



EFFECT OF PROBLEM-BASED INSTRUCTION (PBI) LEARNING METHOD ON BEHAVIOR PREVENTION OF HIV/AIDS PREVENTION IN ADOLESCENT

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ABSTRACT

Keywords

HIV/AIDS is one of the health problems that concern the world today because of the increase in patient population causing a health crisis in the world. The highest number of AIDS cases according to the World Health Organization (WHO) indicates that people are infected while still in middle adolescence stage. Teens need to be provided with Problem Based Instruction (PBI) method because PBI can improve knowledge and creativity. This study aims to determine the effect of Problem Based Instruction (PBI) learning methods on prevention behavior of HIV/AIDS in adolescents. The research design used pre-experimental pre-test post-test one group design. The population is all adolescents as many as 180 people with a sample of 36 people using cluster random sampling technique. The results of this study indicate that there is a change of negative behavior before given Problem Based Instruction Learning (72,2%) turns into positive after given Learning Problem Based Instruction (61,1%). Wilcoxon test analysis results show that P value $< \alpha$ so that H1 accepted, meaning there is the influence of Problem Based Instruction Learning to behavior prevention of HIV / AIDS transmission in the adolescent. PBIs are developed to help students develop thinking and problem-solving skills, through engagement in real-life experiences and become autonomous and self-reliant learners. Schools working together with health workers are expected to create large posters or billboards about the prevention of HIV / AIDS transmission with attractive design to make it easier for students to read.

**Conduct,
Problem-
Based
Instruction,
Prevention Of
Hiv / Aids
Transmission,
Teens**

INTRODUCTION

One of the health problems of HIV / AIDS is now the world's attention due to the dramatic increase in the population so that cause health crisis in the world. HIV / AIDS is a scourge for people all over the world. Patients with HIV / AIDS will experience a decrease in immunity so that people are susceptible to various diseases and other complications. Until now there is no drug that can cure HIV / AIDS. Consistently the highest number of AIDS cases according to WHO (World Health Organization) occurs in adolescents age 20 to 29 years who indicate they have been infected with HIV from 5 to 10 years before, at which time they were still in the middle adolescent stage (Amelia, Rahman, & Widitria, 2016)

This disease becomes a dangerous disease because it has not found a drug that can cure people with HIV / AIDS so that eventually ended in death (Kementrian Kesehatan RI, 2011). Therefore it is necessary to provide information about HIV / AIDS in adolescents in schools. One of the learning methods that can be used is the Problem Based Instruction (PBI) method because PBI can improve the knowledge and creativity of students in the classroom, with the basis of raising an actual problem as a challenging and interesting learning. Students are expected to learn to solve the problem fairly and objectively (Trianto, 2009). The design of the PBL instructional approach used in the current study (Dastgeer & Afzal, 2015). The aim of PBL is to help students to think, to solve problems and to thinking skills by constructing real or resembling situations pertaining the concepts to be learned (Bilgin, Şenocak, & Sözbilir, 2009).

WHO 2015 notes that HIV / AIDS causes sickness in 22 / 100,000 people worldwide, and causes deaths of 30 / 100,000 people worldwide (WHO, 2015). Indonesia Health Profile recorded the number of new cases of HIV positive reported in the year 2013 as many as 29,037 cases, in 2014 as many as 32,711 cases, in 2015 as many as 30,935 cases. East Java Province reported the number of cases of HIV infections from 2012 as many as 2912 cases, in 2013 as

many as 3,391 and in 2014 a number of 4,508 cases (Kemenkes RI, 2015). The number of new HIV / AIDS sufferers in Mojokerto Regency from 2013 is 127 cases, 2014 in 116 cases, and in 2015 there are 69 cases (Dinas Kesehatan Kabupaten Mojokerto, 2015). A preliminary study of 10 adolescents on HIV / AIDS prevention behaviors showed that 6 (60%) had never had free sex and 4 (40%) had a boyfriend. Three people (75%) of 4 teenagers who have had a boyfriend just do handrails and kiss.

Risk factors from HIV / AIDS make this disease as a disease that needs special attention, especially among people. Transmission of HIV / AIDS in general through three ways: free sex, needle use together, and through fetomaternal that is between mother and baby during pregnancy. Problems with the condition of the disease seem to make the reason why HIV / AIDS is a case that is still large and continues to be repressed again through various strategies. Thoughts of both right and wrong teenagers about HIV / AIDS will soon be reflected in their real world. This change of adolescent thinking will affect the way they behave towards people living with HIV / AIDS (Firda, Maqfiroh, & Shaluhiyah, 2014). Improper precaution behavior often makes teenagers away from people living with HIV, can cause behavioral disorders in people living with HIV, including avoidance of physical and social contact. The anger felt by people living with HIV will result in a deliberate effort to re-infect the HIV virus to others, if this happens, the greater the problem of HIV / AIDS in the community (Firda et al., 2014). Preventive HIV / AIDS prevention programs include: primary prevention with ABCD program (Abstinence: not having sex outside of marriage, Be faithful: loyal to spouse, Condom: using condoms during intercourse, and Drug no: refusing drug use especially injecting drugs) blood security, and information-communication and education (IEC) dissemination of HIV/AIDS (Kementrian Kesehatan Republik Indonesia, 2014)

One of the efforts to provide KIE is through Problem Based Instruction (PBI) learning method which is a learning based on many problems that require authentic investigation ie investigation that requires real settlement from the nearest similar circumstances (Trianto, 2009). PBI has been proven in increasing knowledge and developing attitudes of existing knowledge. One of the advantages of an underdog is that learners can learn from various sources, both written and unwritten so as to gain extensive experience. This is the basis for better behavioral change

MATERIALS AND METHODS

In this research using experimental research design pre-experimental type with pretest-posttest approach one group design. In this study, the pretest was done before treatment so that the treatment can be known more accurate because it can compare with the condition before and after treatment. In this study population is all adolescent in junior high school is 180 people. Sampling in this study using random sampling cluster technique with a sample size of 36 people. The instrument used in this study is the questionnaire used to measure the prevention behavior of HIV / AIDS transmission consisting of 15 statements. The data analysis used is Wilcoxon Statistics Test.

RESULTS

Prevention Behavior of HIV / AIDS Transmission Before Student Problem Based Instruction

Table 1. Distribution of Respondents Frequency Based on Prevention Behavior of HIV / AIDS Before Studying Problem Based Instruction

| No | Behavior | Frequency | (%) |
|-------|----------|-----------|-------|
| 1 | Positive | 10 | 27,8 |
| 2 | Negative | 26 | 72,2 |
| Total | | 36 | 100,0 |

Based on table 1 it is known that most of the respondents have negative behavior before

given the Problem Based Instruction Learning is 26 people (72,2%).

Prevention Behavior of HIV / AIDS After Having Problem Based Instruction Learning

Table 2. Distribution of Respondents Frequency Based on Prevention Behavior of HIV / AIDS After Studying Problem Based Instruction

| No | Behavior | Frequency | (%) |
|-------|----------|-----------|-------|
| 1 | Positive | 22 | 61,1 |
| 2 | Negative | 14 | 38,9 |
| Total | | 36 | 100,0 |

Based on table 2 it is known that most respondents have positive behavior after given Problem Based Instruction Learning that is 22 people (61,1%).

Effect of Problem Based Instruction Learning on Prevention of HIV / AIDS Transmission on Prevention Behavior of HIV / AIDS

Table 3. Differences in Preventive Behavior of HIV / AIDS Transmission Before and After Problem Based Instruction Learning

| No | Behavior | Before | | After | |
|-------|----------|--------|------|-------|------|
| | | f | % | F | % |
| 1 | Positive | 10 | 27,8 | 22 | 61,1 |
| 2 | Negative | 26 | 72,2 | 14 | 38,9 |
| Total | | 36 | 100 | 36 | 100 |

p value = 0,005

Based on table 3 it is known that there was a change of negative behavior before given Problem Based Instruction Learning (72,2%) changed to positive after given Learning Problem Based Instruction (61,1%).

Wilcoxon test results show that $p\text{-value} < \alpha$ because the $p\text{-value}$ obtained is 0.005 whose value is smaller than α (0.05). This indicates that H_1 is accepted, meaning that there is an influence of Problem Based Instruction Learning toward prevention behavior of HIV / AIDS in the adolescent.

DISCUSSION

Prevention Behavior of HIV / AIDS Transmission Before Student Problem Based Instruction

The results showed that most of the respondents had negative behavior before being given Problem Based Instruction Learning.

Prevention of transmission of HIV used the concept of D (Drug no), meaning It is prohibited to use drugs, and E (Education), meaning-seeking information through health education. Establish an Anti-AIDS study group. Activities are conducted by discussion or question and answer about the dangers of HIV-AIDS, how to prevent, good treatment in patients. Discussions can be conducted in class, school, or even by visiting institutions related to AIDS care (Kementrian Kesehatan Republik Indonesia, 2014). Behavior is influenced by predisposing factors consisting of knowledge, attitudes, beliefs, values, beliefs, and traditions; enabling factors consisting of facilities and infrastructure; as well as reinforcing factors consisting of community leaders, government policies, and health workers. These three factors affect the behavior consisting of 3 domains of knowledge, attitude, and action. Knowledge is influenced by age, intelligence, education, experience, information, environment, and socio-culture, while attitudes are influenced by personal experience, the influence of others who are considered important, cultural influences, mass media, educational and religious institutions, and emotional factors (Notoatmodjo, 2010).

Respondents who have negative behavior are caused by not realizing that the behavior is one way in preventing HIV AIDS transmission, because according to them, preventing HIV / AIDS transmission is by not having premarital sex and not using drugs, so both parameters have score which is very high, even maximal, but they do not realize that some other behavior that they think is natural is the trigger of HIV / AIDS transmission. The lowest-scoring behavior is

to follow AIDS care organizations, attend seminars on AIDS, following HIV / AIDS counseling, and watch blue films. This shows that many junior high school adolescents who like blue films are the triggers of premarital sex that they may not be aware of.

Respondents who had positive behavior were due to some of them already knowing that some of the behaviors mentioned in the questionnaire may trigger HIV / AIDS transmission even though indirectly, such as watching blue film, clubbing, wearing miniskirts, which can trigger the occurrence of premarital sexual intercourse that is the largest transmission of HIV / AIDS. The parameters with the highest scores are about drugs and sexual intercourse, as these two parameters are very crucial for junior high teenagers so they will avoid this behavior because they are aware of the magnitude of the risks that will be incurred if they violate them.

In this study, it is known that almost all respondents aged 14 years, ie as many as 28 people (77.8%). Adolescence still amazes the changes that occur in the body itself and the impulses that accompany the changes. They develop new thoughts, quickly attracted to the opposite sex, and are easily aroused erotically. With his shoulder held by the opposite sex, he had fantasized erotic. This exaggerated sensitivity coupled with reduced control of the ego causes these early adolescents to be difficult to understand and understand adults (Wirawan, 2010)

Teenagers who have negative behaviors show that free will and follow peers are stronger than their dependence on parents so that they do behaviors they are not supposed to do. Respondents who have positive behavior mean that their dependence on parents is greater than peer influence, because parents will not teach bad behavior to children, especially if parents do strict supervision on children, because now even junior high school students already began to love karaoke and clubbing because of the increasingly widespread entertainment facilities that provide it.

Based on the results of the research note that all respondents get information about prevention of HIV / AIDS transmission from mass media (television, radio, internet) that is as much as 36 people (100%). A person can change by showing actions contrary to his or her attitude. One's behavior may change with the acquisition of additional information about the object through persuasion and pressure from its social group (Notoatmodjo, 2010). The correspondent who chooses to get information from open mass media means never getting information from other sources, it's just the intensity is lower than from the mass media. According to the researchers, the negative behavior of respondents is due to information about prevention of HIV / AIDS transmission does not come from health workers who have the clear competence to provide information, so that respondents do what they think is right and make them comfortable but not necessarily the truth. Respondents who have positive behaviors have been informed by health workers, although they like to search for information over the internet, but they can sort and choose the right information so they do not just accept all incoming information without regard to the truth of the information.

Prevention Behavior of HIV / AIDS After Having Problem Based Instruction Learning

Based on the result of research known that most of the respondent have positive behavior after given Learning Problem Based Instruction According to (Rusman, 2010), the mastery of learning content from heuristic discipline and the development of problem-solving skills. PBI also deals with learning about a wider life (lifetime learning), information understanding skills, collaboration and team learning, and reflective and evaluative thinking skills. (Trianto, 2009) stated that the purpose of PBI is to help students develop thinking skills and problem-solving skills, learning the role of authentic adults and becoming independent learners. With the renewed emphasis being placed on the basics of

education, and increasing pressure to streamline instruction and teach to specific standards, the idea that the most effective instruction for these goals is also one that fosters depth of learning and engages students on a personal level is quite appealing (Holm, 2011). In PBL, teachers coach students with suggestions for further study or inquiry but do not assign predetermined learning activities. Instead, students pursue their own problem solutions by clarifying a problem, posing necessary questions, researching these questions, and producing a product that displays their thinking. These activities are generally conducted in collaborative learning groups that often solve the same problem in different ways and arrive at different answers (Mergendoller, Maxwell, & Bellisimo, 2006)

