

Original Article

Impact of Media Stimulus Health Promotion Videos on Adolescents Risk of Smoking

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ABSTRACT

Adolescence is a transitional period, which causes physical, psychological, and social changes. Such changes tend to lead to susceptibility to delinquency in adolescents. One of delinquency begins with smoking behavior, the impact of nicotine on cigarettes can reduce the concentration and memory of adolescents, make someone become an addict or dependent on cigarettes, and can be a gateway to drug entry. Efforts to prevent smoking behavior can be carried out promotive actions through health education using Video Media, to improve good behavior towards preventing adolescent smoking risks. Basic Health Research in 2018 shows a high number of Indonesians who smoke. The number of active smokers of the population aged more than 15 years is 33.8%. Of these, 62.9% of men and 4.8% of women, meaning that two in three men are active smokers. The prevalence of smoking cases in adolescents of school aged 10 to 19 years has increased by 9.1%. In Talaud Islands District the data of daily smokers is 18.40%, smokers not every day 3.63%, do not smoke 77.78%, do not know about cigarettes 0.18%. This study aims to determine the effect of health promotion media stimulus, and smoking risk videos on adolescent behavior. The research method uses a quasi-experimental research design with Pretest and Posttest design with a Control Group Design. The study respondents were adolescents at risk of smoking with a category of 13 to 21 years with a sample of 80 respondents. Data analysis using statistical Wilcoxon signed rank test and significance level $p < 0.05$. 95% confidence level. The results of this study showed a significant value (2-tailed) of < 0.000 which means there is a significant effect of stimulus interventions media promotion health video smoking risk on adolescent behavior. The conclusion of this study shows that health promotion video media has an effect as a stimulus on the risk and dangers of smoking in adolescents.

Keywords: Stimulus-Response, Media Health Promotion video, Adolescent Behavior, Risk of Smoking.

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INTRODUCTION

Adolescence is a transitional period where it causes physical, psychological, and social changes. Such changes tend to cause delinquency in adolescents. One of delinquency begins with smoking behavior, the impact of nicotine on cigarettes can reduce the concentration and memory of adolescents, make someone become an addict or dependent on cigarettes, and can be a gateway to drug

entry. Smoking behavior is one of the complex health problems that occur in the World health environment¹.

Based on data from the World Health Organization, Word Health Organization states that Indonesia ranks third among countries with the highest aggregate level of tobacco consumption in the world, then ranks first in ASEAN countries. ASEAN countries are a region with 10% of all world smokers and 20% of global causes of death due to smoking. The

percentage of smokers in the population in the largest ASEAN countries is Indonesia 46.16%, Philippines 16.64%, Vietnam 14.11%, Myanmar 8.72%, Thailand 7.74%, Malaysia 2.9%, Cambodia 2.07%, Laos 1.23%, Singapore 0.39%, and Brunei 0.04%. The increase in cigarette consumption has an impact on the increasing burden of disease caused by smoking and the increase in mortality due to smoking².

Basic Health Research in 2018 shows a high number of Indonesians who smoke. The number of active smokers of the population aged more than 15 years is 33.8%. Of these, 62.9% of men and 4.8% of women, meaning that two in three men are active smokers. The prevalence of smoking cases in adolescents of school age 10 to 19 years has increased by 9.1%. This is related to the nature of adolescents who are more likely to take risks, higher curiosity, and environmental influences³.

Based on data from the Central Statistics Agency of North Sulawesi (BPS) in 2020, it shows that data on smokers in Manado, North Sulawesi in 2020, who stated every day 18.44%, who stated not every day 3.18%, and those who did not smoke 73.53%, did not know about cigarettes 4.85%. In 2021, it shows that data on smokers in Manado, North Sulawesi, namely daily smokers 19.79%, smokers not every day 3.45%, do not smoke 73.75%, do not know about cigarettes 3.01%. The results showed an increase in smokers in North Sulawesi at the age of 15 years and over according to districts and cities. In Talaud Islands Regency, the data on daily smokers is 18.40%, smokers not every day 3.63%, do not smoke 77.78%, do not know about cigarettes 0.18%^{3,18}.

The category of adolescents is individuals aged 13 years to 21 years. This transition phase has an impact on the vulnerability of adolescent health status. Related to how a teenager can go through the transition period and stay healthy and live a quality life, of course, health services are needed that are oriented towards the process of controlling juvenile delinquency and controlling diseases caused by environmental factors such as smoking, so that there is an improvement in adolescent health.

