

## Conference Paper

# Occupational Health of PT. Indonesian Ship Industry in Makassar City

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Occupational health is an endeavor to keep employees healthy while they work and to protect them by providing health insurance while they labor. The goal of this study is to look at the occupational health of personnel at PT Indonesian Ship Industry (Persero) in Makassar City. A quantitative technique approach was applied in the investigation. This quantitative strategy is carried out by processing all of the data from the research instrument, through a questionnaire, which is then analyzed statistically. According to the findings of this study, the occupational health variable has a marginally significant influence on the job productivity of PT. Indonesian Ship Industry (Persero) Makassar City personnel. This is evident from the findings of the partial test (*t*-test) conducted in this study.

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## 1. Introduction

In the era of globalization, competition in the industrial sector is getting tighter. Companies are required to be able to survive and compete competitively. Every activity in a company, be it a large or small company, really needs human resources, namely employees. Human resources are one element of the organization and have an important role in organizational activities[1]. With the existence of humans who are expected to become resources that are ready to use and able to help achieve company goals[3].

According to Article 86 of Law No.13 of 2003 concerning Employment, every worker/laborer has the right to obtain protection for: (1) occupational safety and health; (2) morals and decency; and (3) treatment in accordance with human dignity and values as well as religious values.

Occupational health is the application of health/medical science in the field of employment which aims to prevent work-related illnesses and maintain and improve the health

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of workers/laborers to improve their performance [4,5]. Occupational health according to Mangkunegara (2005: 161) is a condition that is free from physical disturbance, mental emotion, or pain caused by the work environment. Occupational health risks are factors in the work environment that work beyond the specified time period, an environment that can create emotional stress or physical disturbance [6].

In addition, occupational health is a health science and its application aims to create a healthy and productive workforce at work, in an optimal balance between work capacity, workload, and working environment conditions, as well as being protected from diseases caused by work and work environment [7]. Based on the above understanding, it can be concluded that occupational health is an effort to keep employees healthy while working and provide protection to employees by providing health insurance while doing work.

As for factors that can affect occupational health, employee occupational health can be influenced by various factors. The following are the factors that affect the health of employees according to (Cashmere, 2018) that is :

1. Air, I mean air condition in the workplace should make employees calm and comfortable. For example, in a closed room, of course, you need to provide sufficient air conditioning.
2. Light, the quality of light in the room too will greatly affect the health of employees. In a room that is too dark or not enough light will certainly damage the health of employees, especially eye health.
3. Noise, meaning existing sound in a room or work location. A room that is too noisy or noisy will certainly affect the quality of hearing.
4. Smell smells, for a room that has a strong scent not tasty then health will be very disturbed. The odor emitted from certain harmful substances, for example chemicals, will affect the health of employees.
5. room layout room layout greatly affect the health of employees, for example the layout of chairs, tables and other equipment [9].

Occupational health is an effort made by companies, governments and workers/laborers to prevent workers/laborers from getting sick as a result of carrying out their work. Occupational health indicators according to Mangkunegara (2013), namely:

1. Physical work environment

Namely everything that is around the employee's workplace that focuses on objects and situations around the workplace so that it can affect employees in carrying out their duties, for example lighting, air temperature, space for movement, security, cleanliness and others.

## 2. Health Facilities and Services

The company's efforts to improve the health of its workforce, such as the provision of clean water and clean bathroom facilities and facilities such as conducting periodic health checks and medical insurance so as to improve the health of the workforce, as well as providing health services for workers when work accidents occur and can be handled immediately, such as providing complete first aid facilities.

## 3. Recreation Facilities

Namely providing facilities to employees who have carried out their duties properly by providing recreational activities or sports activities so as to reduce work-related stress.

## 4. Occupational Health Regulations

Occupational health regulations must be implemented by applying occupational health regulations in accordance with standard operating procedures (SOP)[10].

