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Correlation Between Crowded Perception On The Highway And Aggressive Driving Tendencies In Teenage Motorcyclists

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ABSTRACT
The purpose of this study was to determine the relationship between crowded perception on the highway and the tendency of aggressive driving in teenage motorcyclists. Crowded perception is a factor that influences someone to do aggressive driving. This study is a quantitative correlation study using data collection techniques in the form of a crowded perception scale and an aggressive driving tendency scale compiled by the researcher himself. The subjects of the study were 80 teenagers who in their daily activities use motorbikes and have a driving license. The data analysis technique used was product moment analysis with a significance level of 0.05. The results showed a correlation value of p = 0.000 <0.05 and r = 0.546> 0.220, meaning Ha was accepted. This means that there is a relationship between crowded perception on the highway and the tendency of aggressive driving in motorbike riders. Based on these results, it means that the higher the crowded perception on the highway, the higher the tendency of aggressive driving in teenage motorcyclists. The results of the analysis also showed that men tend to be more aggressive than women when driving. In addition, the level of aggressiveness also showed differences based on age. At the age of 19, aggressive driving behavior appeared higher than other ages.

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INTRODUCTION

Transportation has an important and strategic role to strengthen the realization of the archipelago insight, strengthen national resilience and strengthen relations between nations in an effort to achieve national goals based on Pancasila and the 1945 Constitution (Anonymous, 1992). Transportation on the highway is one form of transportation that cannot be separated from other modes of transportation and is arranged in a national transportation system that is able to reach all corners of the region and is regulated in laws and regulations. (Kunarto, 1995, in Prasetiyo & Septiningsih, 2011) stated that the purpose of organizing transportation is to realize safe, secure, fast, smooth, orderly, organized, and efficient traffic, and is able to integrate other modes of transportation, support equality, growth, and stability. Transportation in Indonesia has various types of four wheels such as cars, transportation, trucks, buses, and motorcycles. Motorcycles are a type of vehicle that has its own capabilities compared to other vehicles. This condition brings an increase in the level of motorization, even to a higher level than that found in developed countries. In Indonesia, India, and Thailand, the

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existence of motorcycles reaches two-thirds of the total population of existing motor vehicles. The growth of motorcycles is estimated to increase faster and play a dominant role. Motorcycles are a type of low-cost vehicle and are more widely used by humans including in Indonesia (Lulie & Hatmoko, 2005).

According to the Chairman of the Indonesian Motorcycle Industry Association (AISI), Gunadi Shindhuwinata, the rate of increase in the number of motorcycle users in Indonesia is considered irrational because it has reached 85 million units from a population of approximately 250 million people in Indonesia (Viva.co.id, 2016). From data from the Surabaya Police Traffic Unit in 2014, there were 3,625,999 two-wheeled vehicles in Surabaya. The number of vehicles is almost twice that of the population of Surabaya, which is only 2,844,782 people. Every month, it is estimated that the number of motorcycles in Surabaya increases by 13,441 units. "The rapid increase in the number of vehicles in the City of Heroes and the addition of many vehicles with police numbers from outside Surabaya makes the roads increasingly congested and congested," said Head of the Surabaya Police Traffic Unit, AKBP Raydian Kokrosono (Jawa Pos, 2014).

Using a motorcycle does have many advantages, such as the price of the motorcycle is relatively affordable, besides that, the down payment for the installments is very low and the last and most important reason is because a motorcycle is the cheapest means of transportation. That is why the number of motorcycle users is increasing at this time (Kompas.com, 2010).

However, behind the advantages of using a motorcycle, the increasing number of motorcycle users also causes many problems such as security, order, smoothness, criminal acts of motorcycle theft and traffic safety (Susilo, 2008, in Utami, 2010). Another disadvantage of using a motorcycle is that it is less stable and accidents are easy to occur.

Traffic accidents are no longer a foreign thing. Traffic accidents on the highway are a problem that is increasingly becoming more complex and more serious. This can be seen from the increase in the number of traffic accidents each year. Traffic accidents on the highway involve motorized vehicles such as cars, public transportation, trucks, buses, and motorcycles (Sulistianingsih, 2014).

Reported by The Washington Post, according to the latest Global Burden data, in developing countries traffic accidents are among the top five leading causes of death in the world, surpassing HIV/AIDS, malaria, tuberculosis and other killer diseases. The global death toll from traffic accidents is currently recorded at 1.24 million per year. It is estimated that this figure will increase threefold to 3.6 million per year by 2030 (Republika, 2017).