Smoking is a lifestyle of adolescents that can cause psychological changes into addiction that causes diseases of the respiratory system where nicotine levels and carbon levels increase in the blood resulting in decreased oxygen levels in the blood so that smoking can cause shortness

of breath, the risk of lung cancer and coronary heart disease

The concept of stimulus response (S-R) is an effort to change knowledge and attitudes to overcome the problem of juvenile delinquency smokers. Researchers use stimulus response theory as a Health Education program related to knowledge and attitudes of adolescents to overcome smoking problems in transitional age. By using stimulus response theory, there will be an increase in awareness and attitude and behavior in overcoming the problem of smoking^{4,19,33}.

There are various kinds of health promotion media that can be used, but not all of them can be applied to all ages. Need a medium to facilitate the understanding of the information provided and used as a reminder even though it is not in the process of providing health education.

Video is a media that can present factual and fictitious messages that are informative, educative and instructional. Videos are excellent learning aids, videos can overcome the lack of skills in reading and language acquisition, overcome visual limitations, videos are also very good for explaining a process by using slow repetition of movements to clarify descriptions and illustrations, attract attention, stimulate and motivate target groups, videos are excellent for presenting theory and practice, saving time for explanations.⁵ This research hypothesis analyzes the impact of health promotion video media stimulus on adolescent smoking behavior.

METHOD

The research design used in this study was using the *Quasi Experiment method with the design of "Pretest-posttest control group design"* The research method is quasi-experimental because the research sample used is a non-random technique and it is not possible for researchers to place research subjects in a pure laboratory situation that is free from the influence of other factors and uses class groups of school children.

The population in this study is each subject studied. The population in this study was 392 male students. Sampling technique by *means of simple random sampling* with the number of samples in the study taken using the slovin formula, which is as many as 80 respondents. The research sample that meets the

inclusion criteria requirements is male adolescents who are at risk of smoking aged 13-21 years, class X and XI. Exclusion criteria for sick teenage students, permission and unwillingness to be respondents

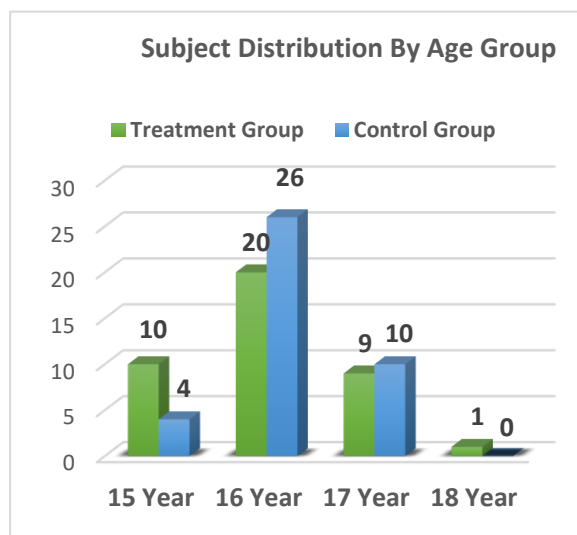
The content of the health promotion video media message is the dangers of smoking for teenagers as a stimulus that can influence teenagers' behavior to change their non-smoking behavior

The instrument in this study is the Health Promotion Media Stimulus Video. The video in this study is a set of projections that are easy for a group of teenagers to understand. The health promotion media video used in this study has a duration of 3 minutes 40 seconds. The first minute opens with a projection video describing the origin of the research institution, then the next minute explains the definition of smoking, the dangers of smoking and the impact of smoking. The questionnaire in this study consisted of 2 (two), namely about adolescent behavior and video media stimuli containing.

Before conducting the research, the researcher proposed a research ethics protocol to the health research ethics commission (KEPK) of the Manado Ministry of Health Polytechnic and received a letter of research approval. During the research, the researcher explained the purpose of the research and asked for consent from the teenagers' willingness to act as respondents by distributing an informed consent form.

