

Factors related to safety riding behaviors among grade XII students of SMKN 3 Mandau Duri

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ABSTRACT

Background: The occurrence of traffic accidents is proof that road users are undisciplined in riding. Accident rates among the students of SMKN 3 Mandau Duri reached their highest levels in 2019 and 2022. Based on the information from interviews conducted with 6 students, the causes of the accidents were that they rode without SIM C, three of them mentioned that wearing a helmet was not compulsory, and peers asked them to act unsafely. This study is aimed at finding out the correlation between knowledge, attitudes, possession of SIM C, as well as peers and safety riding behaviors among the Grade XII students of SMKN 3 Mandau Duri.

Methods: This study is quantitative in nature using a cross sectional approach. The population of this study consisted of 309 students from which proportional random sampling was applied so that as many as 174 respondents were selected as the samples. The data analysis was executed using univariate and bivariate Chi Square tests. The instrument utilized in this study was the questionnaire from researchers whose validity and reliability have been tested.

Results: Correlations were found between knowledge and safety riding behaviors (p -value = 0.006), attitudes and safety riding behaviors (p -value = 0.000), SIM C possession and safety riding behaviors (p -value = 0.000), and peers' influence and safety riding behaviors (p -value = 0.000).

Conclusion: There were correlations between knowledge, attitude, SIM C possession, as well as peers' influence and safety riding behaviors among the Grade XII students of SMKN 3 Mandau Duri



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1. Introduction

The increasing occurrence of traffic accidents among the society cannot be separated from the increasing use of motor vehicles. According to the data from the Police of the Republic of Indonesia, there were a total of 116,411 recorded accidents in Indonesia during 2019 ([Badan Pusat Statistik](https://www.bps.go.id/),

2022). In 2020, the number of fatalities due to traffic and road accidents was recorded at 23,529. As high as 73% of this total number was contributed by the fatalities of motorcycle riders ([Kementerian Perhubungan Republik Indonesia, 2022](#)). The Head of Riau Province Police, Irjen Pol Agung Setya Imam, mentioned that there were 1,160 accidents during 2020. This was an increase from the 2019 accident number of 911 ([Riaueditor.com, 2020](#)).

Traffic accidents may be caused by a number of factors from human factors (93.52%), vehicles (2.76%), road conditions (3.23%), to environmental factors (0.49%) (Supiyono., 2018). These cases are dominated by young age group (productive age). Seen from the accident profiles based on education level in 2020, most accidents happened among those with senior high school (SLTA) education with as many as 80,641 cases ([Ditjen Perhubungan Darat, 2009](#))

SMKN 3 Mandau is one of vocational schools with the bases of technology and engineering located in Duri-Dumai road at Km 18, Bengkalis Regency. This school consists of 8 departments with as many as 1,077 students in 2022. Based on the data collected during a training on safety riding conducted by the Traffic Unit of Duri Police, as many as 650 students rode motorcycles to school and 230 of them were Grade XII students. Among the total of 309 students of Grade XII, only 91 students or 29.44% were in possession of the SIM C, while the remaining 70.56% did not have one. The possession of SIM C has a significant influence on riding safety since it is the administrative requirement and the proof that a person has the skill to ride a motorcycle ([Damaya, 2019](#))

It is known that the accident rates among the students of SMKN 3 Mandau in the last 4 years have been relatively high. Accidents happened every year from 2019 to 2022. The highest number of accidents occurred in 2019 and 2022 with as many as 3 accidents in each of these years where 1 of them had caused a fatality. Meanwhile, the lowest rate was recorded in 2021 with 1 fatal accident. Such a situation should be paid attention by the school for the sake of students' safety by minimizing the occurrence of traffic accidents every year.

Preliminary study and observation was conducted on 28 September 2022 at SMKN 3 Mandau. It was found that there were many students who rode motorcycles without mirrors, non-standard exhausts, and incomplete body parts. There were also students who did not wear helmets during riding. In some occasions, the researchers found some students riding recklessly on the road. It is known that SMKN 3 Mandau is a school located in the operational area of oil and gas company PT Pertamina Hulu Rokan so that there are many heavy vehicles passing the road and this increases the risk of accidents.

