

Original Research

The Effect of Bibliotherapy on Teenagers' HIV/AIDS Knowledge in the Puger Work Area Community-Based Health Centers, Jember Regency

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ABSTRACT

AIDS (Acquired Immune Deficiency Syndrome) is a disease caused by HIV that can lower a person's immune status to trigger an opportunistic infection and cause death. HIV / AIDS can infect all age groups, including teenagers. Bibliotherapy is a learning model to change teenagers' knowledge of HIV / AIDS. We aimed to analyze bibliotherapy's effect on teenagers' knowledge of HIV / AIDS. We used quasi-experimental research with a nonequivalent control group design approach. The population in this study was 30 teenagers, with the technique of determining the sample using purposive sampling. The research instrument used is a knowledge questionnaire. Data analysis using the Wilcoxon test and Mann-Whitney test. The analysis result showed significant differences between the pretest and post-test in the intervention group (p-value= 0.001) and control group (p-value= 0.044). Bivariate test used Mann Whitney indicating an effect of the bibliotherapy method on teenagers' knowledge about HIV / AIDS (p-value = 0.002; p <0.05). The effect of bibliotherapy is to interpret words, sentences, and even images that are captured by the sense of sight and will be conveyed to the brain by optical chiasm when someone reads information. Therefore, the conclusion is bibliotherapy method has an effect on the knowledge of teenagers about HIV/AIDS. Nurses' role in applying bibliotherapy is to increase teenagers' knowledge to reduce the risk of HIV/AIDS in the community.

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Introduction

HIV (Human Immunodeficiency Virus) and AIDS (Acquired Immune Deficiency Syndrome) are global emergencies. The incidence of HIV/AIDS tends to increase in developed and developing countries, including Indonesia (Nurwati & Rusyidi, 2018). Indonesia is the fifth most risky country for HIV/AIDS in Asia (Ministry of Health RI, 2018). HIV/AIDS affects not only attacks adults but also attacks children and adolescents. There were 17.8 million cases of HIV; among them were women aged > 15 years and 1.8 million cases were children aged <15 years, and new cases of 1.9 million over 15 years of age and 150,000 children under 15 years of age in 2015 (World Health Organization, 2016). The incidence of adolescents infected with HIV in Indonesia is 28,060 adolescents (15.2 percent), and as many as 2089 adolescents (3 percent) of whom have AIDS (Ministry of Health, Republic of Indonesia, 2014). Jember District itself has found 4,204 HIV cases as of December 2018. The highest number of sufferers are in Puger, Kencong, Gumukmas, Wuluhan, Kaliwates, Sumbersari, Umbulsari, Bangsalsari, Ambulu, and Patrang Districts (Jember Health Office, 2018).

Based on information obtained from the Jember Regency HIV/AIDS Mitigation Commission, the highest prevalence of HIV/AIDS cases was Puger District. Puger had 357 cases of HIV/AIDS (Regional AIDS Commission, 2017). Referring to the condition of Puger District, the area with the highest incidence of HIV/AIDS cases in Jember Regency, most of the youth may have been exposed to HIV/AIDS, whether true or not. The risk of transmission and the influence of knowledge on adolescents in this area is greater because there is a former brothel or prostitution in one of the villages in Puger District (Nova, 2018). HIV is a type of virus that disrupts the immune system of individuals so that HIV-positive individuals cannot survive opportunistic infections (Yuliyanasari, 2017). Meanwhile, according to the Indonesian Ministry of Health (2014), AIDS is a collection of symptoms of reduced self-defense due to the entry of HIV into a person's body. This disease appears to be characterized by immunosuppression, neurological manifestations, and secondary neoplasms. Signs and symptoms most quickly

appear within one to four weeks after exposure. Symptoms that arise include fever, maculopapular rash, diarrhea, malaise, and lymphadenopathy (Vinay Kumar, Abul K. Abbas, 2015). Transmission of HIV/AIDS is divided into two, namely sexual and non-sexual transmission. The most common sexual transmission in transmission of HIV/AIDS is through sexual intercourse (homosexual and heterosexual) through sperm, vaginal and cervical fluids (Ardhiyanti, 2015). Non-sexual transmission may occur through blood transfusions or products, through the placenta of pregnant women diagnosed with HIV to the baby in their womb, and through needles or other tools that injure the skin (Irianto, 2014).

Adolescents are a group that is vulnerable to contracting HIV/AIDS; this is a psychosocial development that occurs in adolescents, namely, starting to search for self-identity, feeling high curiosity, and starting to have a sense of interest in the opposite sex. However, sometimes this curiosity is not matched by sufficient knowledge, maturity, and limited experience (Susanto, 2015). The impact is that teenagers will be easily influenced and have a free association, leading to deviant activities such as free sex, crimes including abortion, drugs, tattooing, and the development of sexually transmitted diseases (STDs), in this case, HIV/AIDS. Knowledge is information obtained continuously by someone to understand an experience (Perry, 2005).

