Influence of Peers' Conformity and Sensation Seeking towards Smoking Behavior on Adolescents

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Abstract

The development of adolescents' social life is marked by the increase of peers' influence in their lives. Most of their time is spent to have a relation or to have asocialization with their peers; when their peers behave well, the teenagers will also behave well and in contrast, if their peers behave bad, the teenagers will also behave bad. This research aims to examine the influence of peers' conformity and sensation seeking towards smoking behavior. In addition, this research uses quantitative approach with *ex-post facto* research type. The sample of this research *simple random sampling* technique with the total of sample is 381 students. The results of this research are: 1) peers' conformity and sensation seeking are two factors that collectively can influence the students' smoking behavior significantly; 2) the contribution given by peers' conformity and sensation seeking towards students' smoking behavior is 62,2% and the remaining 37,8% is influenced by other factors besides peers' conformity and sensation seeking.

Keywords: Conformity; Sensation Seeking; Smoking Behavior; Adolescents

Introduction

Adolescence is the shifting period from child to adult. In this shifting period, changes will occur on the adolescents like physical, personality, intellectuality, and role in or out of the environment (Papalia et al., 2009). Stanley (Santrock, 2012) considers adolescence as the period of storm and stress which is a turmoil marked by conflict, mood change, and risky action like the abuse of drugs and smoking.

Adolescence is identical with association period. In this period, the adolesceents usually start to not to be dependent on their families and prefer doing what the adolescents want to do (Lombard *et al.*, 2015). Some examples, the adolescents' action recently become more worrying for community since they involve in mischievous activities like ditching from school, smoking, drinking alcoholic water, brawl like thug, and falling into pre-marriage sexual life. In 2016, based on data from Department of Health of Palembang, it was found some adolescents behaviors such as smoking behavior of 1067 cases, menstrual disorder of 576 cases, unwed pregnancy of 576 cases, learning difficulties of 296 cases, and lastly traffic accident of 349 cases. From the data obtained, the biggest case is on smoking behavior on adolescnts.

According to Amrock (2015), the researcher from New York University School of Medicine, it was mentioned that children and adolescents have been frequently told about the danger of smoking habit. Physical, cognitive, and psycho-social change occurring in the adolescents' development have big influence towards the relations between parents and adolescents. Furthermore, the relation development between parents and adolescents must be attached to maintain the bounding between the parents and the adolescents in which the wise parents must let the adolescents think to make decisions, but the parents must also provide guidance to make right decisions because the adolescents' knowledge is still limited. Based on the theory of adolescent development, it is stated that adolescents involve in the behavior that has not considered the danger on what they do (Morrell et al., 2015).

The development of adolescents social life is marked by the increase of peers' influence in their lives. Most of their time is spent to have a relation or to have asocialization with their peers; when their peers behave well, the teenagers will also behave well and in contrast, if their peers behave bad, the teenagers will also behave bad. (Santrock, 2012). School environment is the students' environment which is wider than social environment at home or living place (Molina, 2017). Furthermore, it is explained that at school, the students spend their time at least six hours and the school is also the place of learning for students. At school, not only learning process that can be seen, but also smoking activities done by students.

The behavior of peers plays dominant roles in the beginning and the use of tobacco regularly (Irles et al., 2015). It is also explained that the students in adoslescence have high curiosity, but it is not always good for the adolescents. There is a potential of adolescents' high and can imitate the adult behavior. The smoking behavior is extremely dangerous for their health, but there are also other psychological factors that influence the smoking behavior namely high self-efficacy negatively and depression. (Hiemstra et al., 2011, and Ringlever et al., 2013).

Besides, the research conducted by Chung, and Joung (2014) mentioned that the factor that causes smoking behavior is low academic performance and the factor related to health includes the use of alcohol; and the psychological factor includes depression, low self-esteem, high stress, parents' parenting pattern factor, and peers who smoke. Other researches also state that self-esteem tends to make us to smoke, (Hale et al., 2015), On the other hand, the research conduced by Hwang and Park (2015) found that sensation seeking is highly related to smoking in adolescents. The research also found that the factors that cause smoking behavior on high school students are one of their parents smoke, divorce, and advertisement (Wang et al., 2015). Moreover, worry influence smoking behavior because it the smoker has problem on breathing, the sensitivity is bigger to the worry itself (Zvolensky et al., 2017). Therefore, from psychological factors towards smoking behavior, the researchers are nterested in examining two variables namely peers' conformity and search sensation.

