



Knowledge, Motivation, and Attitudes of Truck Drivers Performing First Aid

Pengetahuan, Motivasi, dan Sikap Pengemudi Truk dalam Melakukan Pertolongan Pertama

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ABSTRACT

Cross-provincial lanes in Majalengka are often passed by truck drivers, and they often encounter accidents in which their help is required. The aim of this study was to determine the direct and indirect effects of truck drivers' knowledge, motivation, and attitudes when performing first aid and the most dominant influencing factors. The research followed a cross-sectional design, and 55 respondents were chosen using total sampling. Partial Least Squares Structural Equation Modeling was used for data analysis. In relation to the practice of first aid, the direct effect of knowledge was found to be significant ($p=0.001$), motivation was insignificant ($p=0.341$), and attitude was significant ($p=0.017$). The indirect effects resulting from the intervention of knowledge motivation was found to be insignificant in the practice of first aid ($t_{\text{statistik}} 0.530 < t_{\text{table}} 1.96$), and attitude was also not significant ($t_{\text{statistik}} 0.758 < t_{\text{table}} 1.96$). Attitude was found to be the most dominant factor.

ABSTRAK

Jalur lintas provinsi di Majalengka sering dilalui oleh pengemudi truk, dan sering mengalami kecelakaan yang membutuhkan pertolongan. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh langsung dan tidak langsung dari pengetahuan, motivasi, dan sikap pengemudi truk saat melakukan pertolongan pertama dan faktor yang paling dominan mempengaruhi. Penelitian ini menggunakan desain cross sectional, dan 55 responden dipilih dengan menggunakan total sampling. Analisa data menggunakan Structural Equation Modeling-Partial Least Square. Berkaitan dengan praktik pertolongan pertama, pengaruh langsung pengetahuan ditemukan sig ($p=0,001$), motivasi tidak signifikan ($p=0,341$), dan sikap signifikan ($p=0,017$). Pengaruh tidak langsung yang dihasilkan dari intervensi motivasi pengetahuan ditemukan tidak signifikan dalam praktik pertolongan pertama, ($t_{\text{statistik}} 0,530 < t_{\text{tabel}} 1,96$), dan sikap tidak signifikan ($t_{\text{statistik}} 0,758 < t_{\text{tabel}} 1,96$). Sikap ditemukan menjadi faktor yang paling dominan.

INTRODUCTION

In 2021, 150 accidents occurred on arterial roads in Majalengka Regency and were mainly caused by a large number of vehicles competing with each other.¹ Cross-provincial routes are often traversed by many large vehicles such as night buses and trucks. As night buses usually carry passengers who must arrive at their destination on time, first aid is often administered by truck drivers. However, the aid provided is not optimal because drivers still have limited knowledge about first aid in an accident.²

When first aid is administered to the victim within 30 minutes after the accident, the consequences are 0.99 times less severe.³ Some countries such as the Czech Republic have made it necessary for all drivers to have basic first aid skills,⁴ so that they can provide assistance in the event of an accident. A past study investigated a total of 500 drivers and found that 32.8% had the courage to help in an accident 6 months post training. This is closely related to knowledge, motivation, and attitude in practicing first aid.⁵

Knowledge can increase one's motivation to take an action.⁶ Research also shows that first aid training for laypeople can improve psychomotor skills,⁷ maximize resources and reduce mortality.⁸ Helpers can be motivated by the teaching method at the time of training; specifically, practical teaching patterns can provide motivation and positive feedback.⁹ In addition to knowledge and motivation, attitude is a factor that influences the practice of first aid among truck drivers. Research in the Czech Republic shows that as many as 41% of the truck drivers display an attitude of not wanting to take risks, and 14% just watch when an accident occurs.¹⁰ Another study on truck driver attitudes conducted in Zambia revealed that 50.4% of drivers show a positive attitude and 35.7% show a negative attitude.¹¹

Based on the aforementioned background, the current study was conducted to understand the direct and indirect effects of intervening motivational knowledge, motivation, and attitude on the practice of first aid in accidents by truck drivers and the most dominant factors influencing these three aspects.

