

## ***Comparison of the Effectiveness of Counseling with Social Media, Animation and Short Films in Improving Perception and Motivation to Do Physical Activity in Adolescents***

**Pahrur Razi<sup>1\*</sup>, Junita<sup>1</sup>, Iksarudin<sup>1</sup>, Reka Lagora Marsofely<sup>2</sup>, Wisuda Andeka Marleni<sup>2</sup>**

<sup>1</sup>Departement of Health Promotion, Poltekkes Kemenkes Jambi, Jambi, Indonesia

<sup>2</sup>Departement of Health Promotion, Poltekkes Kemenkes Bengkulu, Bengkulu, Indonesia

(Correspondence author email, pahrur@poltekkesjambi.ac.id)

### **ABSTRACT**

*Physical activity is an essential component for health, low physical activity in Indonesia causes a high death rate, with 70% of all deaths among adults (including due to heart and lung disease). Therefore, efforts are needed to increase healthy lifestyles, especially physical activity, by providing health information through the media. The purpose of this study was to compare the effectiveness of counseling with social media, animation and short films as health promotion media to increase perceptions and motivation to do physical activity in adolescents. The design of this study is Quasi Experiment with a total sample of 180 people taken by total sampling. The data collection technique uses a physical activity questionnaire. Data analysis using the Anova test. The results of the analysis obtained that counseling with short films was more effective in increasing perceptions and motivation to carry out physical activities in adolescents at SMAN 3 Muaro Jambi indicated by a significance value at 0.000 ( $p < 0.05$ ) compared to social media and animation. There was a more significant increase in perception and motivation to do physical activity after counseling with short films compared to counseling using social media and animation for teenagers at SMAN 3 Muaro Jambi. Suggestions for further research are to examine the factors that influence perceptions and motivation for physical activity in adolescents.*

**Keywords:** Perception, Motivation, Physical Activity, Adolescents

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## **INTRODUCTION**

Non-communicable diseases (NCDs) are non-communicable chronic diseases consisting of cardiovascular disease, cancer, diabetes, respiratory diseases such as asthma and chronic obstructive pulmonary disease<sup>1</sup>. PTM is the biggest cause of death in the world and in 2012 the death rate due to PTM was 68% of the 56 million deaths worldwide. In Indonesia, the highest types of NCDs are

hypertension and stroke. The risk factors that cause PTM in Indonesia are the same as the risk factors (PTM) globally<sup>2</sup>. There are four risk factors that can cause NCDs, namely smoking, lack of physical activity, alcohol consumption, and unhealthy diet<sup>3</sup>.

Physical activity is an essential component for health, low physical activity in Indonesia causes a high death rate, where there are 70% of all deaths among adults (including due to heart and lung disease)<sup>4</sup>. Based on a

review of literature regarding the urgency of research, behavior that causes a person to be reluctant to engage in physical activity can cause various diseases (PTM) such as hypertension and stroke. This condition further accelerates various diseases if unhealthy diet habits, excessive drinking and smoking are followed<sup>5</sup>. Healthy conditions can be achieved by changing unhealthy behavior to healthy behavior<sup>6</sup>.

UNICEF found in 2018 that 70% of all deaths among adults (including due to heart and lung disease), could be prevented through implementing a healthy lifestyle from a young age, namely physical activity. WHO proposes several interventions to prevent and control non-communicable diseases, one of which is providing health information through the media about physical activity<sup>7</sup>. Physical activity is activity carried out in a physically and mentally healthy condition within the capacity of the individual's body. Based on a preliminary study of the phenomenon experienced by respondents, namely that respondents carried out physical activity but still did not really know what physical activity<sup>8</sup>. Teenagers spend 20 hours per week in sedentary activities. Physical inactivity significantly increases the risk of chronic disease and death<sup>9</sup>.

Health promotion is an effort to improve public health that focuses on promotive and preventive efforts<sup>10</sup>. Providing information through the media is a form of health promotion such as social media, films and animation to convey health information to teenagers<sup>10</sup>. Based on a preliminary survey at SMAN 3 Muaro Jambi, 10 people were asked and it turned out that all of them did not know about preventing risk factors for non-communicable diseases. Therefore, it is very important to immediately carry out promotive and preventive efforts for teenagers. So, research was conducted which aimed to determine the comparison of the effectiveness of social media, animation and short films as health promotion media to increase perceptions and motivation for physical activity in adolescents (Study at SMAN 3 Muaro Jambi).