According to the researcher, positive behavior after given Problem Based Instruction Learning on prevention of HIV / AIDS transmission caused because respondents have got correct information about how to do prevention of HIV / AIDS transmission that makes them moved to try to practice it. Evidence given at the time of learning about behavior that can lead to HIV / AIDS will give its own fears for the respondents so that they will try to change their behavior for the better. Negative attitudes that have not changed much are following AIDS care organizations, attending seminars on AIDS, following HIV / AIDS counseling, and watching blue movies. This is due to the limited organization of AIDS care available, as well as seminars and counseling about AIDS so that respondents can not follow it, but watching blue film has slightly increased the score which means there are some respondents who have reduced the intensity of watching blue movies, as well as using mini skirts, karaoke, and clubbing. But the decline in the score occurred in the statement denied dating, it shows that there are some respondents who began dating.

Effect of Problem Based Instruction Learning on Prevention of HIV / AIDS Transmission on Prevention Behavior of HIV / AIDS

Formulated that problem-based learning or PBI was developed to help students develop thinking and problem-solving skills, learn various roles of adults through engagement in real-life experiences and become autonomous and independent learners. Finding and seeking answers to a problem made by students trained to be autonomous and independent learners. In the PBI, students are required to ask questions or problems and seek answers to the proposed problem, which is expected to change the way students learn, develop their curiosity and connect the concepts learned with the natural environment. (Ibrahim, M & Nur, 2000). PBL encourages the development of skills necessary for critical evaluation and acquisition of new knowledge interacting with the environment (Araz & Sungur, 2007).

Based on the result of the research, it is known that the negative behavior change before given the Problem Based Instruction Learning (72,2%) turns into positive after given Learning Problem Based Instruction (61,1%). Wilcoxon test results show that $p\text{-value} < \alpha$ because the $p\text{-value}$ obtained is 0.005 whose value is smaller than α (0.05). This indicates that H1 is accepted, meaning that there is the influence of Problem Based Instruction Learning toward prevention behavior of HIV / AIDS in adolescent

Problem-based instruction (PBI) requires students to ask questions or problems and look for answers to problems raised so that it is expected to change the way students learn, develop their curiosity and connect the concepts learned with their natural environment (Andriansyah & Rifai, 2016). Studies have explored the outcomes related to PBL at virtually all levels of education. There is agreement on the contribution of PBL to factors such as knowledge retention, student satisfaction, motivation, and critical thinking (Burris & Garton, 2007).

To make a change there needs to be a step in the way until hope or the ultimate goal of change can be achieved. These steps include awareness, that is, in making a change requires the existence of consciousness to change if there is no awareness to change, it is impossible to create a change; interest, namely in making changes must arise feelings of interest to the known changes, there is interest that encourages and strengthens awareness to change; evaluation is an assessment of a new so as to avoid the obstacles that will be found during the change; trial is a test phase against a new or a result of changes in the hope of a new can be known results in accordance with existing conditions or situations and facilitate to be accepted by the environment; and the adoption of the last stage of change is the process of acceptance of a new one after a trial and feel the benefits of a new one so that always maintain the results of change. PBI is a learning model based on the constructivist understanding that can accommodate students' involvement in authentic learning and problem-solving.

Respondents who did not experience changes in behavior both before and after were given a Problem Based Instruction Learning, which initially positive remain positive because the positive behavior has become its daily behavior so it is difficult to turn into negative. Respondents whose negative behavior remained negative due to the lack of attention to PBI learning methods, or it could be due to other factors such as a crowded environment so that respondents can not focus or concentrate on receiving learning so as not to capture well-conveyed information about behaviors that can trigger transmission HIV AIDS so it should be prevented. Internal factors that come from within themselves is that they have not realized if their behavior can trigger HIV AIDS transmission to be prevented because behavior change begins with awareness to change and has no interest to abandon the old behavior, it could be because according to their judgment such as dating, mini skirts, clubbing or karaoke have nothing to do with HIV / AIDS transmission due to the strong thought that HIV AIDS is

only transmitted through sexual contact and drugs, so if they do not have sex and do not use drugs, they already feel that they have been doing the prevention of HIV AIDS transmission.

CONCLUSION

There is an influence of Problem Based Instruction (PBI) learning methods on prevention behavior of HIV / AIDS in adolescents. Problem-based learning or PBI was developed to help students develop thinking and problem-solving skills in real-world experience.

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