

Effect of Pictures and Writing of Smoking Health Warnings on Adolescent Smokers' Behavior

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Abstract

Smoking has become a habit among adults, even teenagers who are still in their teens already understand how to smoke. To reduce the death rate of smokers or teenagers in the future, the Indonesian Ministry of Health has made various efforts to warn the public about the dangers of smoking to health. Warnings are given in the form of pictures and writing. Quantitative research using the linear regression method. The population is all existing students at Muhammadiyah Middle School 9, Biringkanaya District. The sample used was 135. Instrument study questionnaire in the form of a list of questions via a Likert scale. Research results show Pictures are also influential positive and significant to demonstrated adolescent behavior with mark test results Q of T count $3,760 > 1,978$ T table And p -value $0.000 < 0.05$. Writing effect positive and significant in a manner Partial to adolescent behavior from results T count $9,555 > 1,978$ T table And p -value 0.000 . Pictures and writing influential positive and significant in a manner simultaneous to variable bound adolescent behavior ari result F count $71,771 > F$ table 3.07 and $0.000 < 0.05$. Influence to two variable pictures and writing to variable adolescent behavior by 44.1% and 5.9% influenced leh other factors outside research.

Keywords: Pictures, Writing, Adolescent Behavior.

INTRODUCTION

In today's daily activities, we always meet people who often smoke around us, both in the office, in the market, in public places as well as at home. Smoking has become a habit among adults and even teenagers who are still in their teens already understand how to smoke. This is supported by the latest data from the 2019 Global Youth Tobacco Survey (GYTS) which shows that 19.2% of Indonesian students aged 13-15 years have had the habit of smoking, of which around 38.3% occur in male students and 2, 4% occurred in female students (Ministry of Health RI, 2019). His height number smoker teenager the show that awareness public to impact bad cigarette Still very low (Mangunsong, et, al., 2016).

Smoking habits have indeed developed widely in the world, even the Statista Costumer Insights report estimates that Indonesia is in third place with the highest number of smokers from the estimated 2021-2030 (Databoks, 2023).

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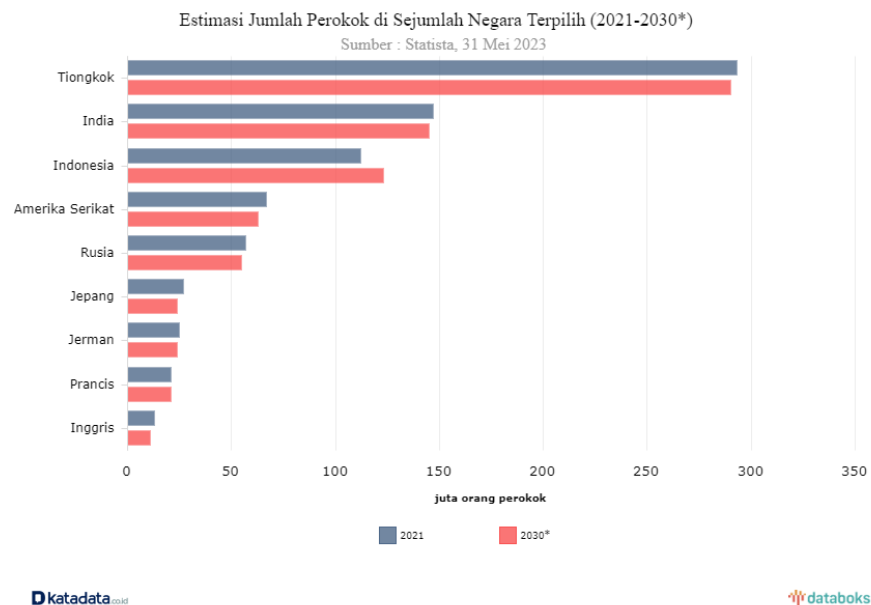
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Statista said that in 2021 there will be 112 million smokers in Indonesia. But by 2030, the number is expected to increase to 123 million. This does not really support current developments, where the ever-increasing number of smokers in Indonesia makes the younger generation addicted to it and has an impact on their future and the country of Indonesia. Because we already know that smoking is very dangerous for the health of the smoker and those around him who inhale the cigarette smoke. Most smoker Already know and believe will impact bad smoke to his health , however habit smoke still done though severity become more increase again (Siregar, 2021; Nasution, 2019). The health hazards of smoking have also been widely recognized and discussed. Many experts have conducted research on the adverse effects of smoking on health. There are results of research conducted for 40 years in England which were then published in the early 1990s, showing that 50% of teenagers died because they started smoking from their teens which caused disease due to their smoking habit (Aditama, 2011; Damanik & Fitri, 2019).