Green (1980) concludes that there are 3 factors which influence individual behaviors including driving, namely predisposing factor, enabling factor, and reinforcing factor ([Notoatmojo, 2012](#)). Predisposing factors may take the forms of knowledge and attitude, enabling factors are related to facilities and infrastructures such as the possession of SIM C, while reinforcing factors are related to peers. This theory became the basis on which the researchers conducted the analyses of the factors correlated to the safety riding behaviors among the Grade XII students of SMKN 3 Mandau Duri.

2. Materials and Method

This study design is quantitative in nature using a cross sectional approach. The population of this study consisted of 309 students from which proportional random sampling was applied. The sampling resulted in as many as 174 respondents as the samples consisting of 19 samples from the Grade XII of Oil & Gas Drilling Engineering, 20 from Grade XII of Oil & Gas Production Engineering, 38 from Grade XII of Geomatic Engineering, 20 from Grade XII of Mining Geology Engineering, 20 from Grade XII of Industrial Chemical Engineering, 19 from Grade XII of Mechanical Engineering, 19 from Grade XII of Heavy Equipment Engineering, and 19 from Grade XII of Motorcycle Engineering and Business. The data were analyzed using univariate and bivariate Chi Square tests with a significance of 95% ($\alpha = 0.05$). The instrument utilized to collect data was a questionnaire where the measured variables consisted of knowledge, attitude, possession of SIM C, peers' influence, and safety riding behaviors.

3. Results

3.1. Characteristics of Respondents

3.1.1. Gender

The distribution of respondents' characteristics based on genders is as shown in the following table.

Table 1. Distribution of Respondents' Genders

No	Gender	Frequency	Percentage (%)
1.	Female	71	40,8
2.	Male	103	59,2
	Total	174	100

In [Table 1](#), it is shown that the respondents were dominated by male respondents with as many as 103 students (59.2%) whereas female respondents constituted as many as 71 students (40.8%).

3.1.2. Age

The distribution of respondents' age characteristics is presented in the following table.

Table 2. Distribution of Respondents' Age

No	Age	Frequency	Percentage (%)
1.	17	60	34,5
2.	18	96	55,2
3.	19	16	9,2
4.	20	2	1,1
	Total	174	100

From [Table 2](#), it is found that the youngest respondents were at the age of 17 with as many as 60 students (34.5%) and the oldest ones were at the age of 20 with as many as 2 students (9.2%).

3.1.3. Departments

The distribution of respondents' departments is as presented in the following table.

Table 3. Distribution of Respondents' Departments

No	Grade Class	Frequency	Percentage (%)
1.	XII Oil & Gas Drilling Engineering	19	10,9
2.	XII Oil & Gas Production Eng.	20	11,5
3.	XII Geomatic Engineering	38	21,8
4.	XII Mining Geology Engineering	20	11,5
5.	XII Industrial Chemical Eng.	20	11,5
6.	XII Mechanical Engineering	19	10,9
7.	XII Heavy Equipment Eng.	19	10,9
8.	XII Motorcycle Eng. and Business	19	10,9
	Total	174	100

From [Table 3](#), it is found that the biggest number of respondents were from the department of Geomatic Engineering with as many as 38 students (21.8%). Whereas the smallest number came from the departments of Oil & Gas Drilling Engineering, Mechanical Engineering, Heavy Equipment Engineering, and Motorcycle Engineering and business with 19 students in each of them (10.9%).

3.2. Univariate Analysis

3.2.1. Knowledge

The frequency distribution of respondents based on their knowledge of safety riding behaviors is as follows.

Table 4. Frequency Distribution of Respondents' Knowledge

No	Knowledge	Frequency	Percentage (%)
1.	Low	78	44,8
2.	High	96	55,2
	Total	174	100

According to [Table 4](#), as many as 78 respondents (44.8%) had low level of knowledge and as many as 96 respondents (55.2%) had high level of knowledge regarding safety riding behaviors.

3.2.2. Attitude

Frequency distribution based on students' attitude towards safety riding behavior is as follows.

