

Safety Driving Behaviour of Adolescents Pre-owning Driving License (SIM)

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Abstract: Several studies on the causes of traffic accidents show that the main causes of accidents include road conditions, vehicles, environment or weather, and people. Humans as the main cause of accidents have derivative factors such as lack of skills and experience, behaviour that ignores safety, carelessness, and fatigue. This study was conducted to determine the level of understanding of traffic signs and driving safety in adolescents who were not yet 17 years old. This age group generally already uses motorbikes for various travel activities even though it is prohibited and this age group is not allowed to have a driving license (SIM). The specific target to be achieved in this study is to know the description and understanding of the dangers of traffic by motorized vehicles for those under 17 years of age. This research was conducted through a media questionnaire containing questions related to adolescent behaviour in driving motorized vehicles. The results showed that almost some respondents understand traffic signs and safe driving, as indicated by the wrong answers in the range below 35%. There needs to be a review of the driving behaviour for adolescents related to understanding safety in driving a motorized vehicle.

1 INTRODUCTION


A traffic accident is an incident on the road that is unexpected and unintentionally involving a vehicle with or without other road users which results in human casualties and/or property loss (UU Republik Indonesia No. 22 Tahun 2009, 2009). Based on the WHO official report in the "Global status report on road safety" published in June 2009, it is stated that every year traffic accidents have resulted in 1.35 million deaths and become the leading cause of death for children and young adults (World Health Organization, 2018).


In the National Road Safety Master Plan 2011 - 2035 it is stated that in 2010 the number of deaths due to accidents in Indonesia reached 31,234 people, which means that every 1 hour there are about 3-4 people died due to road traffic accidents (Government of Indonesia, 2011).

Indonesia is facing serious and worsening road safety problems. More than 32,000 road users die in accidents every year across Indonesia, and 1 million more are injured. The fatality rate of 5.1 (deaths per

10,000 registered vehicles) is a high figure when compared to Australia at 1.2 and Malaysia at 3.7. In recent years, the drastic increase in the number of motorized vehicles on the road, especially motorbikes, has been followed by an increase in the number of fatalities (Howard, 2011). This condition will tend to increase. Based on the prediction regarding the number of fatalities due to traffic accidents in Indonesia using Smeed's Law, it is estimated that Indonesia will experience 37,493 fatalities every year in 2020 if preventive measures are not taken (Yahya, 2011).

The factors causing the largest traffic accidents are caused by human error, driver behaviour, road factors, and vehicle factors. Drivers are the main cause of accidents (Bucchi et al., 2012; Disassa & Kebu, 2019). Various studies and reports on traffic safety regarding the main causes of traffic accidents due to human error are generally caused by 3 (three) main things, namely distraction in the driver, fatigue experienced by the driver while driving, vehicle, and driver behaviour.

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Accidents involving adolescents are common (Rimal et al., 2019; Scott-Parker et al., 2013). Many factors influence the occurrence of traffic accidents involving teenagers. There is an assumption that learning how to drive a vehicle before getting a license can reduce the incidence of accidents by teenagers. Pre-licensed driving did not reduce crash risk among learners or restricted licensed drivers, and even in some cases may have increased risk (Begg et al., 2014; Vaca et al., 2021). Young people should be discouraged from the illegal behaviour of driving a car on-road before licensing (Stavrinos et al., 2020; Thigpen & Handy, 2018).

Permitting to get a driving license at the age of at least 17 years in Indonesia is not without reason, because children under that age may be physically capable of driving, but psychologically they do not have the maturity to decide and act according to the rules or ethics on the road (Begg et al., 2014; Pope et al., 2019; Scott-Parker et al., 2013)

Of the many studies that have been mentioned previously, none of them have discussed the driving safety behaviour of teenagers who do not have a driver's license but already driving on the highway. This study was conducted to determine the level of understanding of driving signs and safety in adolescents who were not yet 17 years old. In Indonesia, this age group generally already uses motorbikes for various travel activities even though it is prohibited and not allowed to have a driving license. The specific target to be achieved in this study is to know the description and understanding of the dangers of traffic by motorized vehicles for those under 17 years of age.

2 METHODS

2.1 Participants

This research was conducted using a questionnaire data collection method for a group of junior high school students in Sukoharjo, Central Java, Indonesia. This group of junior high school students was chosen because this group of adolescents has an age range under 17 years and many of them already have the experience of driving a motorized vehicle (Thigpen & Handy, 2018). Respondents were selected based on the respondent's experience using motorized vehicles on the highway. Respondents were given questionnaires regarding traffic signs and safe driving behaviour. The research was conducted by making a questionnaire of 30 points divided into 15 questions of understanding of traffic signs and 15

questions of understanding about safety riding, which were then carried out by the respondents. Questions about understanding traffic signs consist of 5 questions about warning signs, 5 questions about command signs, and 5 questions about prohibition signs. The questionnaire on driving safety contains questions about the completeness of vehicle documents, driving behaviour, hazardous conditions on the road, and also the driver's safety protection.