To reduce the mortality rate of smokers or adolescents in the future, the Indonesian Ministry of Health has made various efforts to warn the public about the dangers of smoking to health. Warnings are given in the form of pictures or Pictorial Health Wearing (PHW) on cigarette packs to avoid increasing the death toll for new smokers. Because with the description of the bad effects of smoking on the packaging, the younger generation who want to smoke will see the dangers of smoking and make them rethink about continuing it (Trisnowati & Marlinawati, 2018). Warnings through these pictures were also made with the aim of being an initial stimulus to remind smokers and increase youth awareness about their health (Premananto, et. al., 2020). Therefore, it is hoped that installing smoking warning pictures on cigarette packages can reduce the number of smokers in Indonesia, especially among adolescents (Rahmawati, 2018). The types of images displayed in these health warnings show various diseases that result from smoking later, such as oral cancer, laryngeal cancer, lung disease and other visual images that can lead to death from smoking (Putra, 2020).



Figure 1. Warning images and writing on cigarette packs

Source: Doc. Kemenkes

Apart from that, the Indonesian Ministry of Health also applies regulations to every cigarette company to make warnings in the form of text or writing on cigarette packages. Making the writing put rules on the dangers of smoking on each pack (Hamdan, 2015). Because of packaging cigarette designed For stimulate desire buy and try it, the government also has it not quite enough answer For educate public about danger smoking (Nurlinda , 2018). The government has also changed it several times The sentence notifying the dangers of smoking on each pack of cigarettes used to be a warning with long words "SMOKING CAN CAUSE CANCER, HEART ATTACKS, IMPOTENCE AND PREGNANCY AND FETUS DISORDERS" but this had no effect on smokers and is now made shorter and more effective, namely "SMOKING KILL YOU." It is hoped that this written warning will make beginners more afraid to start smoking, so that it can give the impression that smoking is real, because it can kill smokers and is dangerous for the environment (Adiyatama, et.al., 2016).

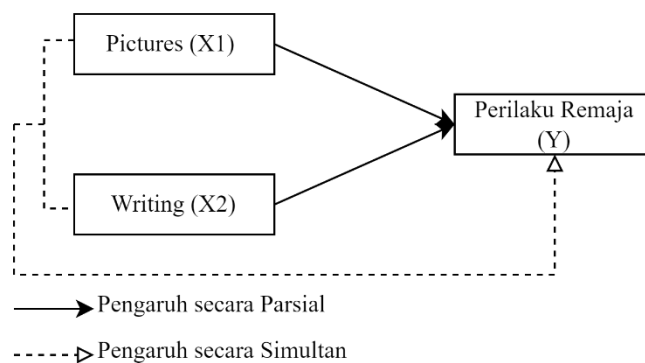
Based on the results of previous research conducted by January (2019) revealed that there is indeed a significant influence through pictures and writing of smoking health warnings on the behavior of adolescent smokers. Which is that warning pictures and writings on cigarette packs can stimulate smokers to change their behavior and make them hesitate to continue smoking. The respondent also stated that he knew the dangers of smoking from the message wrapped in the cigarettes he bought.

Based on the results of observational research at Muhammadiyah 9 Middle School, Biringkanaya District, the researchers aimed to test the effectiveness of warning pictures and writing on new cigarette packs on student behavior. The researcher then found that most of the students surveyed had tried smoking before, and students also saw warning pictures and writing on cigarette packs. But there are also students who have never smoked because they are afraid of the pictures and writing on cigarette packs. This phenomenon shows that the government must try to make teenagers aware of the dangers of smoking. Warning pictures and text on cigarette packs can be used to discourage youth from starting smoking. Therefore the aim of the study here is to find out "The Influence of Pictures and Writing of Smoking Health Warnings on Adolescent Behavior".