In Indonesia, data from the Analysis and Evaluation (Anev) of traffic accidents in 2015-2016 stated that the number of accidents in 2016 reached 125 incidents, with 30 fatalities. Meanwhile, material losses reached Rp. 387,150,000. This figure has increased by around 148 percent or 74 incidents. Compared to the number of accidents in 2015 which reached 50 incidents, with 20 fatalities, and material losses reaching Rp. 182,150,000. The World Health Organization (WHO) also revealed that 48 percent of the victims who died were of productive age, namely 15-44 years (Metrotvnews.com, 2016).

Regarding road accidents, it was stated by Vice President Yusuf Kalla when delivering

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a briefing at the launch of the 2nd National Week of Road Transportation Safety at the National Monument (Monas) intersection in Jakarta, Sunday, April 20, 2008 morning. He said that road accidents in the country have claimed 30,000 victims per year, far above the victims of bird flu in Indonesia, which is 100 people. The vice president's statement did not specify the type of vehicle involved, whether a car or a motorbike (Mashuri & Zaduqisti, 2009).

Currently, motorbikes have become the largest contributor to traffic accidents in Surabaya. The Head of Traffic Police of the Surabaya Police said that accidents involving motorbikes throughout 2015 increased compared to the previous year. In addition, accidents on average occur at 06.00 WIB to 12.00 WIB and are dominated by young riders. Of the 866 cases of motorcycle accidents, 192 victims died and the rest were seriously injured and slightly injured. The victims of accidents involving motorcycles in the Surabaya area mostly claimed productive ages. Almost 70% of motorcycle accident victims are aged 16-30 years (Surabayaonline.co, 2015).

Young age is one of the segments contributing to traffic accidents. Ages 13-18 years are early teenage years where they are just starting to feel interested in trying to ride a motorbike. Teenagers think that they are mature enough to drive a vehicle on the road, but with shallow knowledge about driving often causes accidents (Sammara, 2009).

According to Sundari (2009), adolescence is a time when emotions are overflowing, which has an impact on adolescent behavior that tends to violate norms, so that the knowledge they gain cannot be directly adopted in their daily behavior, even though many teenagers are not yet 17 years old. In addition to not having a driving license, most teenagers also often act recklessly on the road, without realizing that their actions can endanger others, because this teenage phase is a time that attracts attention because of its distinctive characteristics and its role in determining the lives of individuals in adult society (Yusuf, 2012, in Utari, 2016).

Another factor that causes many accidents in Surabaya can be caused by the density of vehicles on the highway. The increasing need for access to private transportation, and the majority of people in big cities choose to use motorbikes to support their daily activities, has resulted in an increase in the number of drivers, especially motorcyclists. The density that occurs on the highway has an impact on the behavior of drivers which often causes aggressive behavior. Aggressive behavior arises as a result of congestion felt by drivers on the highway (Halim, 2008). This is because aggressive behavior is the most common behavior displayed when in dense conditions (Konecni, 1975).

As happened on Jalan Raya Kletek-Bundaran Waru. Traffic congestion occurs during rush hour, namely 07.00 WIB -10.00 WIB. Congestion cannot be avoided because people continue to do various activities including going to work, going to school, going to college, and other needs. From this congestion, many drivers behave aggressively towards other drivers, such as cursing other drivers for suddenly cutting off their vehicle. There are also drivers who honk repeatedly with quite high intensity in order to immediately get a way and be free from the congestion. In addition, we often find drivers who ride the sidewalk and accelerate their vehicles when the yellow light is on (Observation in March, 2017).

Not only in Surabaya, several areas in Jakarta also experienced similar things. Dozens

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of motorcyclists plundered the rights of pedestrians, driving their vehicles along the sidewalk of Jalan Letjen Suprapto, Cempaka Putih, Central Jakarta. Dozens of other motorcyclists broke through the Transjakarta bus lane on the Pulogadung-Harmoni corridor two route along with a number of car drivers in the area (Antara News, 2014).

At the Senen intersection, Jakarta, when the red light was on, dozens of drivers parked their vehicles until they covered the zebra crossing which should be a place for pedestrians to cross. Dozens of other motorcyclists tried to keep going even though the traffic light was still red. On the other hand, several drivers were busy trying to cross their motorbikes from the Transjakarta bus lane separator to avoid officers standing at the intersection of the highway (Antara News, 2014).

The behavior of motorcyclists, such as impatient drivers and refusing to give way, overtaking or overtaking, high speeds, and violating traffic laws, are included in aggressive driving behavior or also known as aggressive driving. Harris & Houston (2008) explained that aggressive driving is a form of unsafe driving behavior that can be measured without referring to emotional and motivational conditions, because there are many other causes, including stress, driver thinking patterns and coping with environmental conditions.

