



Legal protection of labor fatigue in the production part of PT. Maruki International Indonesia Makassar[☆]

Indar^{a,*}, Muh Alwy Arifin^a, Muh Anas^b, Etika Barutji^b, Nur Inayah Ismaniar^c

^a Department of Health Policy and Administration, Faculty of Public Health, Hasanuddin University, Makassar Indonesia

^b Academy of Hygiene and Occupational Health, Makassar Indonesia

^c Institute of Health Science Baramuli, Pinrang Indonesia

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ABSTRACT

Objective: To describe the legal protection arrangements for workers who suffer from work fatigue, for workers of age, nutritional status, work attitude, and gender.

Method: The type of research described is normative research using legal materials conducted with document study techniques as well as descriptions of respondents.

Results: The results of the study showed that the regulation of legal protection against work fatigue was regulated in the 1945 Constitution, Law no. 1 of 1970 concerning Occupational health and safety, Law No. 13 of 2003 concerning Employment, Law No. 40 of 2004 concerning the National Social Security System, Law No. 36 of 2009 concerning Health, Law No. 24 of 2011 concerning BPJS, PP No. 50 of 2012 concerning OHS Management Implementation.

Conclusions: Based on research conducted on workers in the production section at PT. Maruki International Indonesia Makassar, the following conclusions are drawn, Older workers experience more fatigue than younger workers.

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Introduction

The rapid development of technology has increasingly pushed Indonesia to reach the stage of industrialization. The challenge of the company to produce for 24 h continuously is a consequence of the development of the industry. Increasing the quality and quantity of production is expected to achieve maximum profits. Running production activities and increasing the quality and quantity of labor protection is needed. The protection referred to is a treatment that is in accordance with human dignity, safety, health, and maintenance of work morale. Providing guarantees for safety and improving the health status of the workforce is the objective of the protection.¹

One of the problems of occupational health and safety (OHS) that can be a trigger for workplace accidents is fatigue. Work fatigue is a condition according to one's efficiency and endurance at work.¹ This is where fatigue leads to the weakening of the workforce to carry out an activity, resulting in a reduction in work capacity and endurance.²

World Health Organization (WHO) predicts that the number 2 killer disease after heart disease is a feeling of heavy fatigue. The Japanese Ministry of Manpower conducted a study of 12,000 companies and involved around 16,000 randomly selected workers showing that 65% of workers complained of physical fatigue due to routine work, 28% complained of mental fatigue and around 7.5%

of workers complained of severe stress and felt left out. In the production section of one of the companies in Indonesia, research has been conducted showing that the symptoms of tiredness experienced by the average worker are symptoms of headache, stiffness in years, and back pain.³

Job losses can be seen from the weakening of labor in carrying out activities or work so that it will increase the level of error in carrying out work and result in fatalities that can result in work accidents. Risks that can arise from the occurrence of fatigue include declining work motivation, a lot of mistakes in work, work stress, the onset of occupational diseases, injuries, and work accidents.⁴

Work fatigue can be seen from the weakening of energy in carrying out activities or work and it will increase the level of errors in carrying out work and have fatal consequences.⁵ The risks that can arise from fatigue, more than 60% of work accidents are contributed by the workforce who experience fatigue. Work fatigue has been proven to provide one of the main causes of work accidents is fatigue.⁶

Setyawati⁶ stated that more than 60% of work accidents were sourced from workers who were exhausted. Thus work fatigue provides one of the main causes of work accidents. Data from the International Labor Organization (ILO) shows that nearly 2 million workers die every year due to ape accidents caused by fatigue.⁷

Factors that cause the occurrence of work fatigue in the industry are very diverse including influenced by health conditions, work environment, and also the workload. Work fatigue can also be influenced by external factors such as age, sex, nutritional status, diet, and psychological conditions.⁶

PT. Maruki Internasional Indonesia Makassar is an industry engaged in the field of furniture. The product which is produced

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* Corresponding author.

E-mail addresses: indar.sh@gmail.com, pmc@agri.unhas.ac.id (Indar).

is Butsun, which is furniture used by Buddhism to communicate with its ancestors. The longer the demand for Butsudana increased so that the number of workers increased.

Based on preliminary data conducted at the Polyclinic regarding fatigue, in 2017 there were 355 cases (11%), from the number of diseases reported to the Polyclinic, in 2018 there were 275 cases (12%) of all types of diseases reported, and in 2019 there were 48 cases (10%) from January to March.

The results of an initial survey conducted on May 23, 2019, showed many workers who preferred to stand up rather than sitting while doing work even though in each factory prepared chairs for the workers. Workers also sit a lot when working because of the field of work and job demands.

Based on the background stated earlier, the author intends to research the title “Legal Protection Against Labor Fatigue in the Production Section of PT. Maruki International Indonesia Makassar”.

Method

Research location and design

This research was conducted in the Production Section of PT. Maruki International Indonesia Makassar. This type of research used in this study is normative research using legal materials carried out with document study techniques as well as descriptions of respondents, continuous observation throughout the study.

Population and respondents

The population in this study were all workers in the Production Section of PT. Maruki International Indonesia Makassar, amounting to 204 people. Respondents were taken from a population of 135 people using the Slovin formula for determining the magnitude of respondents. Responding is done by using a stratified random sampling technique.

Data collection technique

Primary data is obtained by collecting data through interviews guided by questionnaires and observing processes or objects to understand knowledge and ideas previously known. Secondary data obtained directly archives and labor documents at PT. Maruki Internasional Indonesia Makassar.

Data processing and analysis

Data processing is carried out using SPSS both primary data and secondary data through the stages of data editing (editing), data entry (entry), and data cleaning (cleaning).

Data analysis was performed based on the univariate analysis used on each variable from the results of the study through the frequency distribution table and the percentage of each table.

Results

Based on Table 1 obtained that from 135 respondents, the number of respondents who were young (<40 years) of 62 workers (45.9%) and the number of respondents who were old (\geq 40 years) of 73 workers (54.1%), while the number of respondents whose nutritional status is below normal of 4 workers (3.0%). The number of respondents with normal nutritional status of 120 workers (88.9%) and the number of respondents who were obese is 11 workers (8.1%).

Speaking about work attitude, there are 41 workers who have a moderate risk and the number of respondents working attitude

Table 1

Labor fatigue in the production part of PT. Maruki International Indonesia Makassar.

Variable	Amount (n)	Percent (%)
<i>Age</i>		
Young	62	45.9
Old	73	54.1
<i>Nutritional status</i>		
Below normal	4	3.0
Normal	120	88.9
Obesity	11	8.1
<i>Work attitude</i>		
Medium risk	41	30.4
High risk	94	69.6
<i>Sex</i>		
Male	102	75.6
Female	33	24.4
<i>Fatigue level</i>		
Low	28	20.7
Medium	107	79.3

Source: Primary Data, 2019.

that has a high risk of 94 workers while the number of respondents who experienced low levels of fatigue were 28 workers (20.7%) and those who experienced moderate levels of fatigue were 107 workers (79.3%). In this the Production Section of PT. Maruki International Indonesia Makassar shows that of 62 workers who have a young age with a low level of fatigue as many as 12 workers (8.9%), who have a moderate level of fatigue as many as 50 workers (37.0%) and of the 73 workers who have old age with low levels of fatigue as many as 16 workers (11.9%) who have moderate levels of fatigue as many as 57 workers (42.2%).

Discussion

Age

As a theory that is proven in Japan, workers aged 50–60 years will bear the workload faster than those who are relatively younger.⁷ In old age muscle tissue will shrink and be replaced by connective tissue. Contracted muscles cause reduced muscle elasticity. Life activities are also reduced, which results in the increasing inability of the body in various ways.⁷ Workers of PT. Maruki International Indonesia showed that had more old workers than young. There were 73 old workers and 62 young workers while there were 57 workers had moderate levels of fatigue for old age than young age is only 50 workers for moderate levels of fatigue.

Nutrition

Nutrition means the nutrients needed by workers to meet their needs according to the type of work.⁸ Work nutrition is a nutrient or substance that is needed by the workforce to carry out a job that must be adjusted to the workload in order to create an optimal state of health to increase workforce productivity.¹ In PT. Maruki International Makassar showed workers had normal status had more number than abnormal nutritional status or even workers who had obesity status, this is because, worker's source of data is secondary data who took on 2019 January, while this research have done on 2009 July, so it is possible that many workers have experienced nutritional status.

The result of this study are in line with research conducted in the Ciputat districts, where the normal nutritional status is 61 workers, while the labor status with abnormal nutritional status is 14 workers. Nutritional status is the cause of fatigue. A person in the

workforce with good nutrition will have better work capacity and endurance.⁹

Work attitude

Work attitude is an assessment of the suitability of the work tools used by workers at work with the anthropometric measurements of workers with a predetermined size.¹⁰ The position of the body at work is very much determined by the type of work done, each type of work has a different effect on the body. The standing work position is a standby work position both physically and mentally so that the activities carried out are faster, stronger, and more thorough. But basically standing itself is more tiring than sitting and the energy expended to stand is 10–15% more than sitting. Standing work positions, especially when workers have to work for long periods of time, often cause fatigue. Result showed that there were workers attitudes in the production division that are categorized as very high risk, this is because the work field is not in accordance with the worker's body anthropometry so it is easier to cause fatigue. In a long period, especially the movement of blood and accumulation of body fluids in the thigh area (leg). Sometimes repeated stresses on the abdomen and neck for the type of motion to reach, reach, or twist. Complaints usually occur due to gradually feeling heavy in the vein muscles, distance to reach outside the normal range tolerance, work area that is high or short, not available legroom (knee).

Sex

Based on data obtained from PT. Maruki International Indonesia Makassar, shows that out of 102 male workers, 23 workers (17.0%) have low fatigue levels, and 79 workers (58.5%) have moderate fatigue levels. Of the 33 female workers with low levels of fatigue, there were 5 workers (3.7%) and 28 workers who had moderate fatigue levels (20.7%).

Although there are still debates of opinion from some experts regarding the effect of gender on the risk of skeletal muscle complaints, several research results significantly show that gender greatly affects the level of muscle complaint risk. This is because physiologically the muscle ability of women is indeed lower than that of men. Women's muscle strength is only about two-thirds of men's muscle strength so that men's muscle endurance is higher than women's.¹¹

Conclusions

Based on research conducted on workers in the production section at PT. Maruki International Indonesia Makassar, the following conclusions are drawn:

Older workers experience more fatigue than younger workers.

Observation results showed that in PT. Maruki International Makassar workers who have a work attitude with a very high risk experience more fatigue than workers who have a work attitude with moderate risk. The male workforce has more fatigue than the female workforce.

It is better for companies to reduce work fatigue in workers in the production section by paying more attention to time for rest or pauses when they feel an indication of fatigue due to the work position that sits too long and stands constantly.

It is hoped for the workforce that workers will know the amount of energy intake needed per day so that workers can pay attention to balanced nutritional intake every day so that it does not have an impact on decreasing efficiency and performance which ultimately leads to work fatigue. reduce fatigue, workers should often stretch The muscles as often as possible within a few minutes to avoid muscle tension. For companies to prepare ergonomic facilities and pay more attention to the work environment so that performance is maintained such as temperature, humidity.

Conflicts of interests

The authors declare that they have no conflict of interest.

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