METHOD

Quantitative research using linear regression method for measure exists influence in a manner Partial or simultaneous between variable independent with variable dependent (Leonanda & full moon, 2020). The research location is at SMP Muhammadiyah 9, Biringkanaya District . With a population of all students in the junior high school. The sample used was 135. Instrument study questionnaire in the form of a list of questions in a manner written design For measure the influence of smoking warning pictures and writings on adolescent behavior through the Likert scale.

Analysis using multiple linear in explain connection between second variables free with variables bound. Hypothesis classic use three testing includes: test normality, multicollinearity test, and test heteroscedasticity. Variable free here ie images and writing, meanwhile variable bound ie adolescent behavior. Following picture 1 framework think from variables used in research .



Picture 2. framework think

Description :

H₁ : Pictures influential on adolescent behavior

H₂ : Writing is influential to adolescent behavior

H₃ : Pictures and writing influential to adolescent behavior

RESULTS AND DISCUSSION

Study use application SPSS Version 27 in processing the data. Processing data use SPSS calculation divided become some tests, namely:

Results Testing Validity And Reliability Data

Test Validity

Validity explained in several lines of evidence, including validity content, validity structure, validity structure, And validity criteria (Yusup, 2018). Objective from testing validity is To use know accuracy measurement. Validation Can is known through comparison r - count results with r - table. If the results of r - count more big from r - table results, then results declared valid (Purpasari & Pupita, 2022). Table 1 follows include SPSS test results from validity.

Table 1. Results Test Validity

Variable	Items	r_{count}	r_{table}	Information
Pictures	X1.1	0.850	0.170	Valid
	X1.2	0.818	0.170	Valid
	X1.3	0.828	0.170	Valid
	X1.4	0.829	0.170	Valid
	X1.5	0.821	0.170	Valid
Writing	X2.1	0.877	0.170	Valid
	X2.2	0.801	0.170	Valid
	X2.3	0.891	0.170	Valid
	X2.4	0.841	0.170	Valid
	X2.5	0.928	0.170	Valid
Adolescent Behavior	Y.1	0.875	0.170	Valid
	Y.2	0.943	0.170	Valid
	Y.3	0.911	0.170	Valid
	Y.4	0.796	0.170	Valid
	Y.5	0.909	0.170	Valid

Validity from instrument can declared valid if own r count value $>$ r table. Based on Table 1 can is known that all over variable Good independent form picutres (X_1) and writing (X_2) as well as variable dependent adolescent behavior (Y) has valid Because have r count $>$ 0.170 r table. Table 1 explains that instrument in research has valid as well Can done For testing next.

Test Reliability

Test reliability aim so that know measurement Which done can reliable and consistent during measurement held in a manner repeated. Reliability means can trusted, Which means that tool the own ability For give results Which appropriate in accordance with condition exist (Goddess, 2018). Reliability with method Cronbach's Alpha is shown with own value $>$ 0.6. Table 2 follows show test gain reliability processed using SPSS version 27.

Table 2. Results Test Reliability

Variable	Cronbach's Alpa value	Information
Pictures (X_1)	0.931	Reliable
Writing (X_2)	0.886	