## 2. Research Methods

A quantitative method was used to perform this study. This quantitative strategy is carried out by processing all of the data from the research instrument, whether it is a questionnaire or a questionnaire, which is then analyzed statistically. According to Sugyono (2017), quantitative research methods are research methods based on the philosophy of positivism that are used to examine specific populations or samples, collect data using research instruments, and analyze quantitative/statistical data with the goal of testing established hypotheses [11]. The associative research approach was used to examine the effect or link between two or more factors. In this study, questionnaires and direct observation were utilized to collect data. The questionnaire is a data collecting method that is used.[12]

### 3. Results and Discussion

Occupational health provided by PT. Indonesian Ship Industry (Persero) Makassar City is measured based on four indicators, namely the physical work environment, health facilities and services, recreational facilities, and occupational health regulations. To find out the distribution of respondents' answers regarding each of these indicators, the following analysis was carried out:

#### 3.1. Physical work environment

The physical work environment is a sense of comfort that focuses on the conditions around the workplace so that it can affect employees. Employees will do the work given to the fullest if the work space is fully facilitated and kept clean.

TABLE 1: Clean environmental conditions.

Answer Category	Frequency (f)	Percentage (%)
Strongly agree	22	22
Agree	32	32
<b>Doubtful</b>	<b>34</b>	<b>34</b>
Don't agree	11	11
Strongly Disagree	1	1
<b>Amount</b>	<b>100</b>	<b>100</b>

Source: Processed results of questionnaire data number 13

Based on the table above it is known that the questionnaire statement number 13 shows the Doubtful category. This can be seen from the results of the respondents' answers, most of whom stated Doubtful, namely as many as 34 respondents with a percentage of 34 percent. Thus the respondents feel that they have worked in clean environmental conditions.

TABLE 2: Good air circulation.

Answer Category	Frequency (f)	Percentage (%)
Strongly agree	26	26
<b>Agree</b>	<b>33</b>	<b>33</b>
Doubtful	22	22
Don't agree	18	18
Strongly Disagree	1	1
<b>Amount</b>	<b>100</b>	<b>100</b>

Source: Processed results of questionnaire data number 14

Based on the table above it is known that the questionnaire statement number 14 shows the agree category. This can be seen from the results of the respondents' answers, most of whom agreed, namely as many as 33 respondents with a percentage of 33 percent. Thus the respondents feel that the workspace has a good workspace. Siswanto (2015) which states that work safety has a significant effect on employee work productivity [13,14]. Another thing stated by Osha Silvia, 2014 states that Occupational health (K3) affects work productivity. Work discipline affects the work productivity of employees [15,16].

TABLE 3: Indoor lighting.

Answer Category	Frequency (f)	Percentage (%)
Strongly agree	29	29
<b>Agree</b>	<b>43</b>	<b>43</b>
Doubtful	20	20
Don't agree	8	8
Strongly Disagree	0	0
<b>Amount</b>	<b>100</b>	<b>100</b>

Source: Processed results of questionnaire data number 15

Based on the table above it is known that the questionnaire statement number 15 shows the Agree category. This can be seen from the results of the respondents' answers, most of whom agreed, namely as many as 43 respondents with a percentage of 43 percent. Thus the respondents feel that the lighting in the room is comfortable to work in.

TABLE 4: Good security system.

Answer Category	Frequency (f)	Percentage (%)
Strongly agree	39	39
<b>Agree</b>	<b>43</b>	<b>43</b>
Doubtful	16	16
Don't agree	2	2
Strongly Disagree	0	0
<b>Amount</b>	<b>100</b>	<b>100</b>

Source: Processed results of questionnaire data number 16

Based on the table above it is known that the questionnaire statement number 16 shows the agree category. This can be seen from the results of the respondents' answers, most of whom agreed, namely as many as 43 respondents with a percentage of 43 percent. Thus the respondents feel that the company has been equipped with a good security system.

### 3.2. Health facilities and services

Employees are the main asset for a company that must be given special attention, one of which is by providing occupational health insurance such as providing medical facilities for first aid in the event of a work accident and regular health services.

TABLE 5: Provide guarantee of treatment.

Answer Category	Frequency (f)	Percentage (%)
Strongly agree	31	31
<b>Agree</b>	<b>55</b>	<b>55</b>
Doubtful	14	14
Don't agree	0	0
Strongly Disagree	0	0
<b>Amount</b>	<b>100</b>	<b>100</b>

Source: Processed results of questionnaire data number 17

Based on the table above it is known that the questionnaire statement number 17 shows the agree category. This can be seen from the results of the respondents' answers, most of whom agreed, namely as many as 55 respondents with a percentage of 55 percent. Thus the respondents feel that the company has provided good treatment guarantees to employees.

TABLE 6: Carry out regular checks.