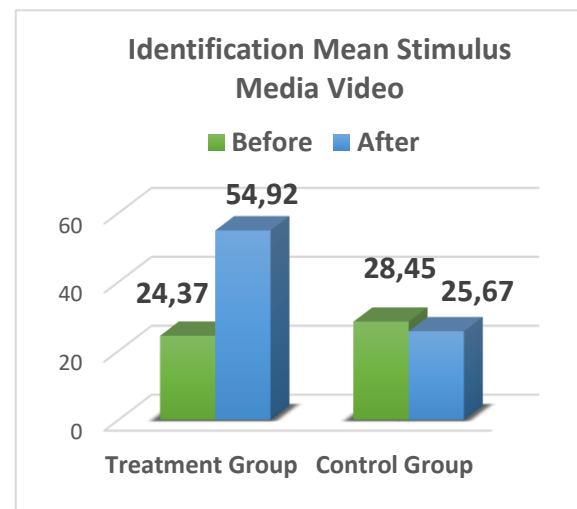
RESULT AND DISCUSSION

Grafik 1. Distribution of Respondents according to Age in Groups of Treatment and Control



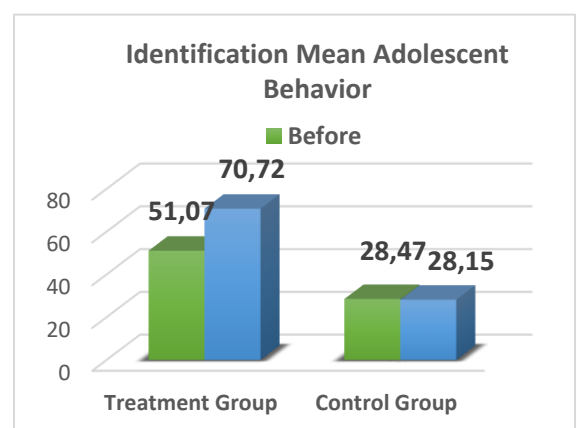
Graph 1. Explain about the distribution of age group respondents. The most age characteristics in the treatment group were 16 years with a percentage of 60.0% (n = 20) and the least age was 18 years with a percentage of 2.0% (n = 1). In the control group, the highest age was 16 years with a percentage of 65.0% (n = 26) and at least 15 years old with a percentage of 10.0% (n = 4).

Graph 2. Average Distribution of Video Health Promotion Media Stimulus in Treatment and Control Groups.



Graph 2. Displays the average stimulus score of Health promotion media videos before and after. In the treatment group, there was an increase in reara score from 24.37 to 54.92 with a mean difference of 30.55. Then the average score in the control group from 28.45 to 25.67 with a mean difference of 2.78 showed that the average score in the control group decreased with a mean difference of 2.78.

Graph 3. Identifying Average Adolescent Behavior in the treatment and corolls



Graph 3. Describes the average behavior score before and after the increase and decrease. In the treatment group, the average value was 51.07 to 70.72 with a mean difference of 19.65. Then the average media score in the control group from 28.47 to 28.15 with a mean difference of 0.32.

Table 1. Results of Statistical Test of Differences in Media Stimulus, Health Promotion, Video and Adolescent Behavior Before and After in the Treatment Group.

Treatment Group			
Stimulus Media Video		Adolescent Behavior	
<i>z</i>	<i>Asymp. Sig. (2-tailed)</i>	<i>z</i>	<i>Asymp. Sig. (2-tailed)</i>
-5,520 ^b	,000	-5,251 ^b	,000

Table 1. It shows that both the treatment group and the control group have very significant results where the (p value = 0.00<0.05). This research uses the Wilcoxon signed rank test statistic

Table 2. Results of Statistical Test of Differences in Media Stimulus, Health Promotion, Video and Adolescent Behavior Before and After in the Control Group.

Control Group			
Stimulus Media video		Adolescent Behavior	
<i>z</i>	<i>Asymp. Sig. (2-tailed)</i>	<i>z</i>	<i>Asymp. Sig. (2-tailed)</i>
-,816 ^c	,414	-,231 ^c	,817

The results of table 2 show that both the treatment group and the control group showed insignificant results where the (p value >0.05). This research uses the Wilcoxon signed rank test statistic

