EDUCATION WITH BOOKLETS MEDIA ON HIV PATIENTS IN THE HOSPITAL: A QUASI-EXPERIMENTAL CLINICAL TRIAL

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Abstract

Regular visits of HIV patients to the hospital are expected to provide a positive therapeutic out-come because during the visit clinical monitoring, laboratory testing, counseling conducted by health workers and VCT themes, as well as taking antiretroviral (ARV) routine drugs every once a month, so that it is expected that the compliance of HIV patients to take ARV drugs will increase. Marking the success of the treatment of antiretroviral therapy come from HIV patients includes the minimum opportunistic infections related to AIDS and malignancy, increased CD4 cell counts, and increased body weight. The purpose of this study was to determine the effect of booklet media education on the level of adherence, perception, clinical out come and the quality of life of HIV patients in RSUD R. Soedjati Soemodiharjo The method used was quasi experimental with the design of two design pretest-posttest groups. Data were analyzed by univariate and bivariate. Statistical tests using a sample independent-sample test. The results obtained from this study are a description of the demographic characteristics of HIV patients in RSUD R. Soedjati Soemodiharjo, namely the highest age at 18-29 years as many as 22 patients (36%), dominated by women 43 people (70,5%), married as many as 49 people (80,3%), elementary school education 35 patients (57,4%), the most work was not working 23 people (37,8%), the highest duration of illness was above 1 year, 29 patients (47,6%), the most comorbid / comorbidities suffered by HIV patients in RSUD R. Soedjati Soemodiharjo were TB as many as 8 patients (36,4%). Perception on perception shows a P value of > 0,05. Intervention on compliance analysis results P > 0,05. Both treatment and control studies have moderate adherence because they have 48 patients (78,6%). Statistical results showed a significant difference for Hb because the SPSS results were P < 0,05 between the treatment with controls and for the leukocyte number P > 0,05, meaning that there was no significant difference between treatment and control. Interventions with quality of life P < 0,05. The conclusion is the influence of quality of life education intervention, Hb on HIV patients in RSUD R Soedjati between the control and treatment groups P <0,05.

Keywords: *HIV, Compliance, Results*

1. INTRODUCTION

The problems faced by people living with HIV/AIDS (PLWHA) are not only medical or health problems, but also social problems (Arifin, 2005; Baba, 2005). Many changes occur in the individual after being infected with HIV/AIDS. Physical changes due to symptoms of illness caused by a decreased immune system in PLWHA affect personal, social, study, career and even family life (Novrianda et al., 2018). In addition, the issues of stigma and discrimination experienced by PLWHA, both from family, neighbors, the world of work, schools, and other community members, have made their condition worse and even worse

than the impact of their illness. Furthermore, those who have been diagnosed with HIV face an additional hurdle due to the deterioration of their health as they age (Cardoso et al., 2013). The toxic effects and pharmacological interactions of drugs are also more likely to be problematic in the elderly.

Changes that occur inside and outside of PLWHA make them have a negative perception of themselves and affect the development of their self-concept. PLWHA tend to show forms of reactions to wrong attitudes and behavior. This is due to the inability of PLWHA to accept the reality of the conditions experienced. This situation is exacerbated by the assumption that HIV is a disease for which there is no cure.

The significant increase in the number of HIV cases and the increasing number of HIV patients entering the AIDS stage, may be due to non-adherence to antiretroviral (ARV) treatment (CDC, 2003). Many people living with HIV/AIDS (PLWHA) are already undergoing therapy, but do not have a clear understanding of all aspects of their treatment, including the impact of non-adherence (Ministry of Health RI, 2011). Many people living with HIV use drugs without following the guidelines even though they have been directed by a doctor (Spiritia, 2009)

2. RESEARCH METHOD

In this study, a quasi-experimental clinical trial was used with a two-group pretest-posttest design (Arikunto, 2013). In this study, the population was all HIV/AIDS patients who received outpatient treatment at R. Soedjati Soemodiharjo Grobogan Hospital based on data obtained from June to July 2018.