Conformity is the tendency to obtain a behavior mastered by attitude. Besides, peer is the group which its members are approximately equal in limitations, functions of the group, and having same age (Reber, 2016). The research result done by Villanti et al., (2011) with respondents of 22.111 students aged 10-17 years old found that the influence of peers increase the smoking behavior compared to parents. The othe research conducted by Liem (2014) with respondents of 390 Junior High School adolescents in Yogyakarta compared to mass media, and family aged 14 years old in average found that peers have the strongest influence towards adolescents' smoking behavior in Yogyakarta.

Besides conformity of peers, the other factor that influences smoking behavior is sensation seeking. Sensation seeking is the tendency to look for new and shocking experience. Zuckerman and Neeb (Spillane et al., 2012). Furthermore, the research result with respondents consisting of 353 boys and 411 girls aged 13-21 years old found that the initial search is related to smoking initiation. The boys and the girls are different; in girls, the sensation seeking is higher in the beginning of smoking. The other

research result with respondents comprising of 915 students at grade 10-12 Senior High School found that the influence of sensation seeking towards smoking behavior is significant that sensation seeking is positively related to smoking behavior (Hwang & Park, 2015).

Based on the above explanation, the research takes variables of sensation seeking and peers' conformity. This research is done to know and to obtain data through a research for proving with the fact that has occurred in adolescence. Therefore, the results of this research aim that the adolescents can know more about psychological factor causing to the smoking behavior. However, the limitation regarding with previous researches between variables of peers' conformity and sensation seeking that influence smoking behavior is there. Thus, the researchers are interested in examining whether the influence of peers' conformity and sensation seeking towards smoking behavior is there or not.

Research Method

A.   Type, Location, and Time of Research

The present research uses quantitative approach with ex-post facto research type. This research tests hypothesis but not gives particular treatmens on the research variable and shows cause and effect on independent variables and dependent variables. This research is conducted in six Senior High Schools in Palembang in even semester in academic year of 2018/2019. The researcher chooses Palembang as the location of research is because of the data had by Department of Health of Palembang in 2016 showing that the adolescents' smoking behavior is the highest case. The research data are obtained from the end of March 2019 to the beginning of May 2019 which is from submitting research permission letter to questionnaire distribution.

B.   Research Population and Sample

The population of this research is the adolescents of Senior High School in Palembang. This research is done in Palembang because based on the data from Department of Health of Palembang, adolescents' smoking behavior is the highest case. Palembang has 119 Senior High School with the number of students is 47.929 people. The sample of this research uses mulltistage random sampling technique because every population member has equal opportunity to be chosen as sample. In addition, the number of sample in this research is 381 students based on table of Krejcie and Morgan (1972).

C.   Research Variable

1. Smoking Behavior

Smoking behavior is measured based on the aspects of frequency, intensity,and duration. Higher value obtained from the measurement shows high smoking behavior;in contrast,lower value obtained from the measurement shows low smoking behavior.

2. Peers' conformity

Peers'conformity is measured based on normative and informative aspects. Higher value obtained from the measurement shows high peers' conformity;in contrast, lower value obtained from the measurement shows low peers' conformity.

3. Sensation Seeking

Sensation seeking is measured based on the aspect of thrill and adventure seeking, experience seeking, disinhibition, and breedom susceptibility. Higher value obtained from the measurement shows high sensation seeking; in contrast, lower value obtained from the measurement shows low sensation seeking.

D.   Data Collection Technique

The data collection technique used in this research is by using three questionnaires in scale forms which are questionnaires of smoking behavior, peers' conformity, and sensation seeking by using scales consisting of five answer choices.

E.   Data Collection Instrument

1. Smoking Behavior

Scale of smoking behavior is made to measure the level of adolescents' smoking behavior. The arrangement of this scale is developed based on three aspects according to Martin and Pear (2015), namely: frequency, intensity, duration.

2. Peers' conformity

Scale of peers' conformity is made to measure the level of adolescents' conformity.The arrangement of this scale is developed based on two aspects according to Baron and Byrne (2005), namely: normative and informative aspects.

3. Sensation seeking

Scale of sensation seeking is made to measure the level of adolescents' sensation seeking. The arrangement of this scale is developed based on four aspects according to Zuckerman, and Aluja (2014) namely: thrill and adventure seeking, experience seeking, disinhibition, and breedom susceptibility.