RESULTS AND DISCUSSION

Adolescence is a phase that can allow significant changes, not only in physical form, but also in thought and action. In adolescence they have a tendency to be exposed to cigarettes. In this study, both the treatment group and the control group were generally at the age of 16 years. The older enough, the influence of changes in attitudes and behavior towards

individuals will experience a level of maturity in thinking and acting. This is in line with previous research by in their research it was explained that the higher a person's age, the easier they are to receive information and in the end the more knowledge they have. The more knowledge a person will influence in determining his behavior. According to Hurlock, adolescence is divided into three phases of age limitation, namely: Early adolescence phase in the age range from 12-15 years, middle adolescent phase in the age range of 15-18 years and late adolescent phase in the age range of 18-21 years.^{6,22,30}

Media is a tool to channel messages from sender to receiver so that it can stimulate students' thoughts, feelings, attention and interests in such a way that a process of change occurs. In this study, the average stimulus of health promotion media video of smoking risk before and after treatment in the treatment group increased. Then the average stimulus score of health promotion media video smoking risk in the control group decreased. The concept of stimulus response (S-R) is an effort to change behavior to overcome the problem of juvenile delinquency smokers. Researchers use stimulus response theory as a behavior-related health education program to overcome smoking problems in adolescents in transitional age. The use of stimulus response theory in this study, can increase awareness in behaving and behaving to overcome the problem of smoking in adolescents. Health promotion is a process that can improve a person's health status. Health promotion can be given to all targets, but must use appropriate methods so that the information provided can be received properly. Video is an excellent medium to overcome the lack of reading skills and language acquisition, overcome visual limitations, video is very good for explaining a process by using slow repetition of movements to clarify descriptions and illustrations, attract attention, stimulate and motivate the target group, videos are excellent for presenting theory and practice, saving time for explanation. This result is in line with previous research by ^{7,20} Suggesting that video health promotion is a very effective medium with significant results.

Human behavior is an individual reaction manifested by action or activity to a certain stimuli. In this case the stimulus is cigarettes. The average behavior score in the intervention group, there was an increase and the average

behavior score in the control group decreased. The control group decreased because at the time of data collection the condition of respondents was less conducive because the time of data collection by researchers was quite short, so the control group respondents rushed to fill out questionnaires. This is supported by the test anxiety theory: This theory states that high levels of anxiety during testing can impair cognitive performance, including knowledge and understanding. Respondents who were rushed and anxious when collecting data in the control group could experience a decrease in knowledge due to anxiety that interfered with their thought processes. This is also in line with previous research.⁸ Found that time constraints can affect the quality of assessments, and the presence of perceived time pressures can worsen assessment results.

Health promotion media stimulus videos are media that rely on the sense of hearing and the sense of sight. Video media is one of the media that can increase the interest of teenagers in learning because they can listen as well as see pictures. The results of statistical tests in this study show that there is a difference. This also agrees with⁹, which shows an increase in behavior in extension activities using audio-visual media. Researchers argue that behavior change is caused by a learning process with the aim of behavior change. Exposure to video media risks of smoking can affect adolescents by changing their perceptions and attitudes towards smoking habits. Through the use of powerful messages and evocative visuals, video media can influence teens to consider quitting or reducing their smoking habit.

Education influences human behavior, if the acceptance of new behavior is based on knowledge, awareness, positive attitude, then the behavior will be lasting^{10,23,28} Video media health promotion stimuli have a significant influence on adolescent smoking-related behavior. Exposure to video media that illustrates the risks of smoking can increase interest, desire, and positive attitudes towards smoking in adolescents. The results of statistical tests in this study show that there is a difference. This is in line with previous research^{11,21} which argues that After the intervention completion, there was a significant positive effect of the community-based health promotion intervention program in improving adolescents tobacco smoking knowledge, attitude, intention and behavior.

In the control group, the video media stimulus did not have significant results due to the absence of health promotion interventions. The results of statistical tests in this study were no different. This is in line with a study conducted^{12,25,26} examining the influence of video media on the risk of smoking on adolescent behavior in a control group. The results showed that there was no significant effect between exposure to video media and smoking behavior in the control group. The findings support the argument that video media had no effect on adolescent smoking behavior in the control group.

In the process of behavior change, it appears that behavior can change if the stimulus given exceeds the original. In examining the new behavior there are three important variables, namely attention, understanding and acceptance. The results of this study showed no difference in adolescent behavior before and after in the control group. This is because the control group was not given a video health promotion media stimulus. The response or change depends on the process to the individual. The stimulus that is the message conveyed to the communicant can be accepted or rejected. Furthermore, this theory says that behavior can change only if the stimulus (stimulus) given really exceeds the original stimulus^{13,29}

Behavior is an action or response that can be observed and measured in an individual or group. Behavior includes actions, attitudes, or responses that can be seen, heard, or observed tangibly by others. The control group did not improve behavior because the control group did not receive the stimulus intervention given. This is in line with previous research^{14,20}, researchers argue that there is no influence of audio-visual media on the control group.