Table 5. Frequency Distribution of Respondents' Attitude

No	Attitude	Frequency	Percentage (%)
1.	Less	81	46,6
2.	Good	93	53,4
	Total	174	100

Based on Table 5, as many as 81 respondents (46.5%) showed less attitude and as many as 93 respondents (53.4%) showed good attitude towards safety riding behaviors.

3.2.3. Possession of SIM C

Frequency distribution based on respondents' possession of SIM C with regard to their safety riding behaviors is as follows.

Table 6. Frequency Distribution of Respondents' Possession of SIM C

No	Possession of SIM C	Frequency	Percentage (%)
1.	Do not possess	141	81
2.	Possess	33	19
	Total	174	100

Table 6 shows that there were as many as 141 respondents (81%) who did not possess SIM C and as many as 33 respondents (19%) possessing SIM C.

3.2.4. Peers' Influence

Student peers' influence on safety riding behavior is reflected in the following frequency distribution.

Table 7. Frequency Distribution of Respondent Peers' Influence

No	Peers' Influence	Frequency	Percentage (%)
1.	Supporting	94	54
2.	Not Supporting	80	46
	Total	174	100

Based on Table 7, there were as many as 94 respondents (54%) who had supporting peers and 80 respondents (46%) who had non-supporting peers with regard to safety riding behaviors.

3.2.5. Safety Riding Behaviors

Frequency distribution of respondents' safety riding behaviors is as follows.

Table 8. Frequency Distribution of Respondents' Safety Riding Behaviors

No	Safety Riding Behaviors	Frequency	Percentage (%)
1.	Unsafe	86	49,4
2.	Safe	88	50,6
	Total	174	100

According to Table 8, there were as many as 86 respondents (49.4%) who had unsafe riding behavior and as many as 88 respondents (50.6%) who had safe riding behavior.

3.3. Bivariate Analysis

3.3.1. Correlation between Knowledge and Safety Riding Behavior

The test results on the correlation between the level of knowledge and safety riding behavior among the students using Chi-Square test are as follows:

Table 9. Chi-Square Test Results on Correlation between Level of Knowledge and Safety Riding Behavior

Knowledge	Safety Riding Behavior				Frequency		p-value
	Unsafe		Safe		N	%	
	n	%	n	%			
Low	50	64,1	28	35,9	78	100	0.001
High	36	37,5	60	62,5	96	100	
Total	86	49,4	88	50,6	174	100	

Analyzed from [Table 9](#), it can be seen that, from the total of 78 respondents with low knowledge of safety riding, as many as 64.1% (50 respondents) tended to have unsafe behaviors. Whereas, the remaining 35.9% (28 respondents) tended to have safe behaviors. On the other hand, from the total of 96 respondents with high knowledge of safety riding, as many as 37.5% (36 respondents) tended to have unsafe behaviors, while the remaining 62.5% (60 respondents) tended to have safe behaviors.

Based on the analysis using Chi-Square test, a p-value of 0.001 ($p < 0.05$) was obtained, meaning that H_a was accepted and H_o rejected. As such, the analysis results showed that there was a correlation between knowledge and safety riding behaviors among the Grade XII students of SMKN 3 Mandau Duri.

3.3.2. Correlation between Attitude and Safety Riding Behavior

Results of tests on correlation between attitude and safety riding behaviors among the students using Chi-Square are as follows.

Table 10. Results of Uji Chi-Square Tests on Correlation between Attitude and Safety Riding Behaviors

Attitude	Safety Riding Behaviors				Frequency		p-value
	Unsafe		Safe		N	%	
	n	%	n	%			
Less	50	61,7	31	38,3	81	100	0.004
Good	36	38,7	57	61,3	93	100	
Total	86	49,4	88	50,6	174	100	

Based on the analysis of [Table 10](#), it is seen that, from 81 respondents with less attitude to safety riding, as many as 61.7% (50 respondents) tended to have unsafe behaviors, while the remaining 38.3% (31 respondents) tended to have safe behaviors. On the other hand, from a total of 93 respondents with good attitudes to safety riding, as many as 38.7% (36 respondents) tended to have unsafe behaviors, while the remaining 61.3% (57 respondents) tended to have safe behaviors.