MATERIAL AND METHOD

The participants in this study were truck drivers at PT. Surya Gemilang Transport (SGT) and PT. Kreasi Bangun Langgeng (KBL) in Majalengka Regency. A cross-sectional approach was used for the research design, and the participants were chosen using the total sampling technique. The research was carried out in Majalengka from April 2021 to May 2021. Data were obtained from questionnaires about knowledge, motivation, attitude and first aid that were filled out by 55 respondents. The validity and reliability of the questionnaire were tested using SPSS 26. In terms of latent variable indicators, convergent validity and discriminant validity were determined using SEM-PLS analysis with Smart-PLS 4.4.

Partial Least Squares Structural Equation Modeling (PLS-SEM) was used for bivariate and multivariate analyses to measure the direct and indirect relationships between the variables of knowledge, motivation, and attitude and the practice of first aid in accidents by truck drivers as well as to determine the dominant factors. The analysis was conducted using Smart PLS 4.4 software with a 95% confidence interval (0.05). An ethical feasibility test was carried out at Stikes Mahardika Cirebon, West Java, with the number 007/KEPK.STIKMA/III/2021.

RESULTS

The truck drivers in this study were all male; the majority (85.5%) were 25–65 years of age; 40% had attained the junior secondary education level; and 41.8% had 5–10 years of driving experience (Table 1).

Table 1. Characteristic of Respondents

| Characteristic | n=55 | % |
|-----------------------------------|------|------|
| Gender | | |
| Male | 55 | 100 |
| Female | 0 | 0 |
| Age (Years) | | |
| 18-25 | 8 | 14.5 |
| 25-65 | 47 | 85.5 |
| > 65 | 0 | 0 |
| Education | | |
| Primary School | 14 | 25.5 |
| Junior High School | 22 | 40.0 |
| Senior High School | 19 | 34.5 |
| Driving Experience (Years) | | |
| ≤ 5 | 16 | 29.1 |
| 5-10 | 23 | 41.8 |
| ≥ 10 | 16 | 29.1 |

Source: Primary Data, 2021

Direct Influence Hypothesis Testing

Analyzing the influence of knowledge on first-aid practice resulted in a path coefficient of -0.335 and a p-value of 0.000, which was below the level of significance (alpha 0.05); this indicates a significant negative relationship between knowledge and first-aid practice during accidents. Analyzing the influence of motivation on first-aid practice produced a path coefficient of -0.155 with a p-value of 0.354, which was greater than the level of significance (alpha 0.05); this means that there is no significant negative relationship between motivation and first-aid practice during accidents.

Finally, analyzing the influence of attitude on first-aid practice resulted in a path coefficient of 0.400 with a p-value of 0.013, which was below the level of significance (alpha 0.05); this means that there is a significant positive relationship between attitudes and first-aid practice during accidents (Table 2).

Indirect Influence Hypothesis Testing

It was found that knowledge significantly influences the practice of first aid through motivational intervention, producing a path coefficient of 0.022 with $t_{\text{statistic}}$ 0.517. No significant relationship was found between attitudes and first-aid practice through motivational intervention; the path coefficient was -0.072 with $t_{\text{statistic}}$ 0.452 (Table 3).

Table 2. Path Coefficients and p-values for Direct Influence of Knowledge, Motivation, and Attitudes on First-Aid Practice

| Exogenous | Endogenous | Path Coefficient | p-value |
|------------|--------------------|------------------|---------|
| Knowledge | First-Aid Practice | -0.335 | 0.000 |
| Motivation | First-Aid Practice | -0.155 | 0.354 |
| Attitude | First-Aid Practice | 0.400 | 0.013 |

Source: Primary Data, 2021

Table 3. Path Coefficients and p-values for Indirect Influence of Knowledge, Motivation, and Attitude on First-Aid Practice

| Exogenous | Intervening | Endogenous | Indirect | $t_{\text{statistic}}$ |
|-----------|-------------|--------------------|----------|------------------------|
| Knowledge | Motivation | First-Aid Practice | 0,022 | 0,517 |
| Attitude | Motivation | First-Aid Practice | -0,072 | 0,452 |

Source: Primary Data, 2021

Dominant Factor

Attitude was the variable having the strongest influence, with the total coefficient = 0.328. This value shows that attitude has the most dominant relationship with first aid (Table 4).

