

The Relationship between Gender, Age, and Knowledge with Safety Riding Behaviour at Productive Age in Java Island

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ABSTRACT

According to World Health Organization (WHO) in the 2018 Global Status Report on Road, the number of deaths due to traffic accidents in the world increases to 1.35 million cases every year. In Indonesia, traffic accidents are also a serious problem and increasing every year. Therefore, this study aims to determine the relationship between gender, age, and knowledge with safety riding behaviour at productive age in Java. A descriptive study with a cross sectional study design was chosen to analyse. This research was conducted from March–October 2021. The population in this study were all users or riders of two–wheelers and four–wheelers of productive ages on Java Island. The research samples are 774 respondents with random sampling. Data were analysed using univariate analysis and bivariate analysis with chi-square test. The results of the study showed that the number of male respondents was 51.8%, age > 30 years was 53.1%, good knowledge was 54.4% and good safety riding behaviour was 63.7%. The results of statistical tests showed that there was a significant relationship between gender (OR 1.78 1.32-2.40), age (OR 1.72 1.28-2.32), knowledge (OR 2.59; 1.92- 3.50) with safety riding behaviour. It is recommended that the government and related parties provide more frequent socialization and education related to driving safety, especially for adolescents, young adult and women.

Keywords: safety, riding, accident

INTRODUCTION

Deaths and accidents caused by traffic are global problem and show an increasing trend. According to the World Health Organization (WHO) report in the 2018 Global Status Report on Road, the number of deaths due to traffic accidents in the world w 1.35 million. These data show that deaths caused by traffic accidents are higher than HIV/AIDS, tuberculosis, and diarrhea. 93% of deaths are from Middle low – income countries.(World Health Organization (WHO), 2018) In addition to death, accidents also cause material losses, minor injuries, and serious injuries.(Djaja, Widyastuti, Tobing, Lasut, & Irianto, 2016; Halim, Adisasmata, Ramli, & Aly, 2017)

In Indonesia, traffic accidents are also a serious problem and are increasing every year. Report from the Indonesian National Police, the number of traffic accidents in 2019 increased by 3% compared to 2018.(Ramadhan, 2019) The results of the analysis of traffic accidents in Indonesia in 2010-2014 show that the highest types of vehicles involved in traffic accidents are motorcycles and both cars. The highest proportion of traffic accidents is in West Java, Central Java, East Java, DKI Jakarta, and North Sumatra.(Djaja et al., 2016) Meanwhile, data analysis of the National Transportation Safety Committee (NTSC) in 2007-2016 shows that the highest time of traffic accidents (44%) occurred during productive hours, namely 12.00-18.00.(Dwi, 2017)

WHO states that the highest number of deaths from traffic accidents is in the age range of 5-29 year–old.This shows that children and adolescents are an age group that ignores driving safety.(World Health Organization (WHO), 2018) Meanwhile in Indonesia, the results of the analysis of traffic accidents in Indonesia in 2010 - 2014 show that the highest number of traffic accident victims is in the productive age range, namely the age of 26-30 years as many as 343,743 people. Furthermore, the second highest number of victims is the age group of 16-25 years with a total of 102,881 victims. (Djaja et al., 2016) Thus, adolescents and productive age are the largest groups contributing to traffic accidents.

Adolescence is the beginning of an interest in trying motorized vehicles even though their knowledge of driving is still lacking so they are often ignorant of traffic rules and driving safety. (Alamsyah, 2013) Productive age, vehicles are important for the high need for mobilization. However, high mobility without being accompanied by good driving knowledge is at risk of having a traffic accident. Research shows private employees are the highest number of traffic accidents. Then followed by school students or university students.(Djaja et al., 2016) By gender, women are less skilled at driving than men because women are more likely to be passengers than drivers. (Haryanto, 2016) Therefore, this study aims to determine the relationship between gender, age, and knowledge with safety riding behaviour at productive age in Java.

METHOD

This research is a descriptive study with a cross sectional study design. This research was conducted from March – October 2021. The population in this study were all users or drivers of two-wheeled and four-wheeled adolescents and productive ages on the island of Java. While the research sample is 774 respondents. Determination of the number of samples is determined by using the proportion estimation test formula and sampling based on random sampling. The inclusion criteria used were adolescents and productive age, drivers of two-wheeled or four-wheeled vehicles and residing on the island of Java. This research has passed the ethics test at the Health Research Ethics Commission STIKES Indonesia Maju No. 741/Sket/Ka-Dept/RE/STIKIM/VIII/2021.

The data collected is the characteristics of the respondents, driving knowledge and safety riding behavior. Each of the elements of driving knowledge and safe riding behavior is measured using 15 questions that have been validated and reliable. Data was collected directly from respondents using a google form questionnaire that was distributed online via the link <http://bit.ly/Roda2Roda4>, which was disseminated using WhatsApp's. Data management, which includes data coding, data editing, and data cleansing, is carried out once the data collected is sufficient. There were 858 people that filled out the survey, however only 774 of them completed it entirely. Furthermore, based on the mean value, data analysis of driving safety knowledge and safety riding conduct was divided into two categories (good and poor). The average level of driving safety knowledge is 8.6, while the average level of riding safety conduct is 9.0. Using the IBM SPSS Statistics tool, the data was also examined univariate and bivariate with chi-square tests.