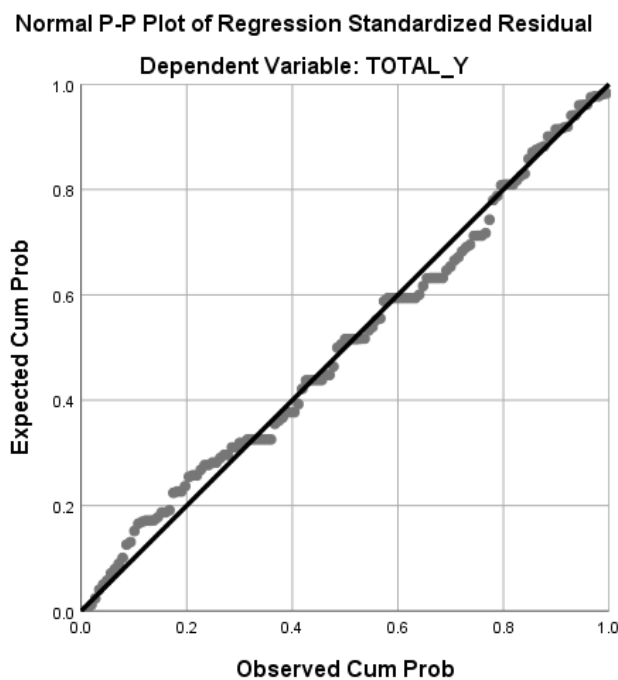
A Dolesent Behavior (Y)	0.918
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Table 2 shows that all over variable Good variable independent and variable dependent has reliable or can reliable. this proven with mark Cronbach's Alpha > 0.6 . Variable free pictures have Cronbach's Alpha results $0.931 > 0.6$ and variable writing has Cronbach's Alpha results $0.886 > 0.6$. Meanwhile, the variable adolescent behavior obtained hasi Cronbach's Alpha $0.918 > 0.6$.

Results Test Assumption Classic

Test Normality

Normality test used to check the regression model variable free and bound in study normally distributed or no (Ghozali, 2013). Kolmogorov Testing- Smirnov, data stated has normally distributed if obtain p-value results > 0.05 , and vice versa (Ginting & Silitonga, 2019). Figure 2 and Table 3 are normality test results Which has processed using SPSS version 27.



Picture 3. Plots Test Normality

Table 3. Results Test Normality

	Unstandardized Residuals
N	60
Asymp. Sig. (2-tailed)	0.200

Data can stated has distributed normal based on test Kolmogorov-Smirnov if mark Asym.Sig (2-tailed) > 0.05 . The Kolmogorov-Smirnov test results are listed in Table 3 acquisition results Asym. Sig (2-tailed) $0.200 > 0.05$. Based on Figure 2 it is known that data has normally distributed.

Test Multicollinearity

Testing multicollinearity role so that inspection model regression in study there is correlation between variable its free. Model regression accepted If No There is correlation between variables independent. Test results multicollinearity shown in Table 4 in lower this

Table 4. Results Test Multicollinearity

Coefficients ^a		
Model	Collinearity Statistics	
	tolerance	VIF
1(Constant)		
TOTAL_X1	.896	1.116
TOTAL_X2	.896	1.116

a. Dependent Variable: TOTAL_Y

Variable free Which No experience multicollinearity determined on results VIF < 10 And tolerance > 0.1. Every researcher must determine how much big collinearity Which Still can tolerated (Indri & Putra, 2022).

Results Test Hypothesis Study

Regression Linear Multiple

Table 5. Regression Linear Multiple

Coefficients ^a			
Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
1(Constant)	2,089	1,520	
TOTAL_X1	.332	,088	.239
TOTAL_X2	.640	.067	,608

a. Dependent Variable: TOTAL_Y

$$Y = 2,089 + 0.332X_1 + 0.640X_2 + e$$

1. Mark constant 2,089 show that mark variable independent as big as 0 so will obtained auditor (Y) of 2.089.
2. Free variable pictures (X₁) provide influence of 0.332 against adolescent behavior,so if happen 1 increase will influential to adolescent behavior as big as 0.332. And If happen two increase will influential of 0.664. Enhancement score This will still guard score X₂ fixed /constant.
3. Variables free writing (X₂) give influence as big as 0.640 against adolescent behavior. So if happen 1 increase will influential to adolescent behavior as big as 0.640. And if a happens two increase will influential of 1.28.

Test Partial (T)

Testing Q done so that know influence Which given by variable independent form pictures (X₁) and writing (X₂) to variable dependent adolescent behavior (Y) in a manner Partial or individual (Permatasari, 2022). Table 5 show results test method linear double

who have processed use SPSS version 27.