Adolescents' knowledge of HIV/AIDS is crucial in changing attitudes and behavior. Youth knowledge about HIV-AIDS is part of the Sustainable Development Goals (SDGs) in indicator three and must be monitored regularly by all people living in Indonesia. Limited information about HIV/AIDS in adolescents can lead to negative impacts and behaviors. Based on the results of the preliminary study conducted by the researchers, it was found that the Puger Community Health Center carried out educational programs on HIV/AIDS in schools every new school year. However, the evaluation results showed that the program was still ineffective in increasing youth's knowledge about HIV/AIDS. This is evidenced by the results of interviews conducted with 12 adolescents in the Jember Health Center working area. The results obtained were 100% of adolescents said they had heard and

understood HIV, but 80% of adolescents could not fully mention how HIV has transmitted signs, symptoms, prevention, and treatment. /AIDS. Lack of adolescent knowledge about HIV/AIDS can be overcome by adding information about HIV/AIDS through education in the school environment, exchanging stories with friends, telling parents, and reading materials to help adolescents to add information. The use of books in a therapeutic and supportive process is called bibliotherapy (Hidayah, Hardiani, & Hakam, 2016). Bibliotherapy is an activity using reading media to reduce or even solve problems experienced by individuals (Trihantoro, Hidayat, & Chanum, 2016). Researchers (Hidayah et al., 2016) examined the effect of the bibliotherapy method on adolescent knowledge about menstrual hygiene at SMP Negeri 2 Mayang, Jember Regency. The results showed an effect of the bibliotherapy method on adolescents' knowledge of menstrual hygiene. Based on the study results above, it is clear that most adolescents still show insufficient knowledge of HIV/AIDS, which can have a major impact on health. Based on the phenomena and background described above, the author wants to know the effect of the bibliotherapy method on adolescents' knowledge of HIV/AIDS in the Work Area of the Puger Health Center, Jember Regency.

Method

The research design in this study was Quasi-Experimental with a nonequivalent control group design approach. This design seeks to determine the effect of variables on a particular situation or group of subjects. The sample in this study was 30 adolescent respondents who met the inclusion criteria with a non-probability sampling technique using purposive sampling. The number of respondents will be divided into two groups, namely, 15 respondents for the intervention group and 15 respondents for the control group. After getting respondents who fit the inclusion criteria, the researcher explained the research objectives.

After the respondents signed the informed consent, the researcher then conducted a pretest on both groups by distributing questionnaires on the level of knowledge about HIV/AIDS to the respondents to determine their knowledge

level. The next researcher applied the bibliotherapy method to the intervention group and continued the discussion. In the last evaluation stage, the researchers carried out a post-test in both the intervention and control groups. Univariate analysis was used to determine the characteristics of the respondents (age, sex, and sources of information about HIV/AIDS). In contrast, bivariate analysis was used to determine adolescents' knowledge level about HIV/AIDS using the Wilcoxon and Mann-Whitney tests with p -value <0.05 .

Results and Discussion

The results obtained from this study are as follows:

A. Univariate analysis

Characteristics of respondents

The characteristics of the respondents in this study included age, gender, and sources of information about HIV/AIDS. The distribution of respondents by age in the Work Area of the Puger Health Center, Jember Regency is shown in table 1 below.

Table 1. Participant Data by Age

Variable	Median	Minimum-Maximum
Age (in years)		
Intervention	17.00	14-18
Control	17.00	14-18

Source: Primary Data, 2020

Table 2. Participant Data Based on Gender and Information Sources

Characteristic	Frequency (orang)	Percentage (%)
a. Gender		
Males	14	46.7
Females	16	53.3
Total	30	100
b. Information Sources		
Media	13	43.4
electronic	1	3.3
Printed	10	33.3
Media	5	16.7
Teachers	1	3.3
None		
Others		
Total	30	100

Source: Primary Data, 2020

The data in table 1 explains that the age in this study is the age of teenagers, where

the median or median value of the age distribution of the respondents is 17 years, the youngest age is 14 years, and the oldest is 18 years. The two groups have the same median or middle value as well as the maximum and minimum values of the two groups. The data in table 2 explains that most of the sexes in this study were female (53.3%) and male (46.7%). Most respondents obtained information about HIV/AIDS through electronic media, namely 43.4%. The order of two sources of information that most respondents got was from teachers (33.3%), then print media and others. Data on the knowledge of adolescents obtained by researchers in the Work Area of the Puger Health Center in Jember Regency regarding HIV/AIDS, are as follows:

Table 3. Pretest and Posttest Knowledge of HIV/AIDS and AIDS in the Intervention and Control Groups

Group	Intervention		Control	
	Pretest	Posttest	Pretest	Posttest
Mean	20.33	27.93	20.20	21.27
SD	2.845	1.624	2.883	3.127
Min	16	25	16	16
Max	23	30	26	26

Source: Primary Data, 2020

Table 3 shows that the pretest and post-test knowledge values in the intervention group are higher than in the control group, namely, the pretest average of 20.33 and the Posttest average of 27.93. The intervention group had a minimum pretest score of 16, a maximum of 23, a minimum post-test score of 25, and a maximum of 30. In contrast, the control group had a minimum pretest score of 16, a maximum of 26, a minimum post-test score of 17, and a maximum of 28.

B. Bivariate Analysis

Differences in Pretest and Posttest Values of Adolescents' Knowledge of HIV/AIDS

Table 4. Pretest and Posttest Results of Knowledge about HIV/AIDS and AIDS in the Intervention Group and the Intervention Group

Group	Mean	Difference
Intervention	Pretest 20.33	7.533
	Posttest 27.93	
Control	Pretest 20.20	1.067
	Posttest 21.27	

Source: Primary Data, 2020

Based on table 4, it can be seen that there is a difference in the average knowledge of adolescents in the intervention group, namely 7.533. The increase in scores on the Posttest occurred for all respondents in the intervention group. Based on the table above, it is also known that there is a difference in the average knowledge of adolescents in the control group, namely 1.067. Five respondents did not experience a change in pretest to post-test scores, and one respondent experienced a decrease in the score during the Posttest.

Table 5. Results of the Wilcoxon Test on Adolescents' Knowledge of HIV/AIDS in the Intervention Group and the Intervention Group

Group	Intervention	Control
	Pretest dan Posttest	Pretest dan Posttest
Z	-3,413	-2,015
p-value	0,001	0,044

Source: Primary Data, 2020

Table 5 shows that the results of the Wilcoxon test in the intervention group had a p-value <0.05, namely 0.001, which indicated a significant difference between the pretest and post-test values in the intervention group. In contrast to the results of the Wilcoxon test in the control group, which had p <0.05, namely 0.044, although there was a difference, it showed that the difference was not as significant between the pretest and Posttest in the intervention group.

Table 6. Results of the Mann-Whitney Test on Adolescents' Knowledge of HIV/AIDS in the Intervention Group and the Intervention Group

Group	Z	p-value
Intervention	-3,078	0,002
Control		

Source: Primary Data, 2020

Based on table 6, the results of the Mann-Whitney test between the intervention group and the control group had a p-value <0.002; this shows a significant difference between the intervention group and the control group.

Characteristics of Respondents

The characteristics of the respondents in this study include age, gender, and the source of information. Age has an enormous

influence on comprehension and individual mindsets; the development of individual mindsets will be directly proportional to the age one has. The more developed the mindset, the better the knowledge of the individual (Hanifah & Sulistyorini, 2019). The high opportunity for adolescents to be exposed to various knowledge and changes is due to adolescents having the highest social mobility. This is directly proportional to the various possibilities of risky behavior because the knowledge obtained is inappropriate (Sman et al., 2018).

Adolescents have a fairly good memory absorption capacity; therefore, it is essential to provide health education regularly about HIV/AIDS. The results of this study also showed that the respondents were more of the female sex type than the male. The study's results also showed that most female respondents had higher pretest and post-test scores than men. According to research conducted by Sman et al. (2018), female adolescents have better knowledge about HIV/AIDS than male adolescents. This is reinforced by the Indonesian Ministry of Health report regarding the 1st Quarter of 2018 HIV/AIDS Progress Report that the ratio of HIV/AIDS incidence in men and women is 2:1. The incidence of HIV/AIDS in men is more than in women.

The majority of respondents in this study obtained information about HIV/AIDS through electronic media. Apart from electronic media such as television, computers and the internet, radio, films, mobile phones and others, some respondents also learned about HIV/AIDS from teachers (33.3%), print media (3.3%), others (3.3%) and surprisingly, there were also 16.7% of respondents who still did not receive information. Respondents who received information had better knowledge than respondents who did not receive information. The results of this study are supported by the results of research conducted by Yuliani (2018), which states that the more sources of information that adolescents obtain, the better the knowledge of adolescents about HIV/AIDS clearly and comprehensively.

Differences in Pretest and Posttest Values of Adolescents' Knowledge of HIV/AIDS in the Intervention and Control Groups

Based on the results of the study, it showed that the knowledge of adolescents before and after being given health education using the bibliotherapy method had increased. The results of data analysis in the intervention group showed an increase in knowledge, with a difference in the average knowledge of adolescents in the intervention group, namely 7.533. After bibliotherapy was carried out in the intervention group, a post-test was carried out. The results showed an increase in the four indicator questions: the causes and course of HIV/AIDS, signs and symptoms, transmission, and treatment of HIV/AIDS in all adolescents. The results of this study are directly proportional to research conducted by Hidayah et al. (2016).

Researchers examined the effect of the bibliotherapy method on adolescent knowledge about menstrual hygiene at SMP Negeri 2 Mayang, Jember Regency. The results of this study are in line with the research of Nia Sari (2015); it was found that knowledge influences PMS prevention behavior. The beta value shows a positive sign indicating that the better the knowledge about sexually transmitted diseases, the better the prevention behavior against sexually transmitted diseases, in this case, including HIV/AIDS.

This study's results also show an effect of the bibliotherapy method on adolescent knowledge. There was a significant difference between the pretest and post-test scores in the intervention group. Researchers assume that the bibliotherapy method has a positive effect on increasing adolescent knowledge about HIV/AIDS. The results of data analysis in the control group showed an increase in knowledge. Five respondents did not experience a change in pretest to post-test scores, and one respondent experienced a decrease in the score during the Posttest. Individuals gain knowledge in various ways, one of which is trying to use the possibilities of what is done, and if this possibility fails, the individual will try other possibilities (Notoatmodjo, 2012). Respondents in this study likely learned from the first questionnaire so when doing the Posttest, there was an increase in results. Based on the results of the Wilcoxon test, the control group

showed a difference. However, the difference that occurred was not as significant between the pretest and Posttest in the intervention group. The post-test results of the control group were smaller than the control group. This was because the control group did not receive intervention, namely the bibliotherapy method.

Differences in Adolescents' Knowledge of HIV/AIDS between the Intervention Group and the Control Group

Based on the results of the Mann-Whitney test to determine differences in adolescent knowledge about HIV/AIDS between the intervention group and the control group, it showed that there was a significant difference between the intervention group and the control group, which had a significant post-test score in the intervention group and the control group. This study is in line with research conducted by Hidayah et al. (2016). The study's results showed an effect of the bibliotherapy method on adolescent knowledge about menstrual hygiene at SMP Negeri 2 Mayang. Bibliotherapy is also often referred to as reading therapy, which requires individuals to read books or literature appropriate to the problems individuals are experiencing so that these problems can be overcome and resolved (George, 2017).

According to Roger Sperry's theory, when reading, a person will use his left brain, which is logical, linear, intellectual, analytic, and rational. When reading the information in the form of words, sentences, and even pictures, it will be captured by the sense of sight and will be conveyed to the brain by the optic chiasm. Therefore reading activities will make the reader to interpret the author's way of thinking, translating symbols and letters into a word or sentence that has a certain meaning. The feelings that readers get can reflect on themselves and encourage more positive behavior (Fauziyah, 2015). The use of the bibliotherapy method in adolescents can stimulate adolescents to think and can be done at any time, and involves the independence and participation of adolescents so that the results are effective and good (Purwanto, 2015).

The increase in knowledge about HIV/AIDS in the intervention group was due to the fact that the respondents received an

intervention in the form of a bibliotherapy method. In the control group knowledge about HIV/AIDS tended to remain the same even though the average had increased, but it was not statistically significant, this was because the control group did not receive bibliotherapy therapy. Based on the above, the researchers concluded that the bibliotherapy method could increase adolescents' knowledge of HIV/AIDS in the Work Area of the Puger Health Center, Jember Regency.

Conclusion

Based on the results of research on the effect of the bibliotherapy method on adolescents' knowledge of HIV/AIDS, it was found that the average age of the respondents was 16 years, and most of the sexes in this study were female (53.3%) and male (46.7%). Most respondents obtained information about HIV/AIDS through electronic media, namely 43.4%.

The results of the bivariate analysis showed that the knowledge of the majority of respondents about HIV/AIDS increased. This was indicated by a significant difference between the pretest and post-test values of adolescents' knowledge about HIV/AIDS in the intervention group with $p < 0.05$, namely 0.001. All respondents in the study experienced increased knowledge of indicators of the causes and course of HIV/AIDS, signs and symptoms, transmission, and treatment of HIV/AIDS, which previously had a low score on the pretest.

The same thing happened in the control group. The test results showed a p -value < 0.05 , namely 0.044, but the difference that occurred was not as significant between the pretest and Posttest in the intervention group. The test results to determine differences in adolescent knowledge about HIV/AIDS between the intervention group and the control group obtained a value of $p = 0.002$ ($p < 0.05$), this indicates that there is an influence of the bibliotherapy method on adolescent knowledge of HIV/AIDS in the Work Area of the Puger Health Center Jember Regency.

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Conflict of Interest

We declare there is no competing interest.

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