DISCUSSION

Knowledge has a strong negative influence on first-aid practice, that is, the higher the knowledge, the lower the first-aid practice. Knowledge gained both from formal training and from information that can be accessed through various sources should be able to decrease involvement in first-aid practice.¹² Research in Nigeria shows a significant difference in increasing knowledge of a driver's first-aid practices, with the assessment carried out before training, after training, and 3 months after training. The results of this study indicate that better knowledge indeed improves the practice of first aid.¹³

The results obtained in the present study differ from the abovementioned research: the higher the knowledge, the lower the involvement of truck drivers in practicing first aid. This was also the result of research in Karacasu,¹⁴ which showed that although drivers had gained knowledge, first-aid practices were not carried out. Some participants underwent refresher training or first-aid knowledge courses for other needs and as a condition for driving license renewal.¹⁵ Fear of making mistakes when providing assistance is a notable factor in the negative relationship between knowledge and first-aid practice.¹⁶

Table 4. Dominant Factor

| Exogenous | Intervening | Endogenous | Total Coefficient |
|------------|-------------|--------------------|-------------------|
| Knowledge | | First-Aid Practice | -0,313 |
| Motivation | | First-Aid Practice | -0,155 |
| Attitude | | First-Aid Practice | 0,328 |
| Knowledge | Motivation | First-Aid Practice | 0,022 |
| Attitude | Motivation | First-Aid Practice | -0,072 |

Source: Primary Data, 2021

Motivation is not significantly related to the practice of first aid. The magnitude of influence,¹⁷ according to the values in this study, is very low in strength. Research has shown that truck drivers have low motivation to perform first aid.¹⁸ The motivation levels of truck drivers in Majalengka Regency are low because of a lack of training or first-aid experience that can help motivate the driver. Motivation is formed by experience, objects, and situational factors.¹⁹

Situational factors may also result in low motivation.¹² For instance, drivers with heavy workloads, fatigue, stringent time targets, and the fear of being a witness or even a suspect have low motivation to do things unrelated to their main job and tend to avoid direct involvement in handling accidents.

Beliefs about the importance of first aid can change attitudes toward first aid. Azjen mentioned that perceived attitude in health behavior will shape people's behaviors and intentions.²⁰

Based on the present study's results from the indirect influence hypothesis testing, t statistic value was less than t table; this shows that there is no significant indirect influence of knowledge of first-aid practice through motivational intervention variables. Research shows that knowledge can increase motivation to engage in an action.²¹ However, this study found that although knowledge was strengthened by motivation, it did not change the practice of first aid among the truck drivers. There is no significant influence due to the lack of information and first-aid training; thus, there is no complex process of knowledge entry and motivation rise to practice skills.²²

Furthermore, attitude was found to have no significant indirect influence even though it was strengthened by motivation to perform first aid. A past study found that individuals who have knowledge tend to require the need to motivate themselves in order to perform a skill.²³ First aid can still be performed if one has a positive attitude without being influenced by motivation.

CONCLUSION AND RECOMMENDATION

Knowledge is directly related to the practice of first aid; motivation is not directly related to the practice of first aid; and attitude is directly related to the practice of first aid as well as the most strongly related factor. Although drivers'

knowledge and attitudes are strengthened by motivation in an indirect relationship, motivation is insignificant in encouraging truck drivers to practice first aid. Possible solutions in this regard are to (i) increase first-aid knowledge among truck drivers through continuous training and (ii) provide safety protection for drivers who provide assistance at the accident site.

The current study was conducted with a sample of truck drivers from a single district. It was limited by the lack of first-aid knowledge and attitudinal differences. This study also focused only on one intervening variable, namely motivation. Furthermore, the process of filling out the questionnaire was influenced by differences in comprehension due to varying levels of education, which could have led to interpretative bias. It is, therefore, recommended that further researchers perform in-depth analyses of the causal factors that can hinder knowledge, motivation, and attitudes of truck driver with regard to first aid, considering different intervening variables.

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