## METHODS

The design of this research is experimental with a quasi-experimental design with two groups pre-post design. input (O1):

Pretest perception and motivation to do physical activity after treatment, intervention and observation are carried out, called process (X): X1: Intervention 1 (Counseling using social media), X2: Intervention 2 (Counseling using animation media), and X3: Intervention 3 (Counseling using short film media), and after the output results are the effects of treatment and experimentation. (O2): posttest perception and motivation to do physical activity after treatment.

The intervention of perception and motivation test in the form of counseling with media. The media used in this study were: short films, animations and flyers for Instagram about physical activity. These three media have been developed through media development design with the ADDIE model with 5 stages, namely: Analysis, Design, Development, Implementation, Evaluation) a second validity test was carried out on media experts, material experts and users with a percentage of 86%, 98% and 90.27% in previous studies. These results have a very good assessment category and are declared suitable for use. Furthermore, an effectiveness test was carried out on perception and motivation in doing physical activity in adolescents at SMAN 3 Kab. Muaro Jambi. So that the ADDIE model media development method and the effectiveness of the media used in increasing perception and motivation to do physical activity can be repeated by other researchers. The measurement parameters of the results of the Perception and Motivation to do physical activity were obtained from the results of filling out the questionnaire given before (pre-test) and after (post-test) the intervention. The measurement results are as follows perception and motivation to do physical activity are the number of correct answers to each of the 10 questions. The attachment is at the link <https://tinyurl.com/three-media> and has been certified with IPR Number: EC00202393204. Population: all students of SMAN 3 Muaro Jambi amounted to 180 people. For short film media, there were 60 respondents, animation as many as 60 respondents, and social media as many as 60 respondents. Total sampling technique in which the entire population is sampled. Inclusion criteria: Class X and willing to be a respondent. Exclusion criteria: not willing to respond. Sampling technique: purposive sampling. Place: SMAN 3 Muaro

Jambi in March-November 2023. Research mechanism: preparation (*ethical clearance, research instruments and equipment*) and implementation of physical activity counseling with: 1) short films, 2) animation, and 3) Social Media = Instagram. The author has previously passed an ethical review with the Jambi Ministry of Health Polytechnic of Health Research Ethics Committee with No.LB.02.06/2/68/2023. Processing date: *editing, scoring, coding, Entry and cleaning*. Analysis date: *Univariate Analysis* (To obtain an average physical activity score before and after the intervention) and *Bivariate Analysis* (To see whether or not there is a difference between the independent variable and the dependent variable by using statistical dependent t-test and ANOVA test (parametric) at the significance level of 0.05).

## RESULTS

**Table 1. Normality test results perception and motivation of physical activity pre-test and post-test on teenagers at SMAN 3 Muaro Jambi.**

Variabel	Kolmogorov Smirnov		
	Statistic	df	Sig.
Pre-test perception	0.212	60	0.061
Post-test perception	0.240	60	0.071
Pre-test motivation	0.201	60	0.064
Post-test motivation	0.272	60	0.070

Description\*) Significant at > 0.05.

Based on Table 1 shows that the results of statistical tests *Kolmogorov Smirnov* obtained significant value of perception and motivation to perform physical activity both at the time of *pre-test* and *post-test*, each of which is greater than 0.05. This means that the data on perception and motivation to perform physical activity during the *pre-test* and *post-test* were normally distributed. Therefore, different statistical tests using *uji Anova test*.

**Table 2. Average Value of Perception and Motivation to do Physical Activity Pre-test and Post-test of Counseling Treatment with Social Media, Animation and Short Films on Adolescents at SMAN 3 Muaro Jambi**

Variable	Treatment	Mean	
Perception	Social Media	Pre-test	3.33
		Post-test	8.50
	Animation	Pre-test	3.30
		Post-test	8.55
	Short Film	Pre-test	3.27
		Post-test	9.14
Motivation	Social Media	Pre-test	3.33
		Post-test	7.67
	Animation	Pre-test	3.30
		Post-test	7.65
	Short Film	Pre-test	4.33
		Post-test	9.50

Based on Table 2, it shows that the mean value obtained is different between the perception and motivation to do physical activity in the pre-test condition and the perception and motivation to do physical activity in the post-test condition. This means that mathematically it shows that there is a difference in perception and motivation to do physical activity before and after being given counseling treatment with social media, animation and short films to adolescents at SMAN 3 Muaro Jambi.

