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Research Article

Influence of Class Action Learning Model on The Knowledge, Attitude, and Behavior of Higher-Class Students of State Elementary School 01 Cilandak Timur, South Jakarta

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Abstract: This study aims to determine the effect of the classroom action learning model on dental health on the knowledge, attitudes, and behavior of upper-class students at Primary School 01 Cilandak Timur, South Jakarta. This study aims to increase students' knowledge criteria by applying an action learning model for class V Elementary School in Cilandak State Elementary School. The subjects of this study were 32 class V students as the intervention class and class V Elementary School Borobudur as the control class. The method used was *Classroom Action Research*. This study used a pre and post-test design with a control group. The pre-test and post-test control group designs involve two classes: the experimental and control classes. Before being given treatment, both classes did a pre-test to get the initial cognitive abilities of the fifth graders. Then the two classes were offered the treatment to the experimental class, namely learning by applying good and correct brushing techniques, while the control class was not given any treatment. After learning, a post-test was conducted to determine the cognitive abilities of the experimental class and control class respondents. In this study, the sample used is part of the population, which is 10%. The sample calculation is 0,1 X 300, that is, 30 people in the intervention class and 30 in the control class with different schools. The results of the study can be concluded that the Classroom Action Learning Model in terms of the teacher's ability to manage the class is said to be effective because the total percentage of good and very good assessments is more than the percentage of poor and quite good assessments, namely: 92% > 8%, Classroom Action Learning Model is reviewed of student activities in learning is said to be effective because the number of percentages of good and very good assessments is more than the number of percentages of poor and good enough assessments, namely: 75% > 25%, Class Action Learning Model in terms of student responses to learning is said to be effective because the number of assessment percentages good and very good more than the total percentage of assessments are not good and quite good, namely: 85% > 15%, Class Action Learning Model in terms of student learning outcomes after learning is said to be effective because the total percentage of assessments understands and understands more than the total percentage appraiser Ian understands well and quite understands, namely: 85% > 15%

Keywords: *Dental Health Class Action Learning, Knowledge, Attitude, Behavior.*

A. INTRODUCTION

Dental and oral diseases that become dental health problems in the community generally are dental supporting tissues (periodontal disease) and dental caries/cavities. The causes of dental caries include food consumption and maintenance of dental hygiene, as well as the condition of the teeth. Dental caries in children is a critical and significant dental and oral disease problem in Indonesia. In this year's research activity, knowledge, attitudes, and healthy behavior of elementary school children in grade 5 are explicit to determine the criteria for knowledge, attitudes, and healthy behavior of children before and after being given treatment or the difference between good and correct brushing skills.

This study aims to increase students' knowledge criteria by applying an action learning model for class V Elementary School in Cilandak State Elementary School. The subjects of this study were the fifth-grade elementary school students, totaling 40 people, as the intervention class and the fifth-grade Borobudur Private Elementary School as the control class. The method used in this study was classroom action research. This research aims to increase the criteria for knowledge, attitudes, and behavior of students through the application of classroom action learning models for elementary school-aged children at State Elementary School 01 Cilandak Timur, South Jakarta. Based on this background, the problem in this study is "How is the effect of classroom action learning models on dental health on knowledge, attitudes, and behaviors of fifth-grade students at state elementary school 01 Cilandak Timur, South Jakarta?"

B. METHOD

This study uses a pre and post-test design with a control group. The pre-test and post-test control group designs involve two classes: the experimental and control classes. Before being given treatment, the two classes did a pre-test to get the initial cognitive abilities of the fifth-grade students. Then one class was given treatment/experiment, namely learning by applying good and correct brushing techniques, while the control class was not given any treatment. After learning, a post-test was conducted to determine the cognitive abilities of the respondents in the experimental class and control classes.

The sample is partly taken from the whole object under study and is considered to represent the entire population (Notoatmodjo, 2005). If the subject is less than 100, it is better to take all of them so that the research is a population study. But if the number of subjects is large, it can be taken between 10-15% or 20-25% or more (Arikunto, 2006). In this study, the sample used was part of the population, namely 10% of the population. The sample calculation is 0.1 X 300, which is a minimum of 30 people, and in this study, each of the intervention and control groups was 40. If the student's dental health class action learning outcomes method is less than <60, it is declared less successful, and the plan is reflected at the end of the cycle to find weaknesses and corrected in the following action cycle.

Differences in approaches, models and learning principles between grades one and two of elementary school and pre-school education can also cause students who have attended pre-school education to repeat classes or even drop out of school. The Class Action method can also apply to other subjects.

The implementation of this research aims to obtain an increase in the level of criteria for knowledge, attitudes, and behavior of students through the application of classroom action learning models for elementary school-age children at State Elementary School 01 Cilandak Timur, South Jakarta. The subjects of this study were 32 elementary school fifth-grade students, the method used in this study was Classroom Action Research.

C. RESULT AND DISCUSSION

1. Characteristics of Respondents by Gender

Below is a table of results from the distribution of the characteristics of the respondents based on their gender.

Table 1. Characteristics of Respondents by Gender

No	Gender	Group		Amount	Percentage
		I	II		
1	Man	9	6	15	45%
2	Woman	11	14	25	55%
Total		**20**	20	40	100%

Information: Group I is a treatment group in this research activity
Group II is the control group or without intervention

Based on the frequency distribution table of respondents according to gender, it can be seen that female students are more than male students. Overall, the numberof respondents was 40 people consisting of 15 men (45%) and 25 women (55%). If classified according to each group composed of 2 groups in which there is one experimental group and one control group, the results obtained in group 1 are groupsthat are equipped with knowledge and skills in the practice of brushing teeth with a picture booklet of 20 students with the details of the male are nine students, and 11 are female. In group II the control group was given counseling without illustrated bookletmedia for several 20 students, namely boys, 6 and 14 girls.

2. Univariate Analysis

Univariate analysis was carried out on each variable to determine the level of knowledge and skills practice of brushing students' teeth, both pre-test and post-test, in the intervention and control groups.

a. Knowledge Score Distribution Frequency Pre-Test of the Intervention and Control Group Scores for searching the level of knowledge of initial brushing (pre-test) in the intervention group were assessed using the questionnaire as follows:

Table 2 Frequency Distribution Criteria for Respondents' Initial Knowledge Level (Pre-Test) at the Intervention Group

Score	Tooth Brushing Knowledge Level Score	
	Amount	Percentage
Less (< 60%)	3	23.5 %
Enough (60% - 80%)	17	76,5%
Good (> 80%)	0	0%
Cumulative	20	100%
Average		5.800
Standard intersection		0.833

Based on table 2, the level of initial knowledge of the intervention group respondents can be known the highest score is in ENOUGH Criteria of 17 respondentsor the range of scores of 60% to 80% with an average level of knowledge of the groupof 5,800 and the standard intersection is 0.833.

Table 3. Frequency Distribution of Criteria for the Pre-Test of the Control Group

Score	Level of Teeth Brushing Knowledge	
Less (<60%)	3	23.5 %
Enough (60% - 80%)	17	76,5%
Good (> 80%)	0	0%
Cumulative	20	100%
Average		5.800
Standard intersection		0.833

In table 3. it can be seen that the highest score of the initial level of knowledgeof brushing the control group respondents is in the range of 60 to 80% or has ENOUGH knowledge of 17 people, while the group's average knowledge score is 6,300 and the standard intersection is 0.978.

b. Preliminary Assessment of the Intervention and Control Group's TeachingBrush Test (Pre-Test)

Table 4. Frequency Distribution of Respondents' Initial Skills Tooth Brushing (Pre-Test) Intervention Group

Score	Tooth Brushing Practice	
	Amount	Percentage
False (< 80%)	16	76,5%
Right (> 80%)	4	23.5%
Total	20	100%
Average		6.600
Standard Intersection		1.429

Based on table 4, it can be seen that the most scores on the initial brushing skillstest in the intervention group were in the range of less than 80% (< 80%) or FALSE Practices of 16 Respondents with an average of 6,600 while the standard intersection was 1.429.

Table 5. Frequency Distribution of Respondents' Initial Skills Tooth Brushing (Pre-Test) Control Group

Score	Tooth Brushing Practice	
	Amount	Percentage
False (< 80%)	13	73,5%
Right (> 80%)	7	26.5%
total	20	100%
Average		7.200
Standard Intersection		0.951

Based on table 5, it can be seen that the initial skills of the respondents who brush their teeth in the control group get the most scores in the range of categoriesless than 80% (< 80%), namely FALSE Practices of 13 people with an average controlgroup of 7,200 and the standard intersection is 0.951

c. Distribution of Frequency of Knowledge Level Respondents Brushing Teeth After Intervention (Post-Test 1).

A population of 40 samples from Primary School 13 and Primary School 01 Pondok Labu were taken, consisting of 20 people given illustrated booklets while 20 others were not. The results of the post-test assessment of the control group are as follows:

Table 6. Frequency Distribution of Knowledge Levels of Respondents After Control Group Interventions (Post-Test 1)

Score	Teeth Brushing Knowledge	
	Amount	Percentage
Less (< 60%)	0	0%
Enough (60% - 80%)	9	39.5%
Good (> 80%)	11	69.5%
Cumulative	20	100%
Average		8.300
Standard Intersection		0.732

Based on table 6, it can be seen that the knowledge level of the respondents after the intervention in post-test 1 obtained the highest score in the range of categories (> 80%) or GOOD Knowledge of 11 people (69.5%) with an average score of 8.30 and the standard crossing is 0.73.

The population of students in Primary School numbered 93 samples, while a selection of 20 students given fulfilling the inclusion criteria was given a booklet. In contrast, 20 students did not, and the results of the post-test groupwere as follows

Table 7. Frequency Distribution of Knowledge Level Scores Intervention Group Respondents (Post-Test 1)

Score	Teeth Brushing Knowledge	
	Amount	Percentage
Less (< 60%)	0	0%
Enough (60% - 80%)	9	69.5%
Good (> 80%)	11	39.5%
Cumulative	20	100%
Average		8.300
Standard Intersection		0.732

Based on table 7, it can be seen that the level of knowledge of early tooth brushing respondents in the post-test one intervention group got the most scores in the range of categories (> 80%) with 11 people with an average of 8.3000 and the standard intersection was 0.732.

Table 8. Frequency Distribution of Knowledge Level Brushing Teeth Score (Post-Test 2) Intervention Group

Score	Teeth Brushing Knowledge	
	Amount	Percentage
Less (<60%)	0	0%
Enough (60% - 80%)	6	13,4%
Good (> 80%)	14	85,6%
Cumulative	20	100%
Average		9.050
Standard Intersection		0.944

Based on table 8, it can be seen that the level of knowledge of brushing teeth inthe post-test two intervention group obtained the highest score in the range ofcategories (> 80%) or GOOD knowledge of 14 people with an average of 9.05 and the standard intersection was 0.944.

Table 9. Frequency Distribution of Knowledge Level Brushing Teeth Score (Post-Test 2) Control Group

Score	Teeth Brushing Knowledge	
	Amount	Percentage
Less (<60%)	5	23.5%
Enough (60% dd 80%)	15	76.5%
Good (> 80%)	0	0%
Cumulative	20	100%
Average		5.800
Standard Intersection		1.281

Based on table 9, it can be seen that the level of knowledge of brushing teeth inthe post-test two control groups had the highest score in the range of categories (60% to 80%) or ENOUGH knowledge of 15 people with an average of 5,800 and the standard intersection was 1,281.

3. Bivariate Analysis

Stages of statistical tests in this study included differences in the scores of pre-test and post-test knowledge in the experimental group and the control group,differences in teeth brushing skills pre-test and post-test in the experimental and control groups, differences in pre-test scores, and the post-test experimental group and the control group, along with differences in the differences in the scores of teeth brushing skills in the pre-test and post-test experimental group and the control group.

a. Knowledge of Pre-Test and Post-Test of Experimental Groups and Control Groups.
   Based on the statistical analysis of the level of knowledge, there is a difference in understanding of tooth brushing between the pre-test and post-test in the experimental

and control groups. The Wilcoxon test shows significant differences in tooth brushing knowledge between the pre-test and post-test. The experimental group produced a p-value = 0.000 (p> 0.05); thus, it can be concluded that there was an increase in the knowledge of tooth brushing between thepre-test and post-test in the experimental group. Wilcoxon test was also conducted in the control group by obtaining the results of p-value = 0.038 (p> 0.05); thus, it can be concluded that there was no increase in knowledge of brushing between the pre-test and post-test in the control group

b. Pre-Test Brushing Skills and Experimental and Control Group Post-Test Groups
Based on the statistical analysis of the experimental and control groups, there were differences in tooth brushing skills between the pre-test and post-test. The Wilcoxon test in the experimental group obtained a p-value = 0,000 (p <0.05); thus, it can be concluded that there was an increase in tooth brushing skills between the pre-test and post-test in the experimental group. The Wilcoxon test was also used in the tooth brushing skills test of the controlgroup with the Wilcoxon test results obtained in the control group, namely the resultsof the p-value = 0.739 (p> 0.05) test in the control group.

c. The difference in Score of Pre-Test Knowledge Level and Experimental Post-Test and Control Group
Based on the results of the analysis of the Wilcoxon test in the experimental andcontrol groups with available data in ordinal scale and unpaired samples, the man-Whitney test was the next test.
The man-Whitney test was used as a comparison to determine whether there wasa difference in student brushing knowledge after different interventions in each group (experiment and control) between the score difference between post-test and pre-test. The basis of decision-making used is based on the p-value. If the p-value> 0.05, then Ho is accepted with the meaning there is no difference and vice versa

d. Difference Score Skills *Pre-Test* and *Post-Test* Group Experiments and Group Control.
Based on the analysis of the experimental group and control Wilcoxon tests with ordinal scale data and unpaired samples, the next test used is a man-Whitney test.
Test man-Whitney is used as a comparison to know the difference in skills brushing teeth in the pupil after different interventions in each group of the difference between a score of post-test and pre-test between the experimental group and the control group. The basis of the decision used is based on the p-value. If the p-value > 0.05, then Ho is accepted, meaning there is no difference. Otherwise, if the p-value<0.05, Ho is rejected with the implication that there is a difference. The results of the man-Whitney test analysis between the difference in post-test and pre-test brushing skills between the experimental and control groups obtained a p-value = 0,000 (p <0.005), which means that there is a significant difference in the increase in brushing skills between the *pre-test* and *post-test* experimental and controlgroups.

4. Discussion

a. Distribution of Respondents by Age
The results of data collection at the time of the study, obtained by the effects ofthe characteristics of respondents according to age, is known that the overall respondents in this study were at most eight years old, amounting to 24 students (56%) and aged nine years at 16 students (44%).

b. Distribution of Respondents by Gender
The data collection results according to sex characteristics are known that the respondents who mainly were male were 24 students (55%) and women as many as 16

students (45%).

c. Differences in the value of the Pre-Test and the experimental group *Post-Test*.
The statistical test results of knowledge and brushing skills in the experimentalgroup after being given the illustrated booklet intervention are as follows. Level of Knowledge of Brushing Teeth in Experimental Groups. The difference between pre-test and post-test knowledge in theexperimental group is known based on the results of statistical tests with Wilcoxon that the data said there was a difference between the pre-test and post-test if the p-value < 0.05. After testing, obtainedp-value = 0,000 with the understanding that there are significant differencesbetween knowledge before and after being given a picture booklet media.

d. Tooth Brushing Skills Score in the Experimental Group
The difference between the pre-test and post-test skills in the experimentalgroup is known based on the results of statistical tests with Wilcoxon showing a difference before and after the illustrated booklet obtained p- value = 0,000 or < 0,05, which means that there are significant differences between skills before and after the picture booklet intervention. The statistical test results of the level of knowledge and brushing skills in the experimental group showed significant differences between before and after the intervention. This result is the same as the study results by Widya Hari Cahyati, which states that illustrated booklet media effectively improves behavior (Williams & Cooper, 2019).

Health education is an application of the concept of education in the health field (Bartholomew et al., 1998). Health education is a learning process aimed at individuals and community groups to achieve the highest degree of dental health (Watt, 2005). Health education can be supported by using a tool or media such as picturebooks to improve children's knowledge by seeing and reading.

Picture teeth health booklet media is one of the adequate education in increasing the knowledge and skills early. Because in it, there are also procedures for brushing teeth properly with language that is easy to understand for elementary school-age children. According to Sukidjo Notoatmodjo, aids, visual aids, or educational media are tools educators use in delivering their education or teaching materials (Mahmudiono et al., 2020). The advantage of using media is that it can generate interest in educational facilities, achieve more goals, help overcome many obstacles and understandings, stimulate students to pass on dental health messages received to others, facilitate the delivery of material by educators, encourage people's desire to know, then explore and finally get a better understanding or support to uphold the knowledge gained (Hornby & Lafaele, 2011).

5. Differences in Pre-Test Values and Control Group Post-Test Values

a. Knowledge Score for Brushing Teeth in the Control Group
The difference between the value of the pre-test and post-test in the controlgroup can be seen based on the results of statistical tests with Wilcoxon. In the Wilcoxon test, the data said there was a difference between the valueof pre-test and post-test if the value of p < 0.05. After doing the test, a p-valueof 0.38 > 0.05 means no significant difference in the level of knowledge before and after being verbally spoken.

b. Tooth Brushing Skills Scores in the Control Group.
Based on the results of statistical tests with Wilcoxon, there was a differencein brushing skills before and after obtaining the value of p-value 0.739> 0.05, meaning there were no significant differences before and after oral material learning. Based on the analysis, the results showed no significant difference betweenteeth brushing knowledge and skills pre-test and post-test on controls. Thisis probably due to the control group not being

treated or intervening with illustrated booklet media but only verbally learning the material at that time (Chan et al., 2002). Students are only active in listening, the density of material provided can result in students not being able to relearn material, easily forgotten, or difficult to achieve the maximum level of knowledge (de Groot, 2006)

c. Differences in the Value of Pre-Tests and Values of Post-Test Intervention Groups and Control Groups

Tooth Brushing Knowledge Scores in the Intervention and Control Groups The experimental group's pre-test and post-test brushing knowledge showed an average value of 5.76 and 8.69, respectively. It was seen that there was an increase in the average score of tooth brushing knowledge in the experimental group of 2.92. The increase in the average score of tooth brushing knowledge is supported by the results of respondents who can answer correctly in the experimental group post-test results. In contrast, pre-test and post-test brushing knowledge results in the control group show an average value of 6.28 and 5.83. From the results, it can be seen that there was a decrease in the average score of -0.45. The unpaired Mann-Whitney test results between the intervention and control groups obtained a p-value = 0,000 ($p < 0.005$). Thus,the brushing knowledge score was significant between the intervention and control groups. This shows that the visual booklet media provision effectively increases the knowledge of brushing teeth for students of Pondok Labu Public Elementary School in 2018. Health education is an activity or effort to convey health messages to the community, groups, or individuals (Mustika & Sudiantara, 2019). The statement said through Picture Booklet media in the experimental group experienced significant differences between the pre-test and post-test knowledge of tooth brushing, whereas, in the control group that was not given the pictorial booklet, there was no difference between the value of the pre-test and post-test

d. Tooth Brushing Skills Scores in the Experiment Group and the Control Group.

In the intervention group, pre-test and post-test brushing skills results showed an average value of 6.57 and 9.30, respectively, indicating an increase in the average knowledge score in the intervention group of 2.73. The increase in the average score of tooth brushing knowledge is supportedby the respondents answering correctly on the results of the intervention group post-test. In contrast, in the control group, the pre-test and post-test brushing knowledge results show an average value of 7.19, and 7.14 shows a decrease in the average score of -0. 04. Statistical tests with unpaired man-Whitney results between the intervention group and the control group after the intervention value = 0,000 < 0,05 can show significant differences in tooth brushing skillsbetween the post-test intervention group and the post-test control group. This means that the provision of Picture Booklets effectively changes the behavior of the respondents. This is following the research of Afif Hamdalah and Widya Hary Cahyati. They stated that visual media improves knowledge and skills more effectively than oral counseling (Laila et al., 2018).

Health education is an application of the concept of education in the health sector (Nutbeam, 2000). Health education is a learning process aimed at individuals and groups to achieve the highest degree of dental health (Petersen & Yamamoto, 2005). Health education can be helped by using a tool or media, one of which is apicture booklet. Media picture books are one of the media that are liked bychildren in general and are made in such a way as to be able to describe theprocedures for brushing teeth properly using language that is easy to understand for elementary school-age children (Mangold & Faulds, 2009).

D. CONCLUSION

After being analyzed, it can be concluded that illustrated booklet media helps increase the level or level of knowledge and brushing skills for upper (IV) elementaryschool students who are significant between increasing knowledge between theintervention and control groups (p-value = 0,000) increase in tooth brushing skills between the intervention and control groups, namely (p-value = 0,000).

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