior therapy. The society often thinks that relaxation of the relaxed state is a state of relaxed, not tense and unpleasant⁽¹⁷⁾. Many patients with complaint-such complaint as disorder anxiety, depression, stress management can be helped by this kind of therapy: prayer, dhikr, reading the Quran for Muslim patients, self-assessment and therapy. For the Christian perspective lesson, do praying while contemplation. These therapies help patients to cope with problems such as anxiety disorders, depression and stress (Hamid, 2012). Relaxation contribute to give calming to the part of the body, making the body feel light and a feeling of warmth that spreads throughout the body. Relaxation can be done by including some elements of beliefs. It can be done by anyone who believes in something and can be practiced by any religion⁽¹⁸⁾.

Complementary and alternative medicine recommend complementary interventions that can be given to HIV/AIDS clients is spiritual, faith healing and Positive Affirmation⁽¹⁹⁾. A study at Southern Methodist University in Dallas have shown that people who experience trauma are getting support systems such as spirituality will enhance immune function, reduce stress and improve health status⁽²⁰⁾.

Intervention spiritual relaxation in this research is relaxation by presenting God in moments of relaxation and then bring up the feeling of resignation. The feeling of resignation is the most powerful in triggering the relaxation of a person. The feeling of resignation centered on the left chest where there is a heart as the center of the quantum vibration energy for relaxation. Quantum Vibration is one of the natural healing methods which is based on the scientific Fikisa Quantum and Quantum Self awareness. In general Vibration is a new framework of understanding of the quantum layer in life and uses it to improve the quality of life⁽²¹⁾. Quantum strength is a force of nature that has not been properly utilized by most people. Whereas in fact, we have to change quantum before we can see the physical reality and enjoy. And in fact, reality and we process through our thoughts, feelings and prayers we⁽²²⁾.

Relaxation techniques considered effective if each individual can feel the change in the physiological response of the body such as decreased blood pressure, decrease muscle tension, pulse rate decreases, changes in levels of body fat, as well as a decrease in the inflammatory process. Relaxation techniques has benefits for our minds, one to increase alpha waves (α) in the brain and result relaxed state, increased concentration and an increased sense of shape in the body⁽¹¹⁾.

Relaxation techniques with quantum vibration methods refer to the new concept. Most people intersperse various activities with a variety of complaints, without realizing that he really doing is trying to focus on what he was complaining about, by the nature of quantum energy discount response automatic approval then what will happen is he will get what he focuses (requested) that the things he complained about it⁽²²⁾.

In the theory of meditation and relaxation cause painful muscle tension, feeds back to the brain occurs amplify that feels more pain, then by doing observe then the tension will melt and automatically pain will evaporate⁽²¹⁾. Relaxation can recover disease, quality of life during the healing process⁽²³⁾ other studies JPMR therapy (Jacobson's Progressive Muscle Relaxation) effectively reduced anxiety of patients with HIV. So it can be used as a non-invasive therapy that is less expensive and can improve the quality of life of patients⁽²⁴⁾.

Relaxation with yoga can reduce stress and decreased levels of IL-6, a marker of inflammation in HIV patients⁽¹⁰⁾. Besides the relaxation response by using quantum vibration has been shown to reduce pain⁽¹³⁾, the decreased of blood pressure of hypertensive patients⁽¹⁴⁾. With modified using spiritual relaxation is expected to be more effective in improving quality of life patients with HIV. As already observed by Basavaraj *et al.*,⁽¹⁵⁾, that spirituality is an important contributor to prosperity for HIV patient, which is considered as a bridge between despair and meaningfulness in life.

Relaxation method also developed at this time such as meditation also has the cooperation by increasing the state psychoneuroimmunology⁽²⁵⁾. In this case the relaxation activities suppress excessive stress hormones released when a person experiences discrimination of PLWHA as experienced in their social aspects^(24, 26).

According to research conducted in the United States, the giving a support system of spirituality for people who have a disease will improve the functioning of his endurance and decrease stress experienced^(20, 27). Thus, it can improve the immunity ie CD4 lymphocytes in HIV patients. And the results obtained in the treatment group after spiritual relaxation showed elevated levels of CD4

Conclusion and Suggestion

Based on the explanation above, it can be concluded that the intervention of spiritual relaxation can improve quality of life and CD4 cells number of HIV/AIDS patient. Therefore, it can be used as a complementary therapy of no pharmacologic nursing for them.

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