**Table 3. Comparison of the effectiveness of counseling with social media, animation and short films in improving the perception and motivation of physical activity in adolescents at SMAN 3 Muaro Jambi.**

Variable	Treatment	Sig. (2-tailed)
Perception	Social Media	0.021*
	Animation	0.037*
	Short Film	0.001*
Motivation	Social Media	0.014*
	Animation	0.032*
	Short Film	0.001*

Description\*) significant at < 0.05

Based on Table 3, it shows that counseling with short films is more effective in increasing perception and motivation to do physical activity in adolescents at SMAN 3 Muaro Jambi compared to counseling with social media and animation.

## DISCUSSION

### 1. Perceptions of Physical Activity

Based on Table 2, the results of the pretest were carried out on teenagers at SMAN 3 Muaro Jambi. From the results of the analysis of the pretest scores, it shows that the average perception score about physical activity among teenagers at SMAN 3 Muaro Jambi is still poor, namely 3.33 before counseling with social media, 3.30 before counseling with animation, and 3.27 before counseling with a short film. This shows that the perception of respondents' physical activity before receiving counseling with social media, animation and short films is still a poor criterion. Based on table 3, the results of the post test carried out on teenagers at SMAN 3 Muaro Jambi show that the average perception score about physical activity among teenagers at SMAN 3 Muaro Jambi has increased, namely 0.83 after counseling with social media, 0.75 after counseling with animation, and 1.13 after counseling with a short film. Social media is a health promotion medium to increase perceptions about health<sup>11</sup>. The increase in perceptions about physical activity was caused by outreach with short films, namely providing counseling to teenagers about correct physical activity as well as increasing motivation to do physical activity among teenagers at SMAN 3 Muaro Jambi<sup>12</sup>. Short film media to increase the knowledge of school age children<sup>13</sup>. Education through film media can increase school knowledge and attitudes about healthy living<sup>14</sup>. The film media referred to here is film as an audio-visual tool for lessons, information or counseling<sup>15</sup>.

### 2. Motivation to do physical activity

Based on Table 2, the results of the pretest were carried out on students at SMAN 3 Muaro Jambi. From the results of the analysis of the pretest scores, it shows that the average motivation score for physical activity for teenagers at SMAN 3 Muaro Jambi is still low, namely 4.33 before counseling using social media, animation and short films, 3.33. This shows that the respondent's motivation to carry out an initial physical activity before receiving counseling was still low.

Based on the results of the analysis in table 4, it can be seen that counseling using short films is very effective in increasing

motivation to do physical activity among teenagers at SMAN 3 Muaro Jambi. The role of motivation is very important as a driving force for physical activity in adolescents<sup>16</sup>. This is proven by the p-value = 0.000, this value is smaller than the value 0.05. Short films are audio-visual media that can increase physical activity in teenagers<sup>17</sup>. Interventions with audio-visual media such as films showed that through post-test results there was an increase in changes in adolescent behavior regarding changes in eating behavior, physical activity and sleep patterns<sup>18</sup>.

Short films are an educational medium that has the advantage that the main content of the discussion can be prepared beforehand, the order of presentation can be arranged quickly, charts can be taken or swapped and can be prepared easily<sup>19</sup>. Increasing the motivation for physical activity among teenagers at SMAN 3 Muaro Jambi provides readiness to learn and be independent in physical activity. Low physical activity among elementary school children is caused by several factors. These factors include the lack of adequate physical activity facilities in schools<sup>20</sup>. One way of being interested in physical activity can be done through health promotion using the right media<sup>21</sup>. Healthy lifestyle behaviors such as activity must be instilled in teenagers because their immune system is susceptible to disease compared to the immune system of adults. This is a shared responsibility, both parents and teachers at school, to teach each other and set an example for teenagers to get used to adopting a healthy lifestyle<sup>22</sup>. Apart from that, health service programs have a significant relationship with physical activity<sup>23</sup>. Irregular physical activity can be a factor in teenagers' weight gain<sup>24</sup>.

## CONCLUSION

There was a more significant increase in perception and motivation to do physical activity after counseling with short films compared to counseling using social media and animation for teenagers at SMAN 3 Muaro Jambi. Suggestions for further research are to examine the factors that influence perceptions and motivation for physical activity in adolescents.

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## CONFLICT OF INTEREST

The authors declare no conflict of interest.

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