Answer Category	Frequency (f)	Percentage (%)
Strongly agree	27	27
<b>Agree</b>	<b>43</b>	<b>43</b>
Doubtful	28	28
Don't agree	2	2
Strongly Disagree	0	0
<b>Amount</b>	<b>100</b>	<b>100</b>

Source: Processed results of questionnaire data number 18

Based on the table above it is known that the questionnaire statement number 18 shows the agree category. This can be seen from the results of the respondents' answers, most of whom agreed, namely as many as 43 respondents with a percentage of 43 percent. Thus the respondents feel that the company conducts health checks on employees on a regular basis.

Based on the table above it is known that the questionnaire statement number 19 shows the agree category. This can be seen from the results of the respondents' answers, most of whom agreed, namely as many as 56 respondents with a percentage

TABLE 7: Providing health services.

Answer Category	Frequency (f)	Percentage (%)
Strongly agree	39	39
<b>Agree</b>	<b>56</b>	<b>56</b>
Doubtful	5	5
Don't agree	0	0
Strongly Disagree	0	0
<b>Amount</b>	<b>100</b>	<b>100</b>

Source: Processed results of questionnaire data number 19

of 56 percent. Thus the respondents feel that the company provides health services to employees.

TABLE 8: Provide medicines for first aid.

Answer Category	Frequency (f)	Percentage (%)
Strongly agree	43	43
<b>Agree</b>	<b>55</b>	<b>55</b>
Doubtful	2	2
Don't agree	0	0
Strongly Disagree	0	0
<b>Amount</b>	<b>100</b>	<b>100</b>

Source: Processed results of questionnaire data number 20

Based on the table above it is known that the questionnaire statement number 20 shows the agree category. This can be seen from the results of the respondents' answers, most of whom agreed, namely as many as 55 respondents with a percentage of 55 percent. Thus the respondents feel that the company provides medicines for first aid in the event of an accident.

### 3.3. Recreational facilities

Recreational facilities are an indicator of occupational health by providing recreational activities and providing sports facilities for employees.

Based on the table above it is known that the questionnaire statement number 21 shows a doubtful category. This can be seen from the results of the respondents' answers, most of whom expressed doubt, namely as many as 46 respondents with a percentage of 46 percent. Thus the respondents feel that the company has provided recreational activities for employees.

Based on the table above it is known that the questionnaire statement number 22 shows the agree and doubt categories. This can be seen from the results of the answers

TABLE 9: Provide recreational activities.

Answer Category	Frequency (f)	Percentage (%)
Strongly agree	15	15
Agree	35	35
<b>Doubtful</b>	<b>46</b>	<b>46</b>
Don't agree	4	4
Strongly Disagree	0	0
<b>Amount</b>	<b>100</b>	<b>100</b>

Source: Processed results of questionnaire data number 21

TABLE 10: Carry out regular checks.

Answer Category	Frequency (f)	Percentage (%)
Strongly agree	17	17
<b>Agree</b>	<b>39</b>	<b>39</b>
<b>Doubtful</b>	<b>39</b>	<b>39</b>
Don't agree	5	5
Strongly Disagree	0	0
<b>Amount</b>	<b>100</b>	<b>100</b>

Source: Processed results of questionnaire data number 22

of the same respondents who agreed and doubted, namely as many as 39 respondents with a percentage of 39 percent. Thus the respondents feel that the company provides sports facilities for employees.

### 3.4. Occupational health regulations

In addition to safety, occupational health regulations are also important for employees. Employees need to be provided with health insurance so that they can work properly and in healthy health conditions.

TABLE 11: Occupational health regulations according to standard operating procedures (SOP).

Answer Category	Frequency (f)	Percentage (%)
<b>Strongly agree</b>	<b>48</b>	<b>48</b>
<b>Agree</b>	<b>48</b>	<b>48</b>
Doubtful	4	4
Don't agree	0	0
Strongly Disagree	0	0
<b>Amount</b>	<b>100</b>	<b>100</b>

Source: Processed results of questionnaire data number 23



Based on the table above it is known that the questionnaire statement number 23 shows the categories of strongly agree and agree. This can be seen from the results of the answers of the same respondents who stated that they strongly agreed and agreed, namely as many as 48 respondents with a percentage of 48 percent. Thus the respondents felt that the company implemented occupational health regulations in accordance with standard operating procedures (SOP).

TABLE 12: Carry out regular checks.