Table 6. Test Partial (T)

Coefficients^a

Model	t	Sig.
1 (Constant)	1,374	.172
TOTAL_X1	3,760	,000
TOTAL_X2	9,555	,000

a. Dependent Variable: TOTAL_Y

Pictures influential positive and significant to adolescent behavior. Calculated t value $3,760 > t$ table 1.978 and significance $0.000 < 0.05$ so can declared H_1 accepted. Writing is influential positive and significant to adolescent behavior, shown in Table 6 with t count results $9,555 > t$ table 1.978 and a significance of $0.000 < 0.05$ so that H_2 is accepted.

Test coefficient Determination (R^2)

Coefficient determination show How many percent variable free Which become variable bound. Coefficient value determination on study This namely:

Table 7 Coefficient Determination (R^2)

Summary Model^b

Model R	R Square	Adjusted R Square
1	.722 ^a	.514

a. Predictors: (Constant), TOTAL_X2, TOTAL_X1

b. Dependent Variable: TOTAL_Y

Table 7 explains he found shared influence variable free form pictures (X_1) and writing (X_2) against variable dependent form adolescent behavior (Y). Influence Which shared variable free to variable bound as big as 51.4%. Next, 55.9% other influenced by factor outside study

Test Simultaneous (F)

Testing F or simultaneous aim For see exists influence Which simultaneous between all over variable free to variable bound (Lind et al., 2014). Influence in a manner simultaneous seen from calculated F value $> F$ table and significance < 0.05 . Table 7 below show results F test who have processed using the SPSS version 27.

Table 8. Test results F

ANOVA^a

Model	F	Sig.
1 Regression	71,771	.000 ^b
residual		
Total		

a. Dependent Variable: TOTAL_Y

b. Predictors: (Constant), TOTAL_X2, TOTAL_X1

Table 8 lists mark significance 0.000 and F count amounting to 71,771. F table with total of 135 respondents is 3.07. this result show that variable pictures and writing influential in a manner positive And significant in a manner simultaneous to adolescent behavior. Matter the stated from results significance $0.000 < 0.05$ and the calculated F results $71,771 > F$ table 3.07.

Pictures influential to adolescent behavior

Study This obtain that there is influence positive and significant given by pictures to adolescent behavior. it stated with T count results $3.760 > 1.978$ T table And p-value $0.000 < 0.05$. From acquisition that, Can concluded pictures in a manner Partial influential positive And significant to adolescent behavior. Similar research was conducted by Chudech et.al. (2021) explained that warning images on cigarette packs provided positive results for adolescent participants who were afraid of smoking, especially based on individual cognitive assessments.

Writing influential to adolescent behavior

Study This obtain that there is influence positive and significant given by writing to adolescent behavior. it stated with T count results $9.555 > 1.978$ T table and p-value $0.000 < 0.05$. From earnings that, can concluded writing own influence positive and important for adolescent behavior. Research by Samad, et al., (2023) shows exists influence significant interest buy cigarette to warning packaged cigarettes. The warning in the form of writing and drawings teenager consider For buy it.

Pictures and Writing influential to adolescent behavior

Testing simultaneous with the F test obtained result F count $71,771 > F$ table 3.07 and $0.000 < 0.05$. Results the clarify variable independent influential positive and significant form pictures and writing to variable adolescent behavior. Besides that study Fatmawati, et.al., (2014) also shows influence positive and significant from pictures and writing to adolescent behavior. Because that, government and society must role active in spread message warning Good in form picture as well as writing so that everyone is aware will danger smoking.

CONCLUSION

1. Variable Pictures are also influential positive and significant to demonstrated adolescent behavior with mark test results Q amounting to T count $3,760 > 1,978$ T table And p-value $0.000 < 0.05$.

2. Variable influential writing positive and significant in a manner Partial to adolescent behavior. Argumentation the proven from results T count $9,555 > 1,978$ T table And p-value 000.

< 0.05 .

3. Variable free form pictures and writing influential positive and significant in a manner simultaneous to variable bound adolescent behavior. this result obtained from F count results $71,771 > F$ table 3.07 and $0.000 < 0.05$. Influence to two variable pictures and writing to variable adolescent behavior by 44.1% and 5.9 % influencedleh other factors outside research .

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