The analysis of Chi-Square tests has resulted in a p-value of 0.004 ($p < 0.05$), indicating that H_a was accepted and H_o rejected. This shows that there was a significant correlation between attitudes and safety riding behaviors among the Grade XII students of SMKN 3 Mandau Duri.

3.3.3. Correlation between Possession of SIM C and Safety Riding Behaviors

The result of correlation tests between the possession of SIM C and safety riding behaviors using Chi-Square test is as follows.

Table 11. Result of Chi-Square Test on Correlation between Possession of SIM C and Safety Riding Behaviors

Possession of SIM C	Safety Riding Behavior				Frequency		p-value
	Unsafe		Safe		N	%	
	n	%	n	%			
Do not possess	85	60,3	56	39,7	141	100	0.000
Possess	1	3	32	97	33	100	
Total	86	49,4	88	50,6	174	100	

The analysis of [Table 11](#) showed that, from a total of 141 respondents who did not possess SIM C with regard to their safety riding behaviors, as many as 60.3% (85 respondents) tended to have unsafe behaviors, while the remaining 39.7% (56 respondents) tended to behave safely. On the other hand, from a total of 33 respondents with the possession of SIM C, only 3% (1 respondent) tended to behave unsafely, while the rest 97% (32 respondents) tended to have safe behaviors.

The analysis of the Chi-Square test has resulted in a p-value of 0.000 ($p < 0.05$), indicating that H_a was accepted and H_o was rejected. This shows that there was a significant correlation between the possession of SIM C and safety riding behaviors among the Grade XII students of SMKN 3 Mandau Duri.

3.3.4. Correlation between Peers' Influence and Safety Riding Behaviors

The results of correlation test between peers' influence and safety riding behaviors among the students using the Chi-Square test are as follows.

Table 12. Results of Chi-Square Test on Correlation between Peers' Influence and Safety Riding Behaviors

Peers' Influence	Safety Riding Behaviors				Frequency		p-value
	Unsafe		Safe		N	%	
	n	%	n	%			
Non Supporting	67	71,3	27	28,7	94	100	0.000
Supporting	19	23,8	61	76,3	80	100	
Total	86	49,4	88	50,6	174	100	

The analysis of Table 12 has shown that, from a total of 94 respondents who had non-supporting peers with regard to safety riding, as many as 71.3% (67 respondents) tended to behave unsafely, while the remaining 28.7% (27 respondents) tended to have safe behaviors. On the other hand, from a total of 80 respondents with supporting peers with regard to safety riding, as many as 23.8% (19 respondents) tended to behave unsafely, while the rest 76.3% (61 respondents) tended to have safe behaviors.

The analysis using the Chi-Square tests has resulted in a p-value of 0.000 ($p < 0.05$), indicating that H_a was accepted and H_o was rejected. This showed that there was a significant correlation between peers' influence and safety riding behaviors among the Grade XII students of SMKN 3 Mandau Duri.

4. Discussions

4.1. Correlation between Knowledge and Safety Riding Behaviors

Bivariate analysis showed that there was a correlation between knowledge and safety riding behavior among the Grade XII students of SMKN 3 Mandai Duri (p -value = 0.001). This finding is consistent with the Precede-Proceed theory which indicates that predisposing factors, including knowledge, may influence an individual's behaviors (Notoatmojo, 2012). In this context, an individual's behaviors tend to follow his/her level of knowledge, where a high level of knowledge would tend to result in good behaviors and vice versa.

The result of this study is consistent with the study by Mirfan et al., [8] who found that there was a significant correlation between knowledge and safety riding behavior among the students of SMA 1 Lubuk Alung with a p -value of 0.002 (p -value < 0.05). A similar result was also obtained from the study by Astuti (2020) who evaluated correlation between knowledge and safety riding behavior among the teenagers of SMAN 7 Bengkulu where significant correlation existed with a p -value of 0.02 (p -value < 0.05).

The data collected from the field showed that 64.1% respondents had a low level of knowledge with unsafe riding behaviors, whereas 50.6% of respondents had high level of knowledge and had safe riding behaviors. This is because respondents with low level of knowledge of safety riding would find difficulties in understanding how to behave safely in riding. Whereas, respondents with a high level of knowledge would find it easier to understand how to behave safely before, during, and after riding.

Knowledge constitutes a significantly vital cognitive domain in defining an individual's behaviors. According to studies, behaviors which are based on knowledge would remain stronger than those without knowledge. Hence, knowledge would directly influence safety riding behaviors in medium term. Further, safety riding behaviors would improve safety indicators and minimize accidents (Ginting et al., 2022).

In order to improve knowledge of safety riding behaviors among the students, the school has organized training sessions every year. The school cooperates with the local police and related institutions namely Astra Honda Motor (AHM) to organize training on safety riding during the School Environment Introduction (*Pengenalan Lingkungan Sekolah* or PLS) program for the newly registered students. The program starts with a preliminary lecture at the beginning of the activities,

then it is continued with practical riding training for the students by actually riding motorcycles under guidance of the organizers. The practical training includes the aspects before, during, and after riding. Before riding, the participants are required to ensure that they take riding documents including SIM C, continued with motorcycle checking covering aspects such as tyres, fuel, chain, and personal protective equipment (PPE) such as helmet. Riding should be done calmly, within regulated distance, and operating the brakes properly by activating both front and rear brakes simultaneously so that more optimal braking is achieved. After riding, the motorcycles should be placed in secure places and should not disturb the surroundings.

4.2. Correlation between Attitude and Safety Riding Behaviors

Analysis of bivariate statistical tests found that there was a correlation between attitude and safety riding behaviors among the students of SMKN 3 Mandau Duri with a p-value of 0.004. This finding is consistent with a study by Astuti (2020) indicating that there was a correlation between attitude and safety behavior variables among the students of SMAN 7 Bengkulu with a p-value of 0.000. In addition, a study by Mirfan et al (2021) was also consistent with this study with a p-value of 0.011, indicating that there was a correlation between attitude and safety riding behaviors among the students of SMA 1 Lubuk Alung.

Based on the data collected from the field, it was found that 61.7% respondents had less attitude with unsafe riding behaviors, while 61.3% had good attitudes and had safe riding behaviors. This is because respondents with less attitude towards safety riding would find difficulties in the application of how to behave safely in riding. Meanwhile, respondents with good attitudes would find it easier in the application of how to behave safely before, during and after riding.

Attitude is an undisclosed reaction or feeling of a person which has not manifested into action and measure but would become an action towards a certain object or condition as a form of the embodiment of the object (Notoatmojo, 2012). Attitude is an affective domain which is related to an individual's emotion. In the attitude domain there are five levels namely accepting, responding, appreciating, organizing, and making a life pattern (Swarjana, 2022).

Efforts to improve safe riding attitudes among the students have included safety riding education, counseling program, and practical exercise in riding safety. In addition, during morning services the head or speaker who is either a teacher or the school principal frequently asks the students to ride safely. By delivering information regarding legal consequences and negative social impacts of traffic violations or accidents, it is expected that the students would be better in understanding the importance of compliance with the regulations and of riding responsibly. This consciousness would encourage students to act responsibly on the roads.

4.3. Correlation between Possession of SIM C and Safety Riding Behaviors

Based on the bivariate analysis, there was a correlation between the possession of SIM C and safety riding behaviors among the Grade XII students of SMKN 3 Mandau Duri which was statistically significant with a p-value of 0.000 (p-value<0.05). This finding is consistent with a study by Sriyanti et al., (2022) which also found correlation between possession of SIM C and safety riding behaviors among the students of SMK Patriot Bekasi in 2021 with a p-value of 0.000. Similar result was also found in a study by Danielle et al. (2020) which indicated that there was a correlation between the possession SIM C and safety riding behaviors among the students of SMA Kota Semarang with a p-value of 0.011.

Among the total 174 sample respondents, there was a significant difference in the distribution of SIM C possession. It was found that SIM C was possessed only by 19% of the total respondents, while the rest 81% were not in possession of the license (SIM C). From the examination of the SIM C possession variable, it was found that 60.3% of the non-possessing of SIM C had unsafe riding behaviors. On the other hand, 97% of the respondents in possession of SIM C demonstrated safe riding behaviors. This indicated that the respondents who did not possess SIM C were less skilled in applying safe riding behaviors, while the respondents with SIM C possession had higher skill levels in implementing safe riding behaviors.