Answer Category	Frequency (f)	Percentage (%)
Strongly agree	26	26
<b>Agree</b>	<b>68</b>	<b>68</b>
Doubtful	6	6
Don't agree	0	0
Strongly Disagree	0	0
<b>Amount</b>	<b>100</b>	<b>100</b>

Source: Processed results of questionnaire data number 24

Based on the table above it is known that the questionnaire statement number 24 shows the agree category. This can be seen from the results of the respondents' answers, most of whom agreed, namely as many as 68 respondents with a percentage of 68 percent. Thus the respondents feel that the health of employees has been guaranteed by the company. In line with the view of Galib (2021) states that occupational health based on regression analysis has a positive and significant contribution to employee work productivity, while Occupational Health and Safety together have a positive and significant effect on employee work productivity[17].

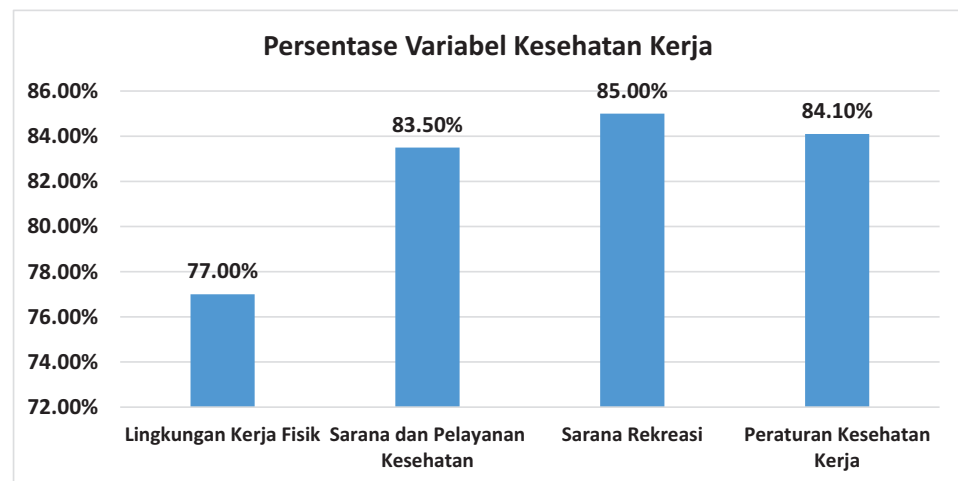
To find out the overall answers to the occupational health variable based on the indicators used, the researcher accumulated these indicators through the table of respondents' achievements as follows:

TABLE 13: Category Level of Achievement of Respondents Occupational Health Variables.

Work Safety Indicator (X1)	Number of Items	Respondent Achievement Score	Ideal Score	Respondent Achievement Rate (TCR %)	Category
Physical environment work	4	1540	2000	70.00	Good
Health facilities and services	4	1670	2000	83.50	Good
Recreational facilities	2	850	1000	85.00	Very good
Work safety regulations	2	841	1000	84,10	Good
<b>Amount</b>	<b>12</b>	<b>4901</b>	<b>6000</b>	<b>81.68</b>	<b>Good</b>

Source: Processed results of questionnaire data number 13-24

Based on the data in the table above, it can be seen that the respondent's level of achievement on the occupational health variable shows a good category or 81.68 percent. Where there is 1 indicator with very good category and the rest are in good category. This shows that all indicators support this variable. The percentage of respondents' achievement levels in the occupational health variable can be seen in the following graph:



**Figure 1:** Graph of Percentage Level of Achievement of Respondents Variable X2.

Based on the graph above, it can be seen that the accumulation of the respondent's level of achievement (TCR) on the variable healthwork performance (X2) obtained by all indicators used in this study are in the good category. This can be seen from the physical work environment indicator of 77.00 percent in the good category, the health facilities and services indicator of 83.50 percent in the good category, the recreational facilities indicator of 85.00 percent in the very good category, and in the indicator of occupational health regulations is 84.10 percent in the good category.

## 4. Conclusion

According to the findings of this study, the Occupational Health Variable has a marginally significant influence on the job productivity of employees at PT. Indonesian Ship Industry Makassar City. This is demonstrated by the results of the partial test (T test) performed in this study, which show a significance value and a computed T value larger than T table, suggesting that H0 is rejected and H1 is accepted. Because occupational health is the most influential variable, PT. Indonesian Ship Industry (Persero) Makassar City can improve occupational health policies and facilities, and maintain the implementation that has been implemented, so that employee productivity will also be higher.

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