F.   Instrument's Validity and Reliability

Before the scale can be used, scale testing must be done first to know the validity and the reliability of the testing tools. Validity and reliability of testing tools are done to know how many items are valid and how many items are invalid.

1. Validity

Validity used in this research is content validity because the researcher arranges testing tool of smoking behavior, peers' conformity, and sensation seeking. According to Azwar (2017), it is explained that content validity is validity of estiation through testing towards properness or relevance of testing content through rational analysis by competent panel or through expert judgment. After doing content validity, expert judgment is then done by using Gregori approach based on the research result from two experts towards an item from how far the item represents the measured construct. The criteria of content validity of Gregori is counted from 0,8 to 1 shows that the content validity is extremely high and it reflects that item point is in a very good scale and if from 0,00 to 0,19, it shows that the content validity is extremely low which also means that the item points are in a very poor scale.

Then, after conducting content validity on scales of smoking behavior, peers'conformity,and sensation seeking,the next phase is doing construct validity with factorial validity.Construct validity is done to prove the measurement result through items obtained that have collaborated with theoretical construct that underlies the three scale arrangement in this research. In factorial analysis, the researcher uses *Exploratory Factor Analysis* (EFA) process to identify statement items to be considered valid if it has loading factor > 0,5.

2. Reliability

A testing tool is considered having high reliability level if a research result measured can be reliable. It means that in doing some measurements towards same subjects, it obtains same results objectively and as long as the aspect measured in the subject is not changed. Empirically, the high and the low of reliability are shown by a number called reliability coefficient symbolized with rxx.

Testing tool reliability refers to consistency or trust of testing tool obtained from reliability testing. The magnitude of reliability coefficient is about 0,00 until 1,00. If the reliability coefficient closes to 1,00, this means that there is more perfect testing tool consistency. Generally, reliability has been considered satisfying if its coefficient achieves rxx' = 0,900; it means that there are ten percents of error variations or error in measurement.

To know the validity and reliability of testing tool used in this research, the researcher conducts scale testing in same subject characteristics as research subjects. The testing is done to know how many valid items and how many invalid items in scales of peers' conformity and sensation seeking towards smoking behavior. Validity and reliability testing will be seen on coefficient of *alpha Cronbach* on SPSS Program.

G.   Data Analysis Technique

The first analysis technique used in this research is descriptive analysis in each variable. Descriptive statistics has objective to provide portrayal on a datum from maximum value, minimum value, mean, and deviation standard. Before testing hypothesis, multiple regression requirements is done first which are: normality testing, multicollinearity testing, and Heteroscedasticity testing.

In this research, the data analysis used is multiple regression analysis method with two independent variables. According to Burhan, Gunawan and the calculation done in regression analysis of two independent variables are searching for regression equation and counting correlation between

variables, and to know multiple correlation on two independent variables namely peers' conformity and sensation seeking towards dependent variable namely smoking behavior on adolescents.

In addition, this research utilizes coefficient determination (R). This testing aims to know how much the ability from model to describe variation from dependent variable. The result of Adjusted R calculation can be seen from output of Summary model to know the percentage that can be explained by dependent variable towards independent variables. Besides, the remining is influenced or is explained by other variables that are inserted in this research. If R has low value, the independent variables can explain towards dependent variable very limited and shows that there are other causes that become the factors of dependent variables. In contrast, if R has high schore, the independent variables can explain well towards the dependent variable.

Results and Discussion

A. Research Results

1. Descriptive Statistics

In this research, descriptive analysis is done to provide the portrayal of peers' conformity, sensation seeking, and smoking behavior of 381 students that become the samples of this research. Descriptive analysis is done by seeing the value on each variable which aim to know the influence of independent variables and dependent variable in this research. The description shown includes minimum value, maximum value, mean, and deviation standard that can be seen on Table 1 provided below:

Table 1.Descriptive Statictics

	N	Min	Max	Mean	Deviation Standard
Peers' conformity	381	24	120	85.7	22.2
Sensation Seeking	381	25	125	84.9	24.7
Smoking Behavior	381	19	95	64.7	16.2

Based on data of questionnaire filling results, these are the overview of peers' conformity, sensation seeking, and smoking behavior of students based on the results of questionnaire filling:

a. Peers' conformity

In this research, variable of peers' conformity is measured with 24 questionnaire statements with the number of sample is 381 respondents. Therefore, the data of peers' conformity results are obtained with minimum value = 24; maximum value = 120; mean = 85.7; and deviation   standard = 22.2.

b. Sensation Seeking

In this research, variable of sensation seeking is measured with 24 questionnaire statements with the number of sample is 381 respondents.Therefore, the data of peers' conformity results are obtained with minimum value = 25; maximum value = 125; mean = 84.9; and deviation standard = 24.7.

c. Smoking Behavior

In this research, variable of sensation seeking is measured with 19 questionnaire statements with the number of sample is 381 respondents. Therefore, the data of peers' conformity results are obtained with minimum value = = 19; maximum value = 95; mean =   64; and deviation standard = 16.2.