Possession of SIM C is an administrative proof that someone has the competence and ability to ride a motorcycle correctly and safely. In the issuance of SIM (Driving License), the Police of the

Republic of Indonesia has implemented certain requirements such as age, health, knowledge, and ability to drive according to the type of vehicle. Students who do not possess SIM C and ride to school have not fulfilled the defined requirements. Hence, they have not met the standards and are categorized as unable to ride safely (Sriyanti et al., 2022).

Even though cooperation with the Police has been done in organizing trainings on safe riding, the school has not cooperated in the making of SIM C. Besides fulfilling administrative requirements, this would help students in obtaining the SIM C.

4.4. Correlation between Peers' Influence and Safety Riding Behaviors

Bivariate analysis has resulted in the presence of a correlation between peers' influence and safety riding behaviors among the Grade XII students of SMKN 3 Mandau Duri in statistical significance with a p-value of 0.000 (p-value < 0.05). This finding was similar to a study by Mokoginta et al., (2022) indicating that there was a correlation between the variables of peers' influence and safe riding behaviors among the students of SMAN 1 Kotamobagu with a p-value of 0.017 (p-value < 0.05). In addition, Kaisun (2020) also presented a similar finding with a p-value of 0.002 (p-value < 0.05) indicating that there was a correlation between peers' influence and safety riding variables among the students of MAN 1 Medan.

Based on the data analysis, as many as 71.3% respondents who had non-supporting peers showed unsafe riding behaviors, while as many as 76.3% respondents who had supporting peers demonstrated safe riding behaviors. This is because the respondents received insufficient support from the peers with regard to safe riding. This has caused the respondents to have the tendency to demonstrate unsafe riding behaviors since there were no reminders from the peers. Meanwhile, the respondents who got support from their peers would have better safety riding behaviors due to the presence of the peers who always provided reminders.

Peers' influence is one of reinforcing factors in the development of students' behaviors. This is consistent with the Maslow's theory on hierarchy of needs which includes social status, reputation, self-confidence, recognition, and social need. These make peers' influence become an important factor. This also applies to the social needs where recognition by surrounding parties is one of them, then students would tend to follow their peers' behaviors (Cahyono et al., 2022).

Peers can become good models by becoming responsible and traffic-rule-compliant riders. By doing so, they can influence their friends to adopt the same behaviors. They can also share personal experiences on how the practice of safe riding would prevent them from hazards and accidents. On the other hand, non-supporting peers would also influence students' riding behaviors. Friends could present pressure to each other to violate traffic rules such as overspeeding, trespassing at red traffic lights, or operating cellular phones while riding. Such pressures may force someone to adopt dangerous behaviors.

5. Conclusion

Based on the results of the study conducted with 174 Grade XII students of SMKN 3 Mandau Duri, it can be concluded that respondents who demonstrated unsafe behaviors were as many as 49.4%; respondents who demonstrated safe behaviors were 50.6%; respondents with low level of knowledge were 44.8%; respondents with high level of knowledge were 55.2%; respondents with less attitude were 46.6%; respondents with good attitude were 53.4%; respondents without SIM C were 81%; respondents with SIM C were 19%; respondents with non-supporting peers were 54%; respondents with supporting peers were 46%. There were correlations between knowledge (p-value=0,001), attitude (p-value=0,004), SIM C possession (p-value=0,000), and peers' influence (p-value=0,000) and safety riding behaviors.