The description of the characteristics of research respondents can be seen in Table 1.1 below:

Table 1.1 Characteristics of Respondents (n = 774)

Characteristics of Respondents		Amount (n)	Percentage (%)
Domicile	DKI Jakarta	154	19,9
	Banten	59	7,6
	Jawa Tengah	50	6,5
	Jawa Timur	166	21,4
	Jogjakarta	22	2,8
	Jawa Barat	323	41,7
Gender	Man	401	51,8
	Woman	373	48,2
Age	< 30 Y	363	46,9
	≥ 30 Y	411	53,1
Vehicle	Motor	524	67,7
	Car	74	9,6
	Motor and car	176	22,7

Characteristics of Respondents		Amount (n)	Percentage (%)
Knowledge	Poor	353	45,6
	Good	421	54,4
Safety Riding Behaviour	Poor	281	36,3
	Good	493	63,7

Based on table 1.1, it is found that 51% of respondents are male and domiciled in West Java (41.7%). Most of the respondents are 20-30 years old (50.1%). Most respondents ride motorbikes (67,7%). Good knowledge of respondents is 54.4% and good safety riding behaviour is 63.7%

The results showed that 54.4% of respondents had a good understanding of driving safety. This means that more than half of the respondents have good knowledge of driving safety. Knowledge of driving safety is a provision that must be possessed before driving a vehicle related to mastery of abilities, control skills, mentality, and attitude. With knowledge of driving safety, it will familiarize someone to be more careful in driving a vehicle.(Wahyuningsih & Ramdana, 2020) Previous research in Medan City also found that more than half of the respondents (55%) had knowledge of good driving behaviour.(Manurung, Sitorus, & Rinaldi, 2019)

Table 1.2 below shows the findings of the bivariate analysis.

Table 1.2 The relationship between gender, age, and knowledge with driving safety behaviour (*safety riding*) (n=774)

Variable		Safety Driving Behaviour				Total		OR (95% CI)	P value
		Poor		Good					
		n	%	n	%	n	%		
Gender	Woman	161	43,2	212	56,8	373	100	1,78 (1,32-2,39)	0,001
	Man	120	29,9	281	70,1	401	100		
Age	<30 Y	156	43,0	207	57,0	363	100	1,72 (1,28-2,32)	0,001
	≥30 Y	125	30,4	286	69,6	411	100		
Knowledge	Poor	170	48,2	183	51,8	353	100	2,59 (1,92-3,50)	0,001
	Good	111	26,4	310	73,6	421	100		

Based on table 1.2, it is found that there are as many as 43.2% of female respondents who have lack driving safety behaviour. The results of statistical tests obtained p value = 0.001 so that there is a significant relationship between gender and driving safety behaviour. From the results of the analysis, the value of OR = 1.78 (1.32-2.39), which means that female respondents have a 1.78 times chance of having lack of driving safety behaviour compared to male respondents.

The results showed that women were more at risk of having lack driving behaviour than men. According to Haryanto (2016) men have better driving skills than women. Women's skills in driving are also inseparable from social roles in society, where the presence of a woman often acts as a passenger compared to the main driver when she has a partner.(Haryanto, 2016)

Based on table 1.2, the results show that there are 43.0% of respondents aged <30 years have lacked driving safety behaviour. The results of statistical tests obtained p value = 0.001 so that there is a significant relationship between age and driving safety behaviour. From the results of the analysis, the value of OR = 1.72 (1.28-2.32), which means that respondents aged <30 years have a 1.72 times risk of having a lack of driving safety behaviour compared to respondents aged >30 years.

The results showed that respondents aged <30 years were more at risk of having lack driving behaviour than respondents aged >30 years. According to Haryanto (2016) young drivers have

minimal experience in driving. The existence of experience in driving leads to the extent to which the driver's ability to control the vehicle, both in normal conditions and in sudden conditions that require a quick response. In addition, young drivers are less mature in carrying out risk assessments so they tend to dare to take risky decisions such as driving at high speed, overtaking other vehicles, and violating traffic rules without paying attention to the impact they will bear.(Haryanto, 2016) Research conducted by Manurung also shows that there is a relationship between age and behaviour safety riding.(Manurung et al., 2019)

Results show that there are 48.2% of respondents with a lack of knowledge have lack driving safety behaviour too. Statistical test results obtained p value = 0.001 so that there is a significant relationship between knowledge and driving safety behaviour. From the results of the analysis, the value of OR = 2.59 (1.92 - 3.50) which means that respondents with a lack of knowledge have a 2.59 times chance of having lack driving safety behaviour compared to respondents who have good knowledge.

The results of this study indicate that there is a significant relationship between knowledge and driving safety behaviour. Respondents who lack knowledge are 2.59 times more likely to have lack driving safety behaviour than respondents who have good knowledge. Aulia's research also shows that there is a relationship between knowledge and safety riding on online motorcycle taxi drivers in Semarang City.(Aulia, Kurniawan, Wahyuni, Masyarakat, & Diponegoro, 2020) Likewise with research conducted on high school students and university students in the city of Semarang.(Eni Mahawati, 2013)

Knowledge is one of the factors that influence a person's behaviour. Someone who has extensive knowledge will be wiser in making decisions or actions. Increased knowledge will encourage a person's awareness to act based on the knowledge possessed.¹⁰ Thus, respondents who have good driving safety knowledge will be more likely to behave or act safely in driving than respondents who have lack knowledge.

CONCLUSION

The results of the study showed that the number of male respondents was 51.8%, age > 30 years was 53.1%, good knowledge was 54.4% and good safety riding behaviour was 63.7%. The results of statistical tests show that there is a significant relationship between gender, age, and knowledge with safety riding behaviour.

SUGGESTION

It is recommended that the government and related parties often increase safe driving campaigns such as providing counselling, socialization, training, distributing brochures, and so on to increase adolescents and young adults knowledge and awareness about the importance of safety riding behaviour, especially adolescents and young adults as well as to women. Other researchers are expected to examine differences in knowledge and safety riding behavior between two-wheeled and four-wheeled riders.

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