B. Result of Pre-Requisite Testing

1. Normality Testing

Normality testing is done to know residual distribution and regression model. If residual distributes normally, the model can be analyzed witu regression analysis; but if the residual does not distribute normally, the model cannot be analyzed with regression analysis. Normality testing is done statistically by using normality testing of Kolmogrov Smirnov. The result of normality testing shows significant value of kolmogrov smirnov normality testing result of 0,203. Because the significant value of normality testing result is > 0,05, it can be concluded that data distribution of residual regression is normal. Therefore, normality requirement is fulfilled.

a. Multicollinearity Testing

According to Imam Ghozali (2011), multicollinearity aims to examine whether regression model found has correlation between independent variables or not. To examine multicollinearity, it can be done by seeing the value of VIF on each variable; if value of VIF < 10 and tolerance > 0,1, it can be concluded that the data are free from multicollinearity indication.

The result of multicollinearity in Table 2 shows that value of VIF on all independent variables is < 10 and tolerance value of all independent variables has exceeded 1. It reveals that regression model has fulfilled multicollinearity assumption.

Table 2 Multicollinearity Testing Result

Coefficients[a]			
		Collinearity Statistics	
Model		Tolerance	VIF
1	Peers_Conformity	.733	1.364
	Sensation_Search	.733	1.364
a. Dependent Variable: Smoking_Behavior			

b. Heteroscedasticity Testing

Heteroscedasticity testing aims to examine whether variance dissimilarity occurs in regression model from residual of one experiment to other experiments. Therefore, the variable shows that there is no Heteroscedasticity with significance on each variable of peers' conformity of 0.568; variable of sensation seeking of 0.453 ($p > 0,05$).

Table 3. Heteroscedasticity Testing Result

No.	Variable	α	Remark
1	Peers' conformity	0,568	No Heteroscedasticity
2	Sensation Seeking	0,453	No Heteroscedasticity

2. Hypothesis Testing

The influence of peers' conformity and sensation seeking towards students' smoking behavior. Below is the table of multiple regession analysis that can be seen in Table 4:

Table 4 Result of Multiple Regression Analysis

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	62178.720	2	31089.360	310.350	.000[a]
Residual	37866.215	378	100.175		
Total	100044.934	380			

Based on Table 4, the result of multiple regression analysis shows strong influence between peers' conformity and sensation seeking towards smoking behavior with value of Sig. 0,000 ($p < 0,05$); thus, the conclusion made is the hyphotesis is accepted or peers'conformity and sensation seeking can predict smoking behavior on adolescents.

C.   Equation of Multiple Regression Line

Table 5 reveals regression equation result between peers'conformity and sensation seeking towards smoking behavior with SPSS as follows:

Tabel 5. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	14.161	2.225		6.365	.000
	Peers_Conformity	.171	.027	.234	6.339	.000
	Sensation_Search	.422	.024	.641	17.351	.000

Based on the conclusion result of regression analysis, it is obtained equation of regression line with constant value = 14.161; $X_1 = 0,171$; $X_2 = 0,422$; the regression equation can be written as follows:
$Y = a + bX_1 + bX_2$
$Y = 14.161 + 0,171X_1 + 0,422X_2$

D   Determination Coefficient (R^2)

In multiple linear regression analysis, determination coefficient shows the influence of independent variables towards dependent variable. The value of determination coefficient is seen from R Square value.

Table 6 Determination Coefficient

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.788[a]	.622	.620	10.00875

Regression analysis result in Table 6 above shows that R Square value of regression model is of 0,622. This reveals that the contribution given by variable of peers' conformity and sensation seeking towards students' smoking behavior is of 62,2% while the remaining is of 37,8%; the variance of students' smoking behavior is influenced by other factors besides variable of peers' conformity and sensation seeking.