3. RESULT AND DISCUSSION
3.1. Overview of HIV/AIDS Patients' Characteristics

Patients in this study were initially 78 patients, then after education and post-test were conducted, only 61 patients came to participate. There was a loss control of another 17 patients that did not come to fill the second questionnaire. The possibility that caused the non-attendance was there are events or busy with their routines, long distances, difficult transportation access to get to the service.

Table 1 Control Group's characteristics description and treatment of HIV/AIDS patients at R. Soedjati Soemodhiharjo Hospital Grobogan in October-December 2018.

No	Patient Characteristics		Control		Treatment		P
				TOTAL			
			N	%	N	%	
1	Age	18-29	12	38.7	10	33.3	0.767
		30-39	8	25.8	9	30	
		40-49	9	29	7	23.3	
		50-65	2	6.5	4	13.3	
2	Gender	Man	10	32.3	8	26.7	0.780
		Woman	21	67.7	22	73.3	
3	Wedding status	Married	24	77.4	25	83.3	0.749
		Not married	7	22.6	5	16.7	
4	Education	Elementary School	16	51.6	19	63.3	0.594
		Junior High School	12	38.7	8	26.3	
		Senior High School					
			3	9.7	3	10	
5	Occupation	Entrepreneur	9	29	5	16.7	0.418
		Does Not Work	11	35.5	12	40	
		Private Worker	6	19.4	9	30	
		Driver	2	6.5	0	0	
		Others (> 1year)	3	9.7	4	13.3	
6	Sick duration	3 months	0	0	2	6.7	0.443
		6 months	2	6.5	1	3.3	
		1 year	14	45.2	15	50	
		other	15	48.4	12	40	
7	ARV drug regimen						
		ZDV+3TC+NVP	13	41.9	11	36.7	0.41
		TDF+3TC+EFV	7	22.6	12	40	
		ZDV+3TC+EFV	5	16.1	3	10	
		TDF+3TC+NVP	6	19.4	3	10	
		TDF+FTC+NVP	0	0	1	3.3	
8	Comorbid	Tuberculosis	4	36.4	4	36.4	1,000
		Diarrhea	1	9.1	1	9.1	
		Stomatitis Aphtosa	3	27.3	3	27.3	
		Typhus					
			3	27.3	3	27.3	
9	Behavior	*questioner*	31	1.42	30	1	0.000
10	Quality of life	*questioner*	31	3	30	2	0.899
11	Perception	*questioner*	31	24	30	24	0.105
12	CD4	RM data	31	213	30	214	0.232
13	AL	RM data	31	12.3	30	12.4	1,000

3.2. Effect of Education with booklet media on knowledge of (People with HIV/AIDS) PWHA patients about the disease and treatment at R. Soedjati Soemodiharjo Grobogan Hospital

Knowledge is defined as the result of human sensing or the result of someone knowing about objects through their senses (eyes, nose, etc.), so as to produce knowledge. This is strongly related to the intensity of attention and perception of the object (Notoatmodjo, 2007). Before the study was conducted, patients were asked about their illness and the treatment they had taken so far, whether they knew correctly or not, then after answering the questions. After two weeks, education was conducted regarding the description of HIV and

its treatment. After one month, data was collected again on the same patient to determine whether there are changes in the patient or not.

Booklet can be designed or made as attractive as possible so the readers feel happy and not bored. The language used is short, concise and easy to understand but comprehensive. The research results can be seen in table 2.

Table 2 Description of HIV patients' HIV/AIDS knowledge at R.Soedjati Soemodhiharjo Hospital Grobogan on October-December 2018

No	Domain	Control		Treatment		P
		correct	wrong	correct	wrong	
1	HIV definition	16	15	21	9	0.192
2	Transmission	12	19	14	16	0.609
3	How to take medicine	14	22	12	8	0.609
4	Side effects if the patient don't take medication	3	28	7	23	0.102

Table 3 The Intervention results of HIV/AIDS knowledge on HIV patients at RSUD R.Soedjati Soemodhiharjo Grobogan on October-December 2018

No	Group	Knowledge	P
1	Control mean±SD	1.4839±1.48	0.303
2	Treatment mean±SD	1,9000±1,647	

The research results obtained statistical results that have P value > 0,05 which means that the control group and the treatment group have no difference.

