

**THE ANALYSIS OF SAFETY AND HEALTHINESS PROGRAM
RELATIONSHIP TO EMPLOYEE MOTIVATION
AT BANDUNG FIREFIGHTERS DEPARTMENT**

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ABSTRACT

Purpose - This study aims to analyze the relationship between safety and health programs with employee motivation.

Design/methodology/approach - Descriptive method used to conduct research and qualitative and quantitative analysis is used to analyze the data.

Findings - After analyzing the results of calculations performed using Spearman rank correlation formula, but the result is 0.7 with 3.94 significance test, which means there is a positive relationship between safety and health with the motivation of employees.

Research limitations/implications – This paper is limited to descriptive studies and researching just about any health and safety, further implications for this research will be examined for other factors in addition to occupational safety and health.

Practical implications – Safety program conducted by the department of prevention and fire prevention Bandung includes two activities that are programmed for construction personnel, the exercise routine and rescue and conduct health and fitness coaching by the company itself and by the health department.

Originality/value – This paper is a new way to look at the relationship between occupational safety and health of employees with the motivation.

Keywords – Safety, health and motivation

Paper type – Research paper



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1. Introduction

Today, development in Indonesia has led to an increasingly complex variety of activities in all fields. Similarly, in the field of business. The development and progress in all fields such as technological progress, social and economic make the increasing number of problems that arise and must be faced by Indonesian society.

An enterprise or institution can not be separated from human which have important role in achieving corporate goals. Each company generally wants its employees to increase their work performance. By paying attention to occupational safety and health of employees is expected to encourage them to work better, which in turn can increase their work motivation.

Because labor is a very important factor in the company's activities, the company is always working to improve the quality of its workers. Safety and health program by a company employee is a tool to improve the welfare of the employees themselves in relation to his needs both personal needs and social needs. So with the existence of the program within the company expected that its workers can be motivated to work better.

One of the companies or agencies that are particularly vulnerable to the danger of accidents and it is essential for employee safety and health is the agency firefighters. Which employees who work at this agency is always surrounded by dangers that surround them at work. Moreover, the activities in that institution for 24 hours.

If the equipment at that agency employees are good but not good health it will be dangerous and will indirectly reduce their work motivation. In addition to the firefighting agency employees who worked at the time of performing their duties, the risk of accidents is very high. So the factor of safety and health of employees in these agencies should be considered in order to increase their work motivation.

2. Literatur Review

2.1 Definitions and role of maintenance manpower

According Hasibuan (1997, 195) understanding of maintenance are: "maintenance is an effort to maintain and or improve the physical condition, mental and attitude of employees, so they remain loyal and more productive work to support the achievement of corporate objectives."

Meanwhile, according to Heartfelt (1996, 15) says: "maintenance is to maintain them to keep going along in the corporate organization and maintain a cooperative attitude and ability of their employees."

And according Soeprihanto (1984, 100) says: maintenance have a very important role because employees are the assets (wealth) of every company who always took an active part and most decisive role whether or not achieved its goals.

2.2 Safety and Health Work

Safety programs and occupational health are intended to assist and maintain physical and mental condition of the workers. Safety program designed to achieve the above objectives in two ways. The first approach is to create psychological environments and attitudes that support safety. Accidents can be reduced if the worker, either consciously or subconsciously, think about safety. This attitude must color the company's operational activities, and a solid company policies and emphasis on occupational health and safety are very important.

A second approach to the design of safety programs is to create and maintain a safe working environment. In this case, the physical environment is designed to prevent workplace accidents.

2.2.1 Safety Work

Safety program objectives are to:

1. Creating a psychological environment and attitudes that support safety. This objective is the responsibility of every person within the organization.
2. Creating and maintaining a safe working environment.

Some of the reasons that encourage the management to support safety programs are:

- a. Personal loss.

Most people do not want to hurt or an accident. Physical and mental suffering caused by accidents are always unpleasant and even traumatic. In addition, there must be an earnest attention to the possibility of a permanent disability or even death.

Financial losses because the worker had an accident.

In general, workers covered by company insurance programs or personal accident insurance. However, injuries due to accidents can cause financial losses that are not covered by insurance.

- b. Loss of productivity

In addition, there are also hidden costs, for example, replacement of injured employees must receive training first.

- c. Higher insurance premiums. Insurance premiums paid workers based on the history of the company in filing insurance claims. The more often an accident, the higher the premiums received by insurance companies.

- d. Possible fines and penalties.

Violation of safety rules could get some fine, imprisonment or other punitive sanctions.

2.2.2 Health Work

Effort prevent and cope with accidents basically can not be separated from efforts to maintain the health of the employees, because these efforts are interrelated to one another. If the physical or mental health conditions can result in neglect employee accidents.

In order to protect its employees against health problems arising from work or work environment and to improve the health of body, mental and physical capabilities of employees, the government issued regulations concerning occupational health services is the number as of: 03 / MEN / 1982.

In this ministerial regulations (Article 1) is meant by occupational health services is a health business conducted with the aim of:

1. Providing support to the work force in the labor adjustment both physically and mentally, especially in the adjustment of work with labor.
2. Protecting workers against any health problems arising from work or work environment.
3. Improving health agencies, mental condition (spiritual) and physical ability of labor.

Providing treatment and care and rehabilitation to employees who suffer illness.

2.3 Motivation

To facilitate the understanding of work motivation, under this proposed understanding the motives and motivation.

Abraham Spierling (1987, 183) promoted that "motive is defined as a tendency to activity, strated by a drive and ended by an adjustment. The adjustment is said to satisfy the motive "

Motive is defined as a tendency for the move, starting from a boost in self-(drive) and ends with self adjustment. Adjustment is said to satisfy the motive. William J. Stanton (1981, 101) defines that "A motive is a need stimulatened the which a goal-oriented individual seeks to satisfy"

Motivation is defined by Fillmore H. Stanford (1969, 173) that "Motivation as an energizing condition of the organism That serves to Direct That organism toward The goal of a perform certain class"

2.3.1 Indicators of Work Motivation

Many factors affect employee motivation. In general, these factors can be grouped into 3 (three) groups, namely:

- a. Related to employee motivation is influenced by the career ladder. Career development to help achieve company goals and individual goals. A successful employee with excellent work performance and occupy higher positions, this means the company goals and individual goals achieved.
- b. The existence of means of support or support. Means of support and this support is divided again into two system, dealing with work environment and that concerns the welfare of employees (reflected in wage and social security system and guarantee the continuity of employment).
- c. The existence of supra facilities. Included in this facility is a supra government policy, industrial relations is the relationship between employers and employees, and management capabilities in using the resources maximally to create an optimal work system.

2.4 RELATIONSHIP BETWEEN SAFETY AND HEALTH PROGRAMS WORK WITH WORK MOTIVATION



Picