

Positive Attitude and Intention of Changes in School Age Children on Prevention of Smoking Behavior Education Post With Jigsaw

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ABSTRACT :- Promotion of non-smoking behavior in school-aged children is one form of promotion of healthy behavior Efforts as the im pact of a threat to addictive substances from tobacco that can endanger the health of children. Facts prove that children with smoker status 20% -80% more frequent cough colds and twice more affected by bronchitis. In addition, the prevalence of smokers \geq . The purpose of this research was to know the effect of health education with Jigsaw method to change the attitude and intention of prevention of smoking in children. This type of research was Quasi Experimental: Non Equivalent Control Group Design. The object of this research was the Grade V students of Bendogerit Elementary School 1, year lesson 2015-2016. Selection of research subjects was conducted by purposive sampling as much as 40 respondents for both research groups. The results show that the health education with Jigsaw Method had an effect on attitude variable ($p = <0.025$) and variable of intention ($p = <0.020$). The Jigsaw Method was more influential than the expository method, namely the Attitude variable ($p = 0.029$) and the Intention variable ($p = 0.024$). Health promotion workers were suggested to use Jigsaw Methods in health education to related institutions, so it can be used as an alternative method in health promotion.

Keywords: Health, Education, Jigsaw, behavior, change.

I. INTRODUCTION

Promotion of smoking behavior in school-aged children is one form of promotion of healthy behaviors as a result of threats against the addictive substance of tobacco can harm the health of children (Ministry of Law and Human Rights Affairs, 2012). Facts prove that children with smoking status 20-80% more likely to develop cough, runny nose and 2 times more often affected by bronchitis. Besides the prevalence of smokers aged ≥ 15 years based on age start smoking in Indonesia there is a tendency of age start smoking at the age of 5-14 years, so the need for prevention of smoking behavior early on, because the state of health of school-age children are very influential on the achievement of learning achieved (Health Promotion Center, 2006).

Smoking behavior is a Planned Behavior in theory greatly influenced by intention, because of these factors is a sign indicative of a person's readiness to perform certain behaviors, and as a direct antecedent of behavior. (Ajzen,

2006) Research Muntaha (2011), in Lamongan stated that teenagers first smoked in the 9-12 year age range by reason of peer influence and trial and error, another reason is the influence of cigarette advertisement and most have family member of smoker. (Muntaha, 2011) Mahardika Research (2011) in Surabaya city, got attitude respondents able to understand the contents of smoking warning warning message, but respondents ignore the message, to remain smoking. (Mahardika, 2011).

The prevalence of smokers aged ≥ 15 years based on age start smoking in Indonesia there is a tendency of age start smoking young age, the age group 5-14 years with increasing number from 9.6% in 1995 to 19.2% in 2010 (Balitbangkes, 2012). Riskesdas 2010, describes the age of start smoking among smokers in each province, it appears that East Java is an area that most smokers with smoking uptake at the age of five, ie 22% of all smokers start smoking at the age of five. (Directorate of P2PL, 2011).Cigarette smoke that is inhaled is a material that disturb the health because it contains 4,000 harmful chemicals including nicotine and tar (Menhum and Ham, 2012). The number of cases of disease due to smoking habits in 2010, among others, chronic obstructive pulmonary disease 183,680 cases of coronary heart disease 53,740 cases, stroke is 47,600 cases, and lung tumors, bronchus and tracheaea 19,810 cases (Balitbangkes, 2012). Remembering the diversity of factors that may affect smoking behavior in children, the health education needs to be considered various characteristics of diverse educational goals as well as the right strategy to provide a learning experience. According to research of *the National Training Laboratories* in Bethel, Maine (1954) United States, explained that the teacher-based learning groups ranging from lectures, reading assignments, including the presentation of teachers, impacting only a maximum of 30% of the memory of students in the learning materials. Learning with discussion method that is not dominated by the teacher, students are able to recall 50%, when accompanied by a simulation study, it can be given 75%. Practice learning by way of teaching, students are able to recall 90% (Warsono, 2013). In order for the child in the process of getting health education learning experience appropriate in the hope k's, then the use of active learning strategies with jigsaw method becomes an option, because this method excels in creating learning conditions with the full cooperation of the group, and each student can learn by teaching practice. This can increase cognitive elaboration

well thus increasing the power of reason and impact on improving cognitive and affective abilities. (Majid, 2014). Jigsaw method is an active learning techniques used in the delivery of material on the topic of tips to avoid smoking behavior, with distributing child into several groups consisting of 4 *Jigsaw groups* and 5 *Expert groups* composed of members of *Jigsaw groups* were assigned to study a number of sub specific topics and completing tasks related to that topic and then communicated to *Jigsaw groups*.

II. MATERIALS AND METHODS

This study is a quasi-experimental study because not meet the requirements such as the way a real experiment, with Definition research, namely Non-Equivalent Control Group Design, that this design is very good for health education evaluation (Notoatmodjo 2005).This study was conducted on 11 and 12 February 2016 in the State Primary School Bendogerit 1 Blitar City, East Java. Sampling using purposive sampling technique, the fifth grade students in the academic year 2015/2016 who have families at home smokers.

Determination of the study group was taken from a large sample is divided in two and arranged so that the two groups of variables have similar characteristics. According to Roscoe, sample size in this research, because research simple experiment using the experimental group and the control group, the number of members each defined sample was 20 respondents (Sugiyono, 2012).

Before the treatment carried out both study groups are given a pretest to determine the equality of variables. As an independent 1 variable experimental group was given right health education treatment with jigsaw method, while the control group was given health education treatment with expository method appropriate learning routines. After the implementation of treatment, both groups are given posttest study, to measure a variable dependent variable attitudes

and intentions include smoking prevention, with instrument a questionnaire that is already in its validity and reliability. Hypothesis testing is done by statistical analysis of non-parametric (sample <30), namely testing the difference dependent variable pre and post intervention by Wilcoxon Signed Ranks Test, and testing the difference variables between study groups on the dependent variable, with Mann Whitney U Test. Error level (α) = 0.05 with the criteria if $p < \alpha$, H_0 is rejected, meaning that there is a significant difference, and when the value $p \geq \alpha$, H_0 is accepted, meaning there is no significant difference (Suliyanto, 2014).

III. RESULTS AND DISCUSSION

The majority of the experiments was 11 years old (70%) and the majority of the control group was 11 years (85%). Analysis obtained difference *U Test* average age of the respondents in the experimental group (20.00) is similar to the control group (21.00) with $p = 0.710$, meaning research groups have a comparable age.

The majority of respondents who smoke at home in the experimental group and the father smokes was 90% while in the control group was 95% . Analysis obtained difference *U Test* average family at home who smoke in the experimental group (21.00) is similar to the control group (20.00) with $p = 0.553$, this means both study groups have families at home who smoked comparable.

Source information of smoking behavior in the experimental group obtained from the advertisement of cigarettes was 65% and in the control group 80% of cigarette advertising. *U Test* analysis obtained by the average difference source of information on smoking behavior in the experimental group (19.33) is similar to the control group (21.68) with $p = 0.417$, this implies both study groups had a source of information on smoking behavior comparable.

Table 1. Attitude change Prevention of Smoking Respondents Before and After Health Education Given the Jigsaw method

Attitude	Groups							
	Experiment (n=20)				Control (n=20)			
	Pretest		Posttest		Pretest		Posttest	
	f	%	f	%	F	%	f	%
Positive	9	45	14	70	7	35	7	35
Negative	11	55	6	30	13	65	13	65
Total	20	100	20	100	20	100	20	100

Table 2. Changes in Smoking Prevention Intentions Respondents Before and After Health Education Given the Jigsaw method

Intention	Groups							
	Experiment (n=20)				Control (n=20)			
	Pretest		Posttest		Pretest		Posttest	
	f	%	f	%	f	%	f	%
Strong	10	50	16	80	9	45	9	45
Weak	10	50	4	20	11	55	11	55
Total	20	100	20	100	20	100	20	100

Table 3. Test Results *Mann Whitney U Test* Statistics Research Variables

Variable	Group	Pretest			Posttest		
		Mean rank	U	P	Mean rank	U	p
Attitude	Experiment	21,50	180	0,602	24,00	130	0,029
	Control	19,50			17,005		
Intention	Experiment	21,00	190,	0,799	24,00	130	0,024
	Control	20,00			17,00		

Table 4. Test Results Statistics *Wilcoxon Signed Rank Test* Research variable

Variable	Experiment		Control	
	z	p	z	p
Attitude	-2,235	≤ 0,025	0,000	1,000
Intention	-2,233	≤ 0,020	-,577	0,546

IV. DIFFERENCES IN SMOKING PREVENTION ATTITUDE

Respondents' attitudes toward smoking prevention before treatment, the results of the analysis of U Test showed the attitude of the average difference in the experimental group (21.50) is similar to the control group (19.50), with $p = 0.602$, meaning that there are no significant differences in attitudes between the two study groups. Desired individual change will not occur unless the individual has received a strong enough cues to trigger the motivation to act in the knowledge (Green, 2000). Hal showed that most respondents for lack of public information through informal channels, it does not form a strong confidence and ultimately impact on the inability of respondents to judge whether the behavior of smoking is something that is positive or negative.

Comparison of the results of the pretest and post test showed the experimental group after given treatment, increases in smoking prevention attitudes to positive category from 9 respondents (45%) to 14 respondents (70%). Analysis used Wilcoxon signed rank test was obtained value of $Z = -2, 235$ with a p -value = <0.025 , this means there was a significant difference of attitude before and after treatment. Later in the control group, after treatment was given, there was no increase attitude of smoking prevention so to remain positive category 7 respondents (35%). Analysis of Wilcoxon signed rank test obtained value of $Z = 0.000$ and $p = 1.000$, which means there was no significant difference between before and after treatment. According to WHO, changes Behavior education will result in an effective change when done through the method of discussion participation (Notoatmodjo 2010 b). Dale research results that learning by doing participatory presentations, can enhance the ability to remember the message that has been discussed in the amount of 90% after 3 hours and 70% after 3 days (Warsono, 2013). Jigsaw method is a learning process that implements the method of discussion participation that is learn through practice how to teach. It is able to condition students to always think about things to do during the learning which leads to the formation of a positive attitude. According to Bloom, phase domain valuing attitude is the ability to give awards, committed or

judging of an object on a good or bad thing (Sudjana, 2013). Attitude on stage valuing when learning with jigsaw method in the form of conscious responses of respondents in participating actively to accomplish tasks in a group learning environment, so that with full confidence respondents can assess the truth of the learning material.

The difference of the average attitude of smoking prevention in both study groups resulted from the analysis of U Test, obtained average difference attitude in the experimental group was higher (24.00) than the control group (17.005) with significance ($p = 0.029$), means There was a higher positive attitude difference in the experimental group than the control group. This research results is in line with the results by Kusuma, that knowledge of students who attend the learning method jigsaw, increased by 63% ($p < 0.001$) and were followed conventional learning lecture only increased by 45% ($p < 0.001$). There was a higher knowledge difference in the experimental group than the control group, obtained ($p = 0.002$). The attitude of the students who complete the learning method jigsaw, increased by 13.3% ($p < 0.001$) and who follow conventional teaching lectures, increased by 8.5% ($p < 0.001$). There is a positive attitude difference was higher in the experimental group than the control group, it was found ($p = 0.001$). (Kusuma, 2013).

Health message delivered in learning with jigsaw method can provide influence on cognitive abilities, as capital in determining the attitude of the respondent. The message is suggestive that influence one's feelings so as to provide a strong foundation in assessing learning objects and form a positive attitude. other than that the formation of a person's attitude greatly influenced by, among others, the experience of the individual, the influence of others that are considered important and emotional factors. (Anwar, 2012).

Factors individual experience. according to WHO, the attitude is often derived from their own experience or from other people who are closest (Notoatmodjo, 2005). Respondents in the experimental group have experience of smoking behavior and risk of harm from cigarette smoke, which is 90% of smokers living with a father as well as the

experience of reading a variety of sources including the internet discussion group. Because of the involvement of emotional factors of the object of the experience, it can lead to a strong response as a personal experience, so the condition is easier to form a positive attitude.

Emotion is perceived psychiatric events or perceived subjectively influenced by the environmental conditions and situations that may affect a person's logical thinking (Notoatmodjo, 2010 b). Learning with jigsaw method can stimulate the respondent to participate actively seek knowledge for themselves through group discussion activities. The situation pushed the respondents involved physically and emotionally because they feel responsible for maintaining the existence of the group. It can have an impact on the confidence of respondents to make learning as a necessity, so that they can unwittingly increase the positive attitude change.

Factors influence of others is important. Government issue a regulation Number 74 of 2008 on teachers, in Article 3, paragraph 5, a competent teacher personality, becoming role models for students and the community. In paragraph 6 teachers have social competence, which is able to communicate verbally, written, or gesture politely, and interact effectively with learners (Ministri of Law and Human Rights Affairs, 2008). Learning with jigsaw method in the experimental group was delivered by a classroom teacher as facilitator. In this case the teacher as facilitator conveys exactly tips to avoid the smoking behavior can lead to a tendency for respondents to choose a more conformist attitude as a teacher as a formal community leaders are very influential in the educational environment and in society generally.

V. DIFFERENCES OF SMOKING PREVENTION INTENTIONS

The intention of respondents to the cessation of smoking before treatment, the results of the analysis of U Test showed the intention of the average difference in the treatment group (21.00) is similar to the control group (20.00), with $p = 0.799$, meaning that there are no significant differences in intent between the two study groups. Strength of intention of individuals is determined by three basic determinants, including Attitudes toward behavior, Subjective norms and Perceived behavioral control (Ajzen, 1991). The weak of respondents' intention to smoking prevention is caused by several factors, among others, is the lack of knowledge and their negative attitude of respondents to smoking prevention.

Behavior Attitudes Toward factors, namely natural personal factors that are positive or negative evaluation of the consequences of behavior that will be raised, and it is determined by the outcome evaluation and behavioral beliefs (Ajzen, 2005). Results of post test attitude smoking prevention in the experimental group the majority of respondents have chosen the option to agree to the prevention of smoking behavior and do not agree with smoking behavior. The selection is a belief in the consequences that come when such behavior can be

realized, that is reason that smoking behavior could damage the health of themselves and the people around him.

Factor Subjective norms, namely an individual's perception of the influence of the social environment that is able to provide a reference for the realization of a behavior, which is a function of normative beliefs and motivation to comply (Ajzen, 2005). Message coverings in learning, the facilitator invites respondents to always be alert to influence smoking behavior, emphasizing the respondent to not try to smoking behavior, suggest immediately stopped if already smoke. The appeals or solicitation is reasonable, because smoking can cause addiction and harm our health. After that the facilitator invites the respondent to say the following message together with the hardware, which is about the following statement: Beware ... !!! ", " Say no to smoke ... !!! . The statement may affect the respondent's perception of the teacher as a reference so that the power of intent on the prevention of smoking behavior can be realized.

Factors Perceived behavioral control, namely an individual's perception of their ability to perform a behavior, which is formed of control beliefs and the power of control beliefs (Ajzen, 2005). Majority of respondents felt confident that he was able to maintain its status to remain experiment smoke and do not feel any difficulty especially enhanced by her attitude after health education. It is also supported her no school rules about the smoking ban, there is a banner including in the library that contains information about the dangers of smoking.

VI. CONCLUSION

Health education with jigsaw method is more influential than the expository method to variable attitudes and intentions toward smoking prevention grader V Bendogerit State Primary School 1 at school year 2015-2016, which is the case: Positive attitude change between pretest to posttest results ($P = <0.025$) and the average obtained in the experimental group was higher (24.00) than in the control group (17.005) with significance ($p = 0.029$). Strong intent was different between pretest and posttest results ($p = <0.020$) and the average obtained in the experimental group was higher (17.00) than in the control group (24.00) with significance ($p = 0.024$).

Application jigsaw method in early learning process on health education can influence the variables of the study, because it is a form of student centered approach, which has an advantage capable of creating the conditions of learning through learning how to practice teaching to each child. It does not occur in the expository method, because it is a form of teacher centered approach, so that the learning process is done with the lecture and question and answer technique classically dominated by teachers. Besides, learning expository method is delivered with pre-existing material, so it does not require students to think creatively.

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