

Effectiveness of Problem-Based Instruction Learning Methods on Adolescent Behavior in Preventing Covid-19 Transmission

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ABSTRACT

Teenagers (students) still need to be given learning using the Problem-Based Instruction (PBI) method, because PBI can increase students' knowledge and creativity in critical thinking. This study aims to determine the effectiveness of the Problem-Based Instruction (PBI) learning method on adolescent behaviour in preventing the transmission of COVID-19 at SMPN 1 Mojoanyar Kab. Mojokerto. This study used a quasi-experimental design with a control group. The Sampling technique uses Total Sampling as many as 26 respondents. The researcher gave the stages in this study starting from collecting data by giving questionnaires to the treatment group and the control group. The treatment group was given an intervention using the Problem-Based Instruction (PBI) method which was carried out by giving a case which was then discussed together. This treatment was carried out 2 times within 1 week with various cases. Then a final assessment was carried out by filling out a questionnaire and followed by data analysis and drawing conclusions about the effectiveness of the Problem-Based Instruction (PBI) learning method on behaviour in the prevention of COVID-19 in both the treatment group and the control group. The results showed that the Problem-Based Instruction method was able to increase the behaviour of respondents in preventing the transmission of Covid-19, namely from 9 (34.6%) to 22 (84.6%). Meanwhile, in the control group, the number increased from 11 (42.3%) to only 12 (53.8%). The statistical test results show p -value = 0.000 less than $= 0.05$ so it can be concluded that H_1 is accepted, which means that there is an influence of the Problem-Based Instruction learning method on changes in adolescent behaviour in preventing the transmission of COVID-19.

Keywords: Problem-Based Instruction, Behavior, Youth, Prevention of Transmission of COVID 19

INTRODUCTION

Lifestyle and socioeconomic changes due to urbanization and modernization, especially among people in big cities in Indonesia, are the cause of the increasing prevalence of degenerative diseases and are thought to be the main cause of death in Indonesia (Prameswari & Widjanarko, 2014). Health development is essentially an effort carried out by all components that aim to increase awareness, willingness and ability to live healthily for everyone to realize the highest degree of public health. is called COVID-

19 (Corona Virus Disease 2019). and was first discovered in the city of Wuhan, China at the end of December 2019. This virus spread very quickly and has spread to almost all countries, including Indonesia, in just a few months. This attacks the respiratory tract of a human being and is characterized by symptoms of sore throat, hoarseness of voice, increased body temperature, headaches, difficulty breathing and diarrhoea. The impact of this increasing incident has resulted in the death of the patient and of course, it will be contagious to anyone. The way this coronavirus spreads is through people who have been infected with corona virus through small droplets from the nose or mouth when someone infected with this virus sneezes or coughs (Parwanto, 2020).

Currently, the number of cases of COVID-19 in East Java from March to April is still increasing. In March 2020 the number of ODP was 793 people, PDP 79 and positive 26 people. In April, the number of ODP was 873 and PDP was 92. Mojokerto Regency in March the number of ODP was 16 people and the number of PDP was 6 people. In April the number of ODP was 176 people and PDP was 28 people and on May 17th there were 78 PDP and ODP 5296 people being treated at the hospital/ confirmed 11 people (Map of distribution of Mojokerto Regency 2020). According to the World Health Organization, deaths from the coronavirus are expected to continue to increase if no emphasis is placed on breaking the chain of transmission. Adolescents need to be monitored intensively (Amelia, Rahman, & Widaditria, 2016)

The results of a preliminary study on students at SMP Negeri 1 Mojoanyar on April 25 2020 through filling out an online questionnaire on 10 class VIII students about COVID-19 prevention behaviour showed that 6 people (60%) were negative. This was shown by the data they did not use masks when going out and 4 people (40%) are positive, namely always using masks, washing hands and not going out at night. The results of Andriansyah's research (2016) at Achmad Jani Puger Middle School, Jember Regency, show that there is an influence of the problem-based instruction (PBI) learning model on adolescents' knowledge and attitudes about HIV/AIDS. Knowledge and attitudes are the domain of behaviour so the PBI learning model is expected to provide behavioural changes in adolescents regarding HIV/AIDS prevention (Putriyaningrum, 2018).

The risk factors for COVID-19 make this disease a disease that needs special attention, especially among the community. Transmission of COVID-19 generally occurs in several ways, namely direct contact with patients, coughing, not washing hands regularly and not wearing masks. The problem with the state of the disease seems to be the reason why COVID-19 is still a big case and continues to be pushed back through various strategies. Teenagers' thoughts, both correct and incorrect about COVID-19, will soon be reflected in their real world. This change in adolescent thinking will later influence the way they behave towards PDP, ODP and positive patients with COVID-19 (Covid Control Group, Mojokerto Regency).

Inappropriate preventive behaviour often makes adolescents become carriers or carriers of the virus, and can potentially transmit if they can avoid physical and

social contact. The program to stop the spread of COVID-19 is carried out with prevention, including: / primary prevention with the GERMAS program (hand washing, wearing masks, exercising diligently, making an effort, eating nutritiously, getting enough rest, social and physical distancing) (Rahayu, Hariyanto, Wulandari, & Finisia, 2020)

One of the efforts to provide important KIE is through the Problem-Based Instruction (PBI) learning method which is learning based on the number of problems that require authentic (real) investigations, namely investigations that require real solutions from similar nearby environmental conditions. (Trianto, 2012) PBI has been proven in increasing knowledge and developing attitudes from existing knowledge. One of the superior advantages is that students can learn from various sources, both written and unwritten to gain extensive experience. This is the basis for better behaviour change (Khanafiyah & Yulianti, 2013)

METHOD

This study used a quasi-experimental design with a control group. Sampling technique using Total Sampling. The stages in this study were divided into 2 groups, namely the treatment group and the control group. In each group, the following steps were carried out: Collecting data on the entire number of teenagers in class VIII A (26 students). Fill in the questionnaire about behaviour in week 1. (Fill in the questionnaire statement as attached in Appendix 5) After filling in it will then be analyzed using a Likert Scale: If T score \geq T mean group then positive behaviour If score T < T mean group then negative behaviour.

Then the researcher intervened with the Problem-Based Instruction method. These interventions include:

1. Trigger Cause the importance of wearing masks. (Conducted in week 2 online)
2. Trigger Cause the importance of washing hands regularly. (Conducted in week 2 online)
3. Trigger Cause the importance of correct coughing and sneezing ethics. (Conducted in week 3 online)
4. Trigger Cause the importance of regular exercise. (Done in week 3 online).
5. Trigger Cause the importance of consuming nutritious food. (Done in week 4 with Online).
6. Trigger Cause the importance of seeking the Almighty. (Conducted in week 4 online).
7. Trigger Cause the importance of social and physical distancing. (Conducted in week 5 online).
8. Trigger Cause the importance of WFH / at home only. (Conducted in week 5 online).
9. Trigger Cause the importance of positive thinking and honesty. (Done in week 6)

with Online).

10. Trigger Cause regarding the medium of transmission of COVID- 19. (Conducted in week 6 with Online). (The intervention is carried out 2X in a week so it takes as much as 5 weeks)

After being given the intervention, for 6 weeks, namely in the 7 th, 8 th, 9 th, 10 th, 11 th, and 12 th weeks the students reflected on problem-based instruction. Then fill out a questionnaire about behaviour (Post-Test) at week 13. Then statistical data processing is carried out

FINDING AND DISCUSSION

Finding

Respondent's behaviour in the pre-test group was given the Problem-Based Instruction Learning Method.

Table 1: Frequency distribution of Respondents' behaviour in the Treatment Group When given the Problem-Based Instruction Learning Method..

No.	Behaviour	Frequency	Presentage (%)
1.	Positive	9	34,6%
2.	Negative	17	15,4%
Total		26	100%

Based on table 1, it is known that the majority of respondents had negative attitudes about preventing the transmission of Covid-19, namely 17 people (15.4%).

Respondents' Behavior in the Control Group (Pre test).

Table 2: Frequency distribution of Respondents' behaviour in the Control Group..

No.	Behaviour	Frequency	Presentage (%)
1.	Positive	11	42,3%
2.	Negative	15	57,7%
Total		26	100%

Based on table 2, it is known that the majority of respondents had negative attitudes about preventing the transmission of Covid-19, namely 15 people (57.7%).

Respondents' Behavior in the After Treatment Group (Post Test) was given the Problem-Based Instruction Learning Method.

Table 3. Frequency distribution of Respondents' behaviour in the Treatment Group after being given the Problem-Based Instruction Learning Method.

No.	Behaviour	Frequency	Presentage (%)
1.	Positive	22	84,6%
2.	Negative	4	15,4%
Total		26	100%

Based on table 3, it is known that the majority of respondents had a positive attitude regarding preventing the transmission of Covid-19 as many as 22 people (84.6%).

Respondent Behavior in the Control Group (Post-Test)

Table 4. Frequency distribution of Respondents' behaviour in preventing Covid-19 Transmission in the Control Group.

No.	Behaviour	Frequency	Presentage (%)
1.	Positive	12	46,2%
2.	Negative	14	53,8%
Total		26	100%

Based on table 4. it is known that the majority of respondents had negative attitudes about preventing the transmission of Covid-19 as many as 14 people (53.8%).

Behavior before and after being given the Problem-Based Instruction Learning Method.

Table 5. Distribution of behaviour frequency in the treatment group before and after being given the Problem-Based Instruction Learning Method

No.	Criteria	Pre-test		Post-test		<i>P value</i>
		f	%	F	%	
1.	Positive	9	34,6	22	84,6	0.000
2.	Negative	17	65,4	4	15,4	
Total		26	100	26	100	

Based on table 5. It is known that the behaviour of adolescents in preventing transmission of COVID-19 before and after being given the Problem-Based Instruction learning method, most of the respondents had change from 9 students (34.6%) to 22 students (84.6%). The results of statistical tests using the Wilcoxon signed rank test obtained p value = 0.000 less than $\alpha = 0.05$ so that it can be concluded that H_1 is accepted, which means that there is an influence of the Problem-Based Instruction learning method on changes in adolescent behaviour in preventing transmission of COVID-19.

DISCUSSION

Identification of behaviour before and after being given the Problem-Based Instruction Learning Method.

Based on table 5, it is known that the behaviour of adolescents in preventing transmission of COVID-19 before and after being given the Problem-Based Instruction learning method, most of the respondents had changed from 9 students (34.6%) to 22 students (84.6%). Whereas in table 6. we can see that in the control group. the results of the behaviour of the respondents from 11 (42.3%) increased by only 1 respondent, namely to 12 (46.2%). Behaviour is a set of actions or actions of a person in responding to something and then becomes a habit because of a belief in values (Sarwar, Khan, Muhammad, Mubarak, & Jaafar, 2021) From a biological aspect, behaviour is an activity or activity of the organism or living creature concerned. Therefore, from a biological point of view, all living things, including animals or humans, have their own activities (Notoatmodjo, 2017) Behaviour is the totality of the appreciation of the activity, which is the end result of the intertwined interplay between various kinds of symptoms such as attention, observation, thoughts, memories and fantasies. These symptoms appear together and influence each other (Notoatmodjo, 2017) It is known that after the action or treatment of the Problem-Based Instruction learning method on adolescent behaviour in preventing the transmission of COVID-19 in students of SMPN 1 Mojoanyar has increased by 13 students. This is because after being given the Problem-Based Instruction learning method to students about ways to break the chain of transmission of COVID-19 from 10 item statements and the dangers or impacts of not complying with health protocols during the current pandemic. So that the students of SMPN 1 Mojoanyar are mostly able to change their behaviour from every daily activity at home or while leaving the house. Apart from that, the most important factor in changing their behaviour was when they were given treatment, they were more interested and understood better by using educational videos. We know that there are different types of people's understanding, some understand sentences more quickly and some are more able to accept using video aids.

CONCLUSION

The Problem Based Instruction Learning Method is very effective in preventing the transmission of Covid-19 for respondents at SMPN 1 Mojoanyar Kab. Mojokerto

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