Jurnal Aisyah: Jurnal Ilmu Kesehatan

Volume 8, Issue 1, March 2023, p. 433–436
ISSN 2502-4825 (print), ISSN 2502-9495 (online)

Occupational Accidents on Transport Workers

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ARTICLE INFO

Article history:

Received 10 October 2022
Accepted 31 January 2023
Published 20 March 2023

Keyword:

Occupational accident
transport workers
Physical condition
work attitude
Transport load

A B S T R A C T

Health and safety at work are aspects related to the welfare of someone who carries out activities within the household, service agency or project implementer. Work safety that is important to note is that work safety can also be expressed as an effort to protect workers against hazards and risks that can occur due to processes and interactions that occur in the workplace. The study was to analyze factors that affect work accidents in transportation workers The study was qualitative with a cross-sectional approach. Eighty-nine respondents were involved in this study, selected using a simple random sampling technique. Data were collected using questionnaires and analyzed using chi-square and multiple logistics regression. The results show that there was a relationship between the transport load, physical condition, work and attitude with work accidents for transportation workers. The transport load variable is the most dominant variable related to the occurrence of accidents in transportation workers. It is expected that the leaders of trade unions throughout Indonesia will provide a good work attitude by sticking posters about good lifting and transporting work attitudes.

Kata kunci:

Kecelakaan kerja
pekerja angkutan
Kondisi fisik
sikap kerja
Beban angkutan

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DOI: 10.30604/jika.v8i1.1650

A B S T R A K

Kesehatan dan keselamatan kerja merupakan aspek yang berkaitan dengan kesejahteraan seseorang yang melakukan kegiatan di dalam rumah tangga, instansi pelayanan atau pelaksana proyek. Keselamatan kerja yang penting untuk diperhatikan adalah keselamatan kerja juga dapat dinyatakan sebagai upaya untuk melindungi pekerja dari bahaya dan risiko yang dapat terjadi akibat proses dan interaksi yang terjadi di tempat kerja. Penelitian ini untuk menganalisis faktor-faktor yang mempengaruhi kecelakaan kerja pada pekerja transportasi. Jenis penelitian ini adalah kualitatif dengan pendekatan cross sectional. Delapan puluh sembilan responden terlibat dalam penelitian ini, dipilih dengan menggunakan teknik simple random sampling. Data dikumpulkan dengan menggunakan kuesioner dan dianalisis menggunakan chi-square dan regresi logistik berganda. Hasil penelitian menunjukkan bahwa ada hubungan antara beban angkutan, kondisi fisik, dan sikap kerja dengan kecelakaan kerja dengan kecelakaan kerja pada pekerja angkutan. Variabel beban angkutan merupakan variabel yang paling dominan berhubungan dengan terjadinya kecelakaan pada pekerja angkutan. Diharapkan para pimpinan serikat pekerja di seluruh Indonesia memberikan sikap kerja yang baik dengan menempelkan poster tentang sikap kerja angkat dan angkut yang baik.

INTRODUCTION

Health and safety at work are aspects related to the welfare of someone who carries out activities within the household, service agency or project implementer. As an aspect of labor protection, the rules are stipulated in Law No. 13 of 2003 concerning manpower (Hantoro & Rejeki, 2020). An important part that is the target of work safety is considering the risk of danger from the application of technology and its development, so that work safety is also defined as a condition that is free from the risk of accidents occurring (Rout & Sikdar, 2017). The concept of work safety that is important to note is that work safety can also be expressed as an effort to protect workers against hazards and risks that can occur due to processes and interactions that occur in the workplace. Is it a result of work or the work environment in the workplace (Mahyuni & Harahap, 2020)

A work accident is an event that is certainly not expected by anyone to be experienced suddenly and without any suspicion and can result in injury to workers who have an accident (Firmansyah, Sismulyanto, & Nurwijayanti, 2020). This also results in injury to workers where workers who have been treated and treated can get cured with no disability (Sumaʼmur, 2014). Health and safety at work are essential for macro or micro economics because these are inseparable in the activity of producing products and providing the best possible service (Wignaraja, 2005). Thus, agencies are required to emphasize the various possibilities that pose a risk of injury and disease resulting from work activities because accidents can result in slow production, basically the right time can affect cost savings on a large scale, on the contrary if it is not right according to the schedule then can have consequences for both the agency and the consumer (Aswar, Asfian, & Fachlevy, 2016).

Data obtained through the International Labor Organization (ILO) describes a record that every day there are around 6,000 fatal work accidents worldwide (ILO, 2018). Based on data obtained through BPJamsostek, the prevalence of work accident claims in Indonesia is seen through BPJS Employment 2019 as many as 114,000 cases of work accidents, in 2020 there were an increase of 177,000 cases. BP Jamsostek explained that there were 23,313 work accident cases in West Sumatra, while in Padang City in 2020 there were 1,597 work accident cases (BPJS Ketenagakerjaan, 2018).

In Indonesia, it shows that workers as transport workers often experience muscle injuries in the lower neck with a proportion of 80% of the shoulders having a proportion of 20%, the back having a 40% proportion, the back of the waist 40%, the back of the hips 20%, the buttocks 20%, the knee is 60%, the thigh is 40%, and the calf is 80%. Transport workers or porters are workers who do work by offering goods transport services from one place to another (ILO, 2018). The risk of work accidents experienced by the transport workers has the cause of a number of factors that are very important to be investigated. Therefore, the formulation of the problem in this study are what factors affect work accidents in transportation workers.

METHOD

Research design

The study was a quantitative with cross-sectional approach. The study was conducted from July 2021 to September 2022 in in the Padang Raya Market Area.

Sampling procedures

The technique for taking samples is using a simple random sampling technique, namely taking samples in a simple random way accompanied by writing the names of the transport workers on small pieces of paper and then rolling them up and drawing lots of samples.

Sample size, power, and precision

The sample in this study was determined based on the sample size formula as follows Slovin (Dahlan, 2014) so that from a population of 114 people to 89 sample.

Measures and covariates

A work accident is an unexpected event experienced by a transport worker while doing their job. Measuring results Ever (if there is one or more work accidents) and Never (if there are no work accidents). Transfort loads is the volume charged to the transportation workers. Measurement results Weight (If the load is >18 kg) and Light (If the load is 15 - 18 kg). Physical condition is the physical condition of the body of transport workers, which can be seen from work fatigue. Fatigue (if score > 21) and Not Tired (if score < 21). Work attitude is an action the transport worker takes in accordance with the work posture measured using the OWAS (Ovako Working Analysis System) method. Measuring results at risk (if score > 1) and not at risk (if score = 1). The result of measuring the contribution if the score is > 50% and no contribution if the score is < 50%.

Data analysis

To determine the relationship between independent variable and dependent variable, a chi-square was performed with a significance level of 5% ($p < 0.05$). While to determine the influence of each of the most dominant variables in this study, multiple logistic regression was performed.

RESULTS AND DISCUSSION

Table 1
Distribution of Work Accidents, Transport Loads, Physical Conditions, and Work Attitudes on Transport Workers

Variable	Frekuensi (f)	Persentase (%)
Work accidents		
Ever	50	56,2
Never	39	43,8
Total	89	100
Transport loads		
Weight	45	50,6
Light	44	49,4
Total	89	100
Physical conditions		
Poor	46	51,7
Good	43	48,3
Total	89	100
Work attitudes		
Repair	47	52,8
Not repair	42	47,2
Total	89	100

Table 2
The Relationship of Transport Loads, Physical Conditions, and Work Attitudes with Work Accidents in Transport Workers

Variable	Work accidents				Total		p- value
	Ever		Never				
	f	%	f	%	N	%	
Transport loads							
Weight	36	80	9	20	45	100,0	0,000
Light	14	31,8	30	68,2	44	100,0	
Total	50	56,2	39	43,8	89	100,0	
Physical conditions							
Poor	33	71,7	13	28,3	46	100,0	0,004
Good	17	39,6	26	60,5	43	100,0	
Total	80	56,2	39	43,8	89	100,0	
Work attitudes							
Repair	34	72,3	13	27,7	47	100	0,002
Not repair	16	38,1	26	61,9	42	100	
Total	50	56,2	39	43,8	89	100	

Based on the table 1, it was found that 50 respondents had experienced work accidents, 45 respondents had heavy transport loads, 46 respondents had poor physical condition, and 47 respondents had a corrective work attitude.

Based on the table 2, it was known that the results of the analysis had a relationship among transport loads, physical conditions, and work attitudes with work accidents with p-value 0.000; 0,004; and 0,002 <0,005.

Table 3
Multiple Logistics Regression Test Results Relationship of Transport Loads, and Work Attitudes with Work Accidents in Transport Workers

Variable	B	SE	*p*	Exp (B)
Transport loads	1,928	0,534	0,0001	6,877
Work attitudes	1,419	0,534	0,008	4,132
Constant	-2,524	0,565	0,0001	0,080

The variable that most influences work accidents is the transportation load with a POR (Prevalence Odds Ratio) value of 6.88 (95% CI: 2.41-19.5). This means that transportation workers who have heavy loads have the opportunity to experience work accidents 6.88 times compared to transportation workers with light loads.

The results of the study can be seen that the proportion of respondents who have experienced work accidents is more in heavy transport loads (80%) compared to light workloads (31.8%). Based on the results of statistical tests obtained p-value 0.000 (<0.05), meaning that there is a significant relationship between the transport loads and work accidents in transportation workers in the Pasar Raya Padang area. This study is in line with research conducted by Raraswati, Sugiarto, and Yenni (2020) found that there is a relationship between the load of transportation and work accidents on the transport workers (p-value 0.000). In addition, another study conducted by Octaviana and Rachmawati (2019) on the relationship between physical workload and quality of life of porters at the Surabaya Customs Market found the results of heavy physical workloads (57%) and heavy work posture (100%) and poor physical health (90.5 %). There is a relationship between physical workload and physical health (p-value 0.000).

Manual transfer of materials if not done correctly will cause accidents in the work. Work accidents that arise can be in the form of damage to body tissues caused by excessive carrying loads (over exertion-lifting and carrying). The problem arises not only because of the disruption of the heavy load on the muscles but the tearing of the gap between the vertebrae (intervertebral discs) which causes impaired bone mobility in the long term. This situation results in an increase in the number of absenteeism, which in turn will reduce the productivity of the workers themselves. The activity of moving goods manually if done repeatedly and in a relatively long period of time will cause the process of degeneration (damage) of the spine (Ukkas, 2017).

The results showed that the proportion of respondents who had experienced work accidents was more in poor physical condition (71.7%) than in good physical condition (39.6%). Based on the results of statistical tests obtained p-value 0.004 (<0.05), meaning that there is a significant relationship between physical conditions and work accidents for transport workers in the Pasar Raya Padang area. The results of this study are in line with research conducted by Azizah, Setiawan, and Silaban (2019) the relationship between supervision, work procedures and physical conditions with the occurrence of work accidents in nurses in the Inpatient Room of Permata Bunda Hospital Medan, There is a relationship between physical conditions and work accidents (p-value 0.000) and other studies that are in line with Dita, Atmojo, Sari, and Susilawati (2019) on the factors that influence the potential for work accidents on truck drivers at PT Berkatnugraha Sinar Lestari Belawan found that there is a relationship between physical condition and work accidents (p-value 0.003).

The results of the study can be seen that the proportion of respondents who have experienced work accidents is more in poor physical condition (72.3%) compared to those who do not improve (38.1%). Based on the results of statistical tests obtained p-value 0.002 (< 0.05), meaning that there is a significant relationship between work attitudes and work accidents on transport workers in the Pasar Raya Padang area. This research is in line with research conducted by Aswar et al. (2016) factors related to work accidents in Kendari City car repair workers, it was found that there was a relationship between attitude and work accidents. Another study conducted Sulung (2016) on loading and unloading workers found that there was a relationship between work attitude position and work accidents (p-value 0.000).

CONCLUSIONS AND SUGGESTIONS

There is a relationship between the load of transportation, physical condition, and work attitude with work accidents with work accidents for transportation workers. The transfor load variable is the most dominant variable related to the occurrence of accidents in transportation workers in the Pasar Raya Padang area in 2022. It is hoped that the leaders of trade unions throughout Indonesia will provide a good work attitude by sticking posters about good lifting and transporting work attitudes. It is expected that all transport workers take adequate rest, perform physical movements that can refresh the body and pay attention to the load carried in accordance with their ability to carry.

ETHICAL CONSIDERATIONS

This study was approved by The Research Ethics Committee of Universitas Sumatera Utara, Faculty of Public Health No. 3824/UN5.2.1.10/KRK/2022.

Funding Statement.

The authors did not receive support from any organization for the submitted work and no funding was received to assist with the preparation of this manuscript.

Conflict of Interest Statement

The author declares that there is no potential conflict of interest concerning the authorship and publication of this article.

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