References

- Astuti, D. (2020). *Faktor-faktor yang berhubungan dengan perilaku safety riding pada remaja di SMA Negeri 7 Kota Bengkulu* [Unpublished undergraduate thesis, Poltekkes Kemenkes Bengkulu]. Repository Poltekkes Kemenkes Bengkulu. <http://repository.poltekkesbengkulu.ac.id/424/1/DINA%20ASTUTI.pdf>
- Badan Pusat Statistik, (2022). *Jumlah kecelakaan, korban mati, luka berat, luka ringan, dan kerugian materi 2017-2019*. <https://www.bps.go.id/indicator/17/513/1/jumlah-kecelakaan-korban-mati-luka-berat-luka-ringan-dan-kerugian-materi.html>
- Cahyono, D. D., Hamda, M. K., & Prahastiwi, E. D. (2022). Pemikiran Abraham Maslow tentang motivasi dalam belajar. *Tajdid: Jurnal Pemikiran Keislaman dan Kemanusiaan*, 6(1), 37-48. <https://doi.org/10.52266/tajdid.v6i1.767>
- Damaya (2019). *Undang-undang dan peraturan pemerintah Republik Indonesia lalu lintas dan angkutan jalan*. Laksana.
- Danielle, C., Kusumawati, A., & Husodo, B. T. (2020). Analisis faktor-faktor yang berhubungan dengan perilaku berkendara aman (safety riding) pada siswa sekolah menengah atas Kota Semarang. *Media Kesehatan Masyarakat Indonesia*, 19(6), 385-391. <https://doi.org/10.14710/mkmi.19.6.385-391>
- Ditjen Perhubungan Darat. (2009). *Buku petunjuk tata cara bersepeda motor di Indonesia*. Departemen Perhubungan Republik Indonesia
- Ginting, S.B., Simamora, A.C. & Siregar, N.S.N. (2022). *Pengetahuan kesehatan tingkatkan pengetahuan ibu dalam mencegah stunting*. Penerbit NEM
- Kaisun, F. (2020). Analisis faktor yang berhubungan dengan perilaku keselamatan berkendara pada siswa/i MAN 1 Medan [Unpublished undergraduate thesis, UIN Sumatera Utara]. Repository UIN Sumatera Utara.
- Kementerian Perhubungan Republik Indonesia, (2022). *Angka kecelakaan masih tinggi, Menhub: kolaborasi jadi kunci peningkatan keselamatan jalan*. <https://dephub.go.id/post/read/angka-kecelakaan-masih-tinggi,-menhub-kolaborasi-jadi-kunci-peningkatan-keselamatan-jalan>
- Mirfan, M. Fadillah, Putri, N. W., & Rahman, A. (2021). Faktor-faktor yang berhubungan dengan perilaku safety riding pada pelajar SMA Negeri 1 Lubuk Alung di Kabupaten Padang Pariaman tahun 2021. *Jurnal Keselamatan Kesehatan Kerja dan Lingkungan*, 2(2), 129–137. <https://doi.org/10.25077/jk3l.2.2.129-137.2021>
- Mokoginta, S., Sulaeman, U., & Amelia, A. R. (2022). Faktor yang berhubungan dengan perilaku keselamatan berkendara pada pelajar SMAN 1 Kotamobagu. *Window of Public Health Journal*, 3(3), 516-526. <https://doi.org/10.33096/woph.v3i3.232>
- Notoatmojo, S. (2012). *Promosi kesehatan teori dan aplikasinya*. Rineka Cipta
- Sriyanti, A., Muda C.A.K., Handayani, P. & Yusvita, V. (2022). Faktor-faktor yang berhubungan dengan perilaku safety riding pada siswa di SMK Patriot 1 Bekasi tahun 2021. *Jurnal Kesehatan Masyarakat*, 15(1), 24-30. <http://jurnal.stikeswirahusada.ac.id/jkm/article/view/409/0>
- Riaueditor.com. (2020). *Jumlah kecelakaan lalu lintas di riau tahun 2020*. <https://www.riaueditor.com/detail/Hukrim/Jumlah-Angka-Kecelakaan-Lalu-Lintas-di-Riau-Tahun-2020-Menurun>
- Supiyono (2018). *Keselamatan lalu lintas*. Polinema Press
- Swarjana, I, K. (2022). *Konsep Pengetahuan, Sikap, Perilaku, Persepsi, Stress, Kecemasan, Nyeri, Dukungan Sosial, Kepatuhan, Motivasi, Kepuasan, Pandemi Covid-19, Akses Layanan Kesehatan - Lengkap dengan Konsep Teori, Cara Mengukur Variabel, Dan Contoh Kuesioner*. CV Andi Offset