2.2 Procedure and Measures

The research stages started from the first, the students were asked to fill out a questionnaire containing their personal biographical data including gender and age. Gender and age are used to determine the distribution of data filling the questionnaire.

In the next stage the respondent filled out a questionnaire about understanding the traffic signs using a motorized vehicle. The test material contains 15 multiple choice questions with a test duration of 15 minutes. The questionnaire about traffic signs contains the extent of the respondent's knowledge of four types of signs, namely Warning Signs, Command Signs, Prohibition Signs, and Guidance Signs.

After the questionnaire on the understanding of traffic signs is done, the same respondent is asked to fill out a questionnaire containing 15 numbers of safety riding with a processing time of 15 minutes.

The answers to the questionnaire were then processed to get conclusions about the level of understanding of driving signs and safety in adolescent respondents who were not yet 17 years old. The research stage is depicted in Figure 1 The process of the respondent filling out the questionnaire



Figure 1: The process of the respondent filling out the questionnaire.

3 RESULTS AND DISCUSSION

Junior high school students are chosen because they have an age range between 12 to 16 years and they are not yet entitled to have a motorized vehicle driving license, but many of them go and return to school or travel outside of school by driving a motorized vehicle, especially a motorcycle. The age limit for obtaining a driving license is at least 17 years old because the child is below the physical age that may be able to drive, but psychologically has the maturity to determine and act not according to the rules or ethics on the road. So those teenagers are not allowed to drive motorized vehicles on public roads. This prohibition can be carried out by parents at home, teachers at schools, or the surrounding community.

The results of questionnaire data processing from 15 questions about understanding traffic signs and 15 questions about understanding safety riding showed that most partners did not understand traffic signs and safe riding. Of the 15 questions regarding traffic signs, there is an average of 72.69% correct answers. Respondents answered with the lowest score of 20% correct and the highest score of 93.33%. With the largest population data in the range of 66.67% - 80.00%. The complete results of the questionnaire analysis regarding traffic signs are shown in Figure 2.

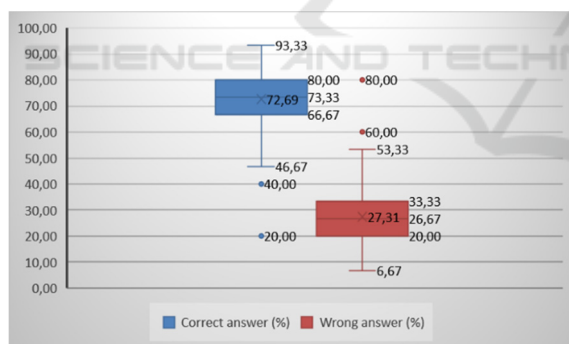


Figure 2: Understanding of Traffic Signs.

These results indicate that respondents who are actually under 17 years of age and do not yet have a driving license, already understand traffic signs as a basis for knowledge of driving on the highway.

Meanwhile, the questionnaire regarding the understanding of safety riding shows that of the 15 questions, there is an average of 68.40% correct answers, with the lowest score of respondents who answered 20% correctly and the highest was 86.67%. For most population data, correct answers are in the range of 66.67% - 73.33%. The complete results of the questionnaire analysis regarding safety riding are

shown in Figure 3. The questionnaire regarding the understanding of safety riding indicates that respondents who are actually under 17 years of age and do not yet have a driving license, already understand safety riding as a basis for knowledge of driving using a motorcycle on the highway.

If the data from the questionnaire on the understanding of traffic signs and safe riding are combined, then on average 70.54% (Figure 4) of respondents already understand traffic signs and safe riding. This is quite surprising considering that junior high school students have not received permission to drive on the highway because they do not have the right to have a driving license.

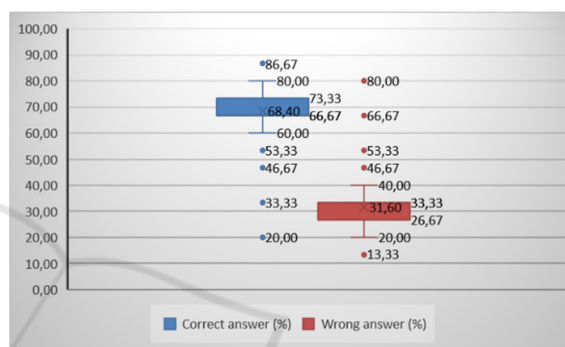


Figure 3: Understanding of Safety Riding.



Figure 4: Understanding of Traffic Signs and Safety Riding.

4 CONCLUSIONS

The results showed that the understanding of traffic signs and safety riding on adolescents who do not have a driving license is quite good. Most of the respondents understood traffic signs and safety riding, although there were a few who did not. The results showed that almost some respondents understand traffic signs and safe driving, as indicated by the wrong answers in the range of numbers below 35%. There needs to be a review of the driving behaviour for adolescents related to understanding safety in driving a motorized vehicle.

This sounds good for the level of driving safety, but teenagers at the age of respondents under 17 years old do not yet have mental stability in driving. The level of maturity of the driver's soul under the age of 17 years can be used as further research on themes related to this research.

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