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The Effect of Traffic Jam on High Levels of Student Stress

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ABSTRACT
Traffic Jam is a problem that is quite complicated in the community. The volume of transportation passing by on the highway is a trigger for traffic jam. This unresolved traffic jam is causing stress to road users. So that, this study aims to see how far the impact of traffic jams has on student life and the level of student stress in dealing with traffic jams. This study uses a quantitative research method with an explanatory approach. The population in this study were 293 students of the Communication Studies Program, Mercu Buana University Yogyakarta batch 2021, while the sample was taken using probability sampling technique, namely Simple Random Sampling so that a sample of 101 students was obtained. The data collection technique used was a questionnaire on the influence of media use and a questionnaire on fulfilling information needs. The data obtained was analyzed using SPSS Version 20 software. The results showed that there was a strong relationship between student stress levels and traffic jams in the city of Yogyakarta. Furthermore, there is an influence of 53.2% between the effect of traffic jams on the high level of student stress. So that the other 46.8% is influenced by other variables not examined. Furthermore, the results of the independent sample t-test showed no difference in the effect of traffic jams between male and female students.

Keywords: *Traffic Jam; Transportation; Stress; Student*

INTRODUCTION

The phenomenon of growth in population, city, and number of vehicles on roads in the city of Yogyakarta causes traffic jams every day, especially on weekends. This density can be felt due to the large number of students or students who come to study from various regions throughout Indonesia. In addition, migration is carried out by workers outside the Yogyakarta area. Knowing that Yogyakarta is a transportation crossing point from the Purworejo area to Solo, or from Magelang to Jogja. Not to mention the private vehicles of tourists. Traffic jam occurs when traffic conditions on the highway start to become unstable, the operating speed decreases relatively quickly due

to obstacles that arise, and freedom of movement is relatively small (Fadriani, 2018). The fact that Yogyakarta is a tourist area, and a student city, has resulted in an increase in the number of vehicles that cannot be eliminated, whether they are two-wheeled or four-wheeled vehicles.

Even the DI Yogyakarta Province Transportation Service noted that there were 530,176 vehicles entering from April 25 to May 1, 2022. Many vehicles entered from the east, namely from Prambanan, around 11,574 vehicles, and 12,442 vehicles leaving the Yogyakarta area. While from the west there were 11,718 vehicles entering, and there were 10,129 vehicles leaving Yogyakarta. The highest number was occupied by two-wheeled vehicles. It was reported that 25,832 two-wheeled vehicles entered, and 24,264 motorcycles came out of DI Yogyakarta. Public transportation also mostly comes from outside Yogyakarta. Evidenced by the existence of public transportation data that entered from outside the area of 156,667, while public transportation that left the Yogyakarta area was 149,597. The problem of congestion that occurs in Yogyakarta is a problem that is quite a headache for road users. The intended road users are not only those from Yogyakarta, but this congestion can also eventually be felt by all road users.

Of course, this creates a feeling of stress for its users, and results in an erratic mood of road users. The focus of this research is the impact of traffic jams on the stress level of students of the Faculty of Communication Sciences, University of Mercu Buana Yogyakarta Class of 2021 in 2022. When viewed from traffic activity in the Yogyakarta area, the large number of vehicles and other factors such as red-light intersections make traffic jams a problem. irritating. This condition is exacerbated by the many small roads that cause traffic jams. It seems that traffic jams are not a simple thing, traffic jams can happen to anyone and anywhere, traffic jams are indeed something that can be anticipated, but on the other hand it can be a disaster for road users if there are factors beyond our control that can cause traffic jams themselves. Traffic jams can also turn into a problem, namely the emergence of stress which can have a negative impact on psychology and biology for students. Another problem that arises is that the use of fuel becomes more wasteful by up to 20%, the engine will burn fuel for nothing because there is no movement. Air pollution from vehicle gas is also another problem.

Several points prone to traffic jam in the Special Region of Yogyakarta include those on Jalan P. Mangkubumi, Jalan Malioboro, Jalan P. Senopati, Jalan Pelajar, Jalan Kebon Raya, Jalan Timoho, Jalan P. Diponegoro, Jalan Laksda Adisucipto, Jalan Mataram, Jalan A. Yani, Magelang Street, Brigadier General Katamso Street. Estimated traffic jams usually occur at 07.00-08.00 WIB, 14.00-16.00 and 16.30-20.00. Jalan Malioboro, which incidentally is an icon of Yogyakarta and a tourist spot, causes traffic traffic jams, especially on weekends. Meanwhile, on Jalan the Student Army there are many institutions and offices, as well as schools. The policy that the Yogyakarta City Government has implemented is the use of a parking policy which is one of the methods of limiting traffic by increasing parking rates in areas that often experience traffic jams.

METHODS

This research uses quantitative research methods. Quantitative research methods are used to examine populations or certain samples and collect data through research instruments, and data analysis is quantitative or statistical in nature with the aim of testing predetermined hypotheses (Winarni, 2021). This study uses an explanatory

approach that aims to explain a generalization of the sample to the population or explain the relationship or influence of a variable on other variables (Setyadi, E). The independent variable in this study is the effect of traffic congestion, while the dependent variable is the stress level of students. The population in this study were all college students' batch 202 1 morning regular class totaling 249 students aged 18-25 years. We used a random sample to get a total of 100 respondents. The sampling technique in this study is probability sampling, namely a sampling technique that provides equal opportunities for each member of the population to be selected as a member of the sample.

The *probability sampling technique* chosen is *Simple Random Sampling,* which is a random sampling technique from a population without regard to the strata in that population (Arifin, 2020). To determine the number of samples, researchers used a random sample to get a total of 101 respondents. Data collection techniques were carried out by distributing research questionnaires to respondents. The scale used to measure the research instrument is the Likert scale by simplifying the answer choices to only 5 answer choices. Alternative answer choices are presented in 5 points only with the criteria STS, TS, N, S, SS. This is done to balance the answers of respondents.

The data collected came from 101 respondents which were then processed using the *Statistical Package for Social Science* (SPSS) software. First, the researchers distributed questionnaires to a trial sample of 20 students. This sample is used to determine the level of reliability and validity of the instrument. After the instrument is valid and reliable, the researcher continues the survey phase with 101 students as the research sample. The second data analysis was used to determine the effect of the independent variables on the dependent variable analyzed using linear regression analysis, while the differences in perceptions between the study sample categories were carried out by analyzing the *independent sample t-test.*

RESULTS AND DISCUSSION

This research was conducted by distributing questionnaires related to congestion (X) consisting of 8 questions, but there was 1 question that was invalid and stress (Y) consisting of 12 questions. Respondents in this study consisted of 53 male students and 49 female students. Before the questionnaire was used for research, the researchers tested the questionnaire on 20 trial samples. The results of testing the research instrument in the form of validity and reliability tests are explained in the following section.

Validity and Reliability Test

Testing the validity and reliability using a trial sample that is different from the research sample. The trial sample used a sample of 20 students. The results of the trial sample validity on variables X and Y show that each item in X and Y variables has a *Pearson Product Moment value* of more than r table (df = 20-2 = 18 and Sig. 0.05) namely 0.444, so it is said to be valid.

Because all items are said to be valid, then it is continued with the reliability instrument test. The test results show that the value of *Cronbach's Alpha* on the X variable is 0.718 which is greater than the R table of 0.444, so that the X variable is declared reliable. In addition, the value of *Cronbach's Alpha* on the variable Y is 0.597 which is greater than the R table of 0.444, so that the variable X is declared reliable.

Linear Regression Analysis

Regression analysis was performed after the prerequisite analysis was met. In testing the terms of this analysis, normality and linearity tests were carried out. The results of the SPSS-assisted *Kolmogorov Smirnov* normality test show that the Sig. The indicators for Road Users Increase and Travel Time are more than 0.05 so that both variables are normally distributed. Furthermore, a linearity test was carried out which based on the results of the linearity test showed that the value of Sig. the *deviation from linearity* is 0.000 which indicates that the marketing content variable and the buying interest variable have a linear relationship. Because the prerequisite analysis has been fulfilled, it is continued with *product moment* correlation analysis. The test results with SPSS show that the correlation level is 0.714. This shows that the marketing content variable and the buying interest variable are positively correlated and have a strong relationship. Therefore, the more often you create marketing content, the higher consumer buying interest.

Correlation results have shown a relationship between congestion and stress levels so that it is followed by linear regression analysis. Linear regression analysis aims to determine the level of influence of each independent variable, namely *User Volume and Travel Time* on the variable Congestion on the dependent variable, namely Stress Level. The results of the regression analysis are presented in Table 1.

Table 1. Analysis of Regression Results

Variable	**Standardized Coefficient**	**R Square**	**Sig**
User Volumes	0.678	0.459	0.000 _
Traveling time	0.608	0.370 _	0.00 0
R Square	**0.5 32**		

Table 1 shows that the *User Volume variable* shows a significant value of 0.0 00 with a beta coefficient of 0.678. This shows that the User Volume variable influences the Stress Level variable by 45.9%. Variable Travel time shows a significant value of 0.00 0 with a beta coefficient of 0.608. This shows that the variable Travel Time influences the Stress Level variable by 37.0%. The coefficient R squared on the results of the linear regression test is 0.5 32 which means 53.2% of the Stress Level variable can be explained and influenced by the independent variables, namely User Volume and Travel Time, while the remaining 4 6.8 % is influenced by other variables which have not been researched. The results of the linear regression test above show that Traffic Congestion has a significant effect on High Student Stress Levels. The traffic congestion that occurs results in feelings of anger, anxiety and depression.

CONCLUSION

The results showed that traffic jams have an influence on the high level of student stress. The effect is 53.2% between the effect of traffic jams on the high level of student stress. So that the other 46.8% is influenced by other variables not examined. Furthermore, the results of the *independent sample t-test* showed no difference in the effect of traffic jams between male and female students.

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