

# A Study on the Prevention of Musculoskeletal Diseases : Focusing on Truck Drivers

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## Abstract

The possibility of developing musculoskeletal disorders increases with the length of service of the worker. Musculoskeletal disorders can occur when performing repetitive and forceful movements. Therefore, Cargo drivers operate repeatedly in the wrong posture for a long time. When loading and unloading a cargo, the cargo driver works repeatedly with force. Cargo operators are also exposed to musculoskeletal disorders in the working environment due to poor posture and repetitive movements. In this study, we are going to conduct a study on the level of awareness and prevention of the possibility of musculoskeletal disorders in cargo drivers for long periods of time. As a result of the study, the factors that cause musculoskeletal disorders in each group can occur during the long-term operation and preparation of drivers.

**Keywords :** Truck Driver, safety, Musculoskeletal Diseases

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3.1.1

[2]

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<Table 1>

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2018

10,000

가

가

(2010)

<Table 1> Current Status of Industrial Accidents

Year	Total Accidents	Percentage	Accidents with Compensation	Percentage of Compensation
2015	7,064		2,130	
2016	7,068	0.00%	2,093	-0.02%
2017	8,190	0.16%	2,436	0.14%
2018	10,302	0.26%	3,322	0.27%
2019	14,080	0.37%	4,988	0.33%

[3]

(2009)

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가

[4]

2019

가

35%가

(2009)

20

9,197



가 가

3.4

3.4.1

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가 가

<Table 3>

7

가 가 (city delivery)

가 , 가

<Table 2> hierarchy of factors

first hierarchy	second hierarchy
(Driving Work)	(Wrist)
(Braking Work)	(Waist)
(Up & down Work)	(Ankle)
(Preparation Work)	(Shoulder)

<Table 3>

Pairwise Comparison Matrix

	1	1	1/5	1/3
	1	1	1/3	1/5
	5	3	1	1
	3	5	1	1

3.4.2

가

가

<Figure 1> <Table 2> (Driving Work)

[7] <Table

<Table 4>

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2

가 가 (Braking Work)

<Table 4> 1 Normalized Matrix of level 1 for Long-distance delivery

	0.151	0.144	0.135	0.175
	0.170	0.163	0.172	0.149
	0.401	0.340	0.361	0.352
	0.279	0.353	0.332	0.324

<Table 5>

1

<Table 5> Sum of Determinant Matrix

	0.523	0.131	0.605	0.151
	0.669	0.167	0.654	0.164
	1.247	0.312	1.454	0.363
	1.561	0.390	1.287	0.322

( ), (CI),  
 (RI), (CR) CR  
 0.1  
 0.01

<Table 6> Consistency measurement

lamda( )	CI	RI	CR
4.04	0.01	0.90	0.0137

3.5

<Table 7> ,  
 ( , , , )  
 ( :0.264)

가

<Table 7> result of a Long -distance delivery

	0.151	0.288	0.165	0.289	0.258	0.259
	0.164	0.209	0.231	0.326	0.234	0.263
	0.363	0.235	0.183	0.198	0.384	0.261
	0.322	0.293	0.113	0.240	0.354	0.264

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 0.263, 0.261, 0.264  
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<Table 8>

( , , , ) (0.300)  
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<Table 8> result of a city delivery

	0.131	0.173	0.111	0.263	0.453	0.300
	0.167	0.288	0.202	0.245	0.264	0.251
	0.312	0.297	0.151	0.186	0.366	0.265
	0.390	0.227	0.137	0.327	0.309	0.275

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## 5. References

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