Discussion

Based on the result of regression analysis, it obtains the result that the significance value of F testing result of 0,000 is < 0,05; then it can be concluded that peers' conformity and sensation seeking influence smoking behavior. The analysis result is that peers' conformity and sensation seeking on smoking behavior is highly significant because the adolescents in high school is still in process of searching identity and not having strong willingness to not to follow their peers in negative aspect like smoking. Because an adolescent starts to socialize in the group which its members are smokers, it automatically makes the new-socialized adolescent to try it too.

One of the characteristics that dominantly make the adolescents to smoke is the factor of peers' influence in which in achieveing good relations, the adolescents frequently do negative action like smoking; the development on adolscents is highly dependent on peers' conformity (Wulan, 2012). This research's result is in line with the research conducted by Harakeh, and Vollebergh (2013) finding that peers' conformity can increase smoking behavior on adolescents because they always socialize. The other finding also shows that peers' conformity has strong relation with smoking behavior (Seo & Huang, 2012). In conformity, adolescents need information in their socialization so that the adolescents extremely need peer group and number of friends in their daily life (Astuti, 2018). Peer group becomes essential and influential in social life of an adolescent since it is taken as a place to learn social ability and take roles; thus, the adolescents become so dependent on their peers. Furthermore, adolescents tend to imitate other people's behavior; this is one of deteminants why the adolescents smoke (Fauzan *et al*., 2018).

Other researches also find that schoolmates have risks in health namely many adolescents smoke because it is more strengthened by peers and smoking is indeed a form of addiction that grows faster and also can make dependency on cigarette (Lorant & Tranmer, 2019; Pancani *et al*., 2018). Afterwards, Warsono (2017) explained that environment has significant role on adolescents' life in building their attitude and behavior. Hence, if the adolescents are in good environment, it will build good personality too. In contrast, if they are in bad environment, it will build bad personality. Therefore, this aspect relies on the environment where the adolescents live that can build their behavior because many adolescents consider how environment can shape smoking behavior.

The individual that is influenced faster by the environment is caused by stress so that it increases unexpected risks (Swearer & hymel, 2015). The bad effect from environment risk is also caused by the low control of parents. The parents' monitor consistently decreases the influence of peers and search for risky sensation towards adolescents' behavior.

Wang *et al*., (2017) found that the adolescents are commonly more curious in searching for sensation which reveals higher tendency to choose peers in similarities in behavior aspect. In this case, the peers accept them easier because of collective agreement to behave and same level of sensation seeking. However, on the other hand, it is because adolescents are willing to express needs on the sensation itself, an adolescent is brave to smoke to take physical risk that will make his body unhealthy because of smoking. The previous literature shows that adolescents, who are categorized as high sensation seekingers, will be more likely to smoke in the future (Banerjee & Greene, 2009; Bisol *et al*., 2010; Dinn *et al*., 2004).

This is in accordance with the research done by Staley, and Geier (2017) revealing that sensation seeking towards smoking on adolescents is so strong. Andreas and Watson (2016) also found significant interation between sensation seeking and environment in influencing adolescents to smoke. Other study also found that sensation seeking is significant towards smoking behavior. An adolescent with high sensation seeking is possible to involve in risky behavior especially to realize strong desire regarding to behavior. Considering this fact, it is indeed beneficial to consider intervention strategy that motivates sensation seeking to get involved in health namely sport in order to stay away from deviating behavior (Hwang & Park, 2015).

From the research's result and the explanation from some researches above, it can be concluded that peers' conformity and sensation seeking have strong influence towards smoking behavior so that it can be stated that both variables specifically peers' conformity and sensation seeking are predictors that can influence smoking behavior on adolescents.

Research Limitation

Research limitation during this research is conducted is as follows:

When distributing questionnaires, the research is done after School Final Examination is conducted so that Grade XII Students are on holiday. Therefore, the researchers only distribute the questionnaires to Grade X and Grade XII students.

Conclusion

Peers' conformity and sensation seeking are two factors that collectively can influence students' smoking behavior significantly. The contribution given by peers' conformity and sensation seeking towards students' smoking behavior is of 62,2% while the remaining 37,8% is influenced by other factors besides peers' conformity and sensation seeking.

Implications

Implications of the research result on peers' conformity and sensation seeking towards smoking behavior consist of: 1) Smoking behavior on adolescents can be avoided by the frequent control of parents on children; 2) Based on this research result, it is expected to psychology practitioners and students to provide correct intervention in solving smoking behavior problem on adolescents.

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