Aggressive driving behavior can be caused by several factors. Tasca (2000) stated that aggressive driving is influenced by internal and external factors. Internal factors include individual personality factors related to thinking, emotions, and biological characteristics, the individual's brain can no longer produce a number of endorgins that provide a feeling of comfort. External factors include family, peer, and environmental factors.

One of the factors that causes motorcyclists to behave aggressively is the environment. The environment plays a major role in shaping individual behavior. Tasca (2000) explains that there is a significant relationship between environmental conditions and aggressive behavior while driving. Drivers who drive more often in traffic jams tend to feel less angry while driving. Tasca (2000) adds that unexpected or unpredictable traffic jams can cause angry emotions in drivers which result in drivers doing aggressive driving.

Another environmental factor that influences the emergence of aggressive driving is density. Sarwono (1997) suggests that this density will have an impact on humans, one of which is the emergence of aggressive behavior. Holahan (1982) says that high density is one of the requirements for crowding, then this condition will cause stress in individuals and give rise to aggressive behavior. In agreement, Prakash & Kansal (2003) explain that one of the causes of aggressive driving is crowding. Crowding is a very subjective cause and will be perceived differently by each individual o can be called crowded perception.

METHOD

This research is a quantitative correlation research using data collection techniques in the form of a crowded perception scale and an aggressive driving tendency scale compiled by the researcher himself. This research is a sample research. The research subjects were 80 teenagers who in their daily activities use motorbikes and have a SIM (Driving License). The data analysis technique used is product moment analysis with a significance level of 0.05.

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RESULT AND DISCUSSION

Respondent's Characteristics

Grouping of Research Subjects Based on Gender

Based on gender, the research subjects are grouped into two, namely male and female with a description of the distribution of subjects as seen in the following table.

Table 9 Description of Research Subjects Based on Gender

	Amount (N)	Percentage (%)
Man	60	75
Woman	20	25
Total	80	100

Based on the description above, it can be seen that the number of male subjects was 60 people (75%) and the number of female subjects was 20 people (25%).

Grouping of Research Subjects Based on Age

Based on the age of the research subjects, the researcher obtained samples with an age range of 17 years to 23 years and were categorized as follows:

Table 10 Description of Research Subjects Based on Age

	Amount (N)	Percentage (%)
17-20 Y. O	13	16,25
21-23 Y. O	67	83,25
Total	80	100

Based on data from 80 research samples, there were 13 people aged 17-20 years with a percentage of (16.25%) and 67 people aged 20-23 years with a percentage of (83.75%).

Grouping of Research Subjects Based on Length of Use of Motorcycles

Based on the length of use of motorcycles, the subject grouping consists of 2 categories, namely 0.5 - 5 years and 6 - 9 years. The following is a description of the distribution.

Table 11 Description of Research Subjects Based on Length of Use of Motorcycles

	Amount (N)	Percentage (%)
0,5 - 6 tahun	13	16,25
7 - 9 tahun	67	83,75
Total	80	100

The description above shows that the number of research subjects based on the length of use of motorbikes 0.5 - 6 years was 13 people (16.25%) and 7 - 9 years was 67 people (83.25%).

Result

The relationship between crowded perception and aggressive driving tendencies is obtained by calculating the correlation coefficient. Therefore, the data analysis used is the product moment correlation analysis technique with the help of the SPSS (Statistical Package for the Social Sciences) for Windows version 16.00 program, using a significance level of 5% or 0.05. The results of the product moment correlation statistical test are as follows:

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Table 19 Product Moment Correlation Test Results

			Crowded Perception	Aggressive Driving
Crowded Perception	Pearson Correlation		1	0.546**
	Sig. (2-tailed)			0.000
	N		80	80
Aggressive Driving 80 80	Pearson Correlation		0.546**	1
	Sig. (2-tailed)		0.000	
	N		80	80

The hypothesis proposed in this study is that there is a relationship between crowded perception on the highway and the tendency of aggressive driving in teenage motorcyclists. From the results of data analysis that can be seen in the product moment correlation test table above, it shows that the study conducted on 80 teenage motorcyclists obtained a correlation coefficient value of 0.546 with a confidence level of 0.05 (5%), then the r table value can be obtained at 0.220. The calculated r value is greater than the r table (0.546> 0.220) with a significance of 0.000, because the significance <0.05, then Ha is accepted, meaning that there is a relationship between crowded perception on the highway and the tendency of aggressive driving in teenage motorcyclists.

Based on the results of the correlation coefficient, it can also be understood that the correlation is positive (+) so it shows a unidirectional relationship, meaning that the higher the crowded perception on the highway, the higher the tendency of aggressive driving in teenage motorcyclists. By paying attention to the correlation coefficient price of 0.546, it means that the nature of the correlation is moderate.

Discussion

This study aims to see the relationship between crowded perception on the highway and the tendency of aggressive driving in teenage motorcyclists. In the results of the normality test, both variables in this study have a normal distribution, namely the crowded perception variable with a p value = 0.384> 0.050 while the aggressive driving tendency variable has a p value = 0.655> 0.050, this means that both data on the crowded perception variable and the aggressive driving tendency variable have normal data distribution. Thus, data analysis can be carried out because there is no violation of the assumption of normality of the distribution of research data. While in the linearity test, a data distribution with a significance value of 0.314> 0.05 is obtained, which means that the data obtained has a linear relationship.

Furthermore, the results of the product moment analysis test in table 19, obtained a significance value of 0.000> 0.05, which means that the alternative hypothesis (Ha) is accepted. This means that there is a relationship between crowded perception and the tendency of aggressive driving. In addition, this study also shows a positive correlation coefficient value of 0.546, so the direction of the relationship is positive. This shows that the higher the perception of crowding, the higher the tendency for someone to drive aggressively,

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and vice versa.

This study is supported by Holahan's statement (1982) that density is one of the conditions for crowding. High density will cause crowding. Furthermore, Holahan added that crowding has a negative effect on individual psychology, including discomfort, stress, and aggressiveness. Therefore, the condition of a crowded road environment will cause a feeling of tightness in the driver, then it will affect stress levels and give rise to aggressive driving.

Supporting this statement, Hennessy & Wiesenthal (2000) explained that the condition of a busy highway environment will affect the individual's stress level, which will then allow aggressive behavior to occur while driving. Hennessy & Wiesenthal (2000) conducted previous research on drivers using the interview method using a cellphone when they were driving on road conditions with high and low congestion, the results showed that stress and aggressive behavior would increase when road conditions experienced high congestion.

Shinar & Compton (2004) added that in their research, it was seen that aggressive driving appeared more during peak traffic hours than during normal times. With increasingly dense road conditions, aggressive driving behavior will also increase. Crowded conditions will cause increased stress which ultimately gives rise to aggressive driving. In agreement, Prakash & Kansal (2007) in their research explained that one of the causes of aggressive driving is crowding. This is because aggressive behavior is the most common behavior displayed due to the crowding felt by drivers on the highway (Halim, 2008).

In this study, there are also additional research results that will differentiate crowd perception on the highway and a person's aggressive driving tendency. The additional research results include gender, age, and length of motorcycle use. From the descriptive analysis test that has been carried out, there are results about the description of gender on crowded perception on the highway and aggressive driving tendencies in table 13. In table 13, the average value of crowded perception in men is 84.30 and the average value of crowded perception in women is 79.75.While the average value of aggressive driving tendencies in men is 84.388 and the average value of aggressive driving tendencies in women is 82.50.This explains that crowded perception on the highway and aggressive driving tendencies in men are higher than women.

Furthermore, regarding the description of the age type of the subject, the lowest average crowded perception on the highway is obtained at the age of 23 years at 82.57 and the highest average crowded perception value is at the age of 19 years at 92.00. While the lowest mean value of aggressive driving tendency is found at the age of 21 years at 79.58 and the highest mean value of aggressive driving tendency is found in the age group of 19 years at 91.50. This explains that crowded perception behavior on the highway and aggressive driving tendencies in 19-year-old subjects are higher than adolescents aged 20, 21, 22, and 23 years.

The last additional research conducted by researchers is a description of crowded perception on the highway and aggressive driving tendencies seen from the length of time the subject uses a motorcycle. Table 15 above shows that the highest mean value of crowded perception is found in subjects with a length of motorcycle use for 5 years of 92.00 and the highest mean value of aggressive driving tendencies is also found in subjects with a length of

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motorcycle use for 5 years of 91.50. This explains that the crowded perception on the highway and the tendency of aggressive driving behavior are mostly carried out by teenagers who use motorbikes for 5 years.

The results of this study prove the opinion of experts who state that crowded perception on the highway will lead to a tendency of aggressive driving behavior is true. Halim (2008) states that aggressive actions are the most common actions displayed as a result of crowdedness felt by motorists on the highway. This is also what is done by teenage motorcyclists who are the sample of researchers that they tend to be aggressive in driving during heavy traffic conditions.

CONCLUSION

Based on the results of the study, it can be concluded that there is a significant relationship between crowded perception on the highway and aggressive driving tendencies in adolescent motorcyclists. The level of aggressive driving tendency is more done by male teenagers than female teenagers and it is seen in the age group of 19 years.

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