This shows that currently there are still many adolescents who are not informed about the risks of smoking at a transitional age. Because Talaud District is in the category of underdeveloped, outermost and deepest areas where in certain villages telecommunication access, information is difficult to reach and there are almost no healthy behavior promotion personnel, therefore health information related to adolescent health is still a taboo. Based on the results of statistical tests of health promotion media stimulus, video before and after media in the treatment and control groups showed a difference. There was a difference in the two groups because the treatment group was given a

video health promotion media stimulus, and the control group was not given treatment, therefore there was a difference between the treatment and control groups. Where there was a significant influence on the treatment group, while in the control group there was no influence. This is in line with previous research by ^{15,27,31} where the intervention group had an effect on increasing knowledge in the intervention group and there was no significant increase in the control group.

Behavior is an individual's response or reaction to stimuli and the environment. Behavior change is caused by a learning process with the aim that behavior changes occur, namely from not knowing to knowing, from not understanding to understanding and unable to become capable. Education influences human behavior, if the acceptance of new behavior is based on knowledge, awareness, positive attitude, then the behavior will be lasting. Thus, the higher a person's level of knowledge, the more precise it is in determining behavior and the faster it will be to achieve the goal of improving the degree of health. To determine the behavior of respondents need knowledge which is the result of knowing that occurs after people sense a certain object. Sensing occurs through the senses of sight, smell, taste, touch, and most human knowledge is taken through the eyes and ears ^{16,24} The results of statistical tests of adolescent behavior before and after in the treatment and control groups showed a difference. There was a difference in the two groups because State 1 Beo senior high school was given a health promotion media stimulus video, and the state 1 Melongguane senior high school group was not given treatment, therefore there was a difference between the treatment and control groups. There was a significant influence on the treatment group, while in the control group there was no significant effect. This is supported by research conducted ^{17,32,35} where statistical test results show a significant influence. So it can be concluded that H_0 is accepted and H_1 is rejected which means that there is an effect of health promotion media stimulus smoking risk videos on adolescent behavior in the treatment group, and these media can be categorized as effective. This is because the information obtained after counseling can be well received and equipped with interesting stories and pictures so that respondents more clearly receive information.

Based on the research results, it shows that the group of teenagers who were treated showed a significant influence compared to the control group. Health promotion video media as a stimulus response for adolescents who smoke who can change their behavior after watching and listening to health promotion video media. adolescents can know the dangers of smoking for health. The results of this research require a policy from the school to program socialization using health promotion video media as a stimulus or stimulate teenagers to pay attention and motivate themselves not to smoke because it is very dangerous for health and for schools to create healthy school programs.

CONCLUSION

Based on the results of the discussion of the effect of stimulus, health promotion media, videos, the risk of smoking on adolescent behavior, conclusions were drawn about the age characteristics of respondents in this study, both the treatment group and the control group, generally at the age of 16 years. There was an increase in the average video health promotion media stimulus in the treatment group and there was a decrease in the average video health promotion media stimulus in the control group. There was an increase in the average behavior of adolescents after being given the stimulus of video health promotion media in the treatment group and there was a decrease in the average behavior of adolescents in the control group. There were significant differences in the health promotion stimulus of video media before and after in the intervention group. There were significant differences in adolescent behavior after being given the health promotion stimulus of video media before and after in the intervention group. There were no significant differences in health promotion media before and after videos in the control group. There were no significant differences in smoking risk behavior in the control group. There was a significant effect of video media health stimulus on adolescent smoking risk behavior after the intervention. There was no significant effect of health media promotion media video stimuli on adolescent smoking risk behavior in the control group.

Health promotion video media as a stimulus response for teenagers who smoke who can change their behavior after watching

and listening to health promotion video media. adolescent can know the dangers of smoking for health. The results of this research require a policy from the school to program socialization using health promotion video media as a stimulus or stimulate adolescents to pay attention and motivate themselves not to smoke because it is very dangerous for health and for schools to create healthy school programs.

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