3.3. Effect of Education with booklet media on perception/BIPQ on HIV patients at R. Soedjati Soemodiharjo Hospital Grobogan

Perception of illness is an interpretation made by a person regarding the disease he is suffering from, it can be good or bad (Chilcot, 2010). The results of HIV/AIDS patients perception's description in this study were reported as scores or descriptive values obtained from each B-IPQ perception domain and can be seen in table 4.

Table 4 The results of perception's intervention of HIV/AIDS in HIV patients at the R.Soedjati Soemodhiharjo Hospital Grobogan on October-December 2018

No	Domain	Control mean±SD	Treatment mean±SD	P
1	Consequences	4.52±1.671	4.93±1.929	0.370
2	Duration	4.55±1.15	6.17±2.627	0.003
3	Personal Control	5.68±1.44	3.43±1.501	0.000
4	Treatment Control	5.42±1.31	3.30±1.557	0.000
5	Identity	4.71±2.036	5.27±2.33	0.324

6	Worries	4.71±1.27	5.97±2.189	0.008
7	Understanding	5,10±1.193	3.03±1.956	0.000
8	Emotional Response	5.77±1.627	6.67±1.668	0.039
9	Total BIPQ	40.45±4.667	38,767±5.63	0.208

BIPQ total value range is from 0 until 80. According to the research of Løchting et al. (2013) A higher BIPQ score indicates that the disease is perceived as a threat. The mean of total B-IPQ score from HIV/AIDS patients in RSUD R. Soedjati Soemodiharjo Grobogan, in control group was 40.45±4.667 and in the treatment group was 38.767±5.63.

Perceptions are classified into two categories, namely good perception < 40 and bad perception if ≥ 40. The results of this study showed that the control group was 40.45, which means it had a poor perception while the treatment group was 38.767 and better than the control group. After education was given to control group and treatment group, average result showed a difference. Treatment group is much less, the value is 38.76 compared to the control group, which is much higher, with 40.45 value, which means it causes anxiety and worries because it is included in the poor perception range.

The perception of HIV/AIDS patients regarding the causes of HIV/AIDS is manifested in the answers to open-ended questions (no.9). The answers to open-ended questions (no.9) related to the main causes of HIV/AIDS were (1) because of sexual intercourse (n=45;61,73,77%), (2) sharing needles (n=7;11). ,47%), (3) and blood transfusion (n=3; 4.91%).

3.4. Effect of intervention on compliance in HIV patients at R. Soedjati Soemodiharjo Hospital Grobogan

Compliance is very important in ARV therapy, because high compliance can provide good clinical outcomes. This study uses the MARS questionnaire which is one of the self-report methods to measure compliance. Table 5 shows a description of adherence level of HIV/AIDS patients at R. Soedjati Soemodiharjo Hospital Grobogan.

Table 5 An overview of the effect of providing education with booklets on HIV/AIDS patient compliance at RSUD R.Soedjati Soemodhiharjo Grobogan on October-December 2018

No	Group	Compliance	P
1	Control mean±SD	22,935±1.26	0.886
2	Treatment mean±SD	22.867±2.3	

The MARS assessment score is divided into 3 categories, it is low compliance with a score of 5, moderate compliance with a score of 6-24, and high compliance with a score of 25. However, the weakness of this assessment is the answers given by the patient are subjective and not necessarily appropriate with actual conditions, such as the patient lying so it can tend to give higher results than the truth (Houlbrooke et al., 2004; Mahler & Fritzler, 2010). Based on the stduy results shown in table 5, it shows that there are no patients who have low adherence.

Table 6 The effect of providing education with booklets on the adherence of HIV/AIDS patients at the R.Soedjati Soemodhiharjo Grobogan Hospital on October-December 2018

No	Compliace Variable	Control		Treatment		P
		Amount	%	Amount	%	
1	Moderate	26	83.9	22	73.3	0.363
2	High	5	16.1	8	26.7	

The results of the questionnaire provide an illustration after the intervetion had been given to patients, there's an increase in taking medication. Patients in treatment group with high medication adherence, 26.7% (8 patients) was higher than the control group that was not given intervention, which was 16.1% (5 people). Although statistically it did not show a significant difference because the results of the SPSS analysis p value was 0,886, the p value > 0,05. However, if examined in detail, there are changes in the treatment group that has been given an intervention that means the patients are increasingly aware of adherence to taking medication and understand the success of treatment starting with adherence of taking medication even though not all patients experience changes. Based on the results of research at RSUD R. Soedjati Soemodiharjo, it can be concluded that the level of patient adherence to ARV treatment is moderate because above 50% of patients have started to realize and understand the importance of ARV treatment for their survival.

3.5. Effect of intervention on Outcome in HIV patients at RSUD R. Soedjati Soemodiharjo Grobogan

Table 7 An overview of the effect of giving education with booklets on the outcome of HIV/AIDS patients at the R.Soedjati Soemodhiharjo Grobogan Hospital on October-December 2018

No	Domain Quality of Life	HB	Leukocytes	CD4
1	Control mean±SD	8.88±0.844	11.067±0.991	366.8±43.75
2	Treatment mean±SD	11.093±0.651	11.043±0.998	318.9±37.86
3	P	0.003	0.425	0.000

Anemia is one of the most common hematological complications found in people with HIV infection. The prevalence of anemia in HIV infection ranges from 1.3%–95%, depending on the clinical stage of the disease. Increased disease progression will increase the incidence of anemia and worsen clinical situation. One study showed that anemia was an independent death risk factor in HIV/AIDS infection, in addition to CD4 cell count (cluster of differentiation) and viral load. On the other hand, it has been shown that anemia improves.

Zidovudine is one of the drugs that has been reported as a cause of hematological disorders (Kiragga et al., 2010), especially anemia, since Zidovudine was first introduced as antiretroviral therapy (Akhtar, 2008; Hidayati et al., 2013). Anemia is a hematological problem that is often found in HIV infection. Anemia can increase morbidity and mortality

in HIV infection so the proper management can improve the quality of life of people living with HIV/AIDS.

3.6. Effect of intervention on Quality of Life in HIV patients at R. Soedjati Soemodiharjo Hospital Grobogan

The quality of life evaluation in HIV/AIDS patients at R. Soedjati Soemodiharjo Hospital Grobogan was carried out by using WHOQOL-HIV questionnaire Bref. On this questionnaire, the quality of life assessment is divided based on 6 domains, it is physical function domain, psychological, level of independence, social relations, environment, and spiritual/religious (O'Connell & Skevington, 2012; O'Connor, 1993).

Table 8 An overview of the effect of giving education with booklets on the quality of life of HIV/AIDS patients at R.Soedjati Soemodhiharjo Hospital Grobogan on October-December 2018

No	Domain Quality of Life	Control mean±SD	Treatment mean±SD	P*
1	Physique	10.8±1.209	13.2±1.533	0.000
2	Psychology	11.058±1.106	12.48±1.13	0.000
3	Level of independent	10,729±1,177	12,540±1,671	0.000
4	Social relations	10.906±1.1567	12.187±1.636	0.001
5	Environment	11,113±1,144	12.233±1.317	0.001
6	Religiosity	11.258±0.841	12,783±1,449	0.000
	Total quality of life	65.864±6.6337	75,423±8,736	0.002

From the results of the SPSS analysis, the effect of the intervention on the patient's quality of life was very significant because the p value < 0,05 in all domains. Quality of life itself is classified into 3, it is good quality of life with 76-100%, moderate quality of life with 56-75%, and low quality of life with < 56%. From the results of data analysis, it was obtained that the treatment group was 62,60% which was classified as moderate quality of life because it was in the 56-75% range and for the control group had a low quality of life because the results of the analysis were 54,67% which was in the < 56% range. It means that carried out interventions using booklets can affect the patient's quality of life.

4. CONCLUSION

Based on quasi experimental with pretest-posttest groups design, it can be conclude that there is an effect of educational intervention on quality of life, Hb on HIV patients in RSUD R.Soedjati between the control and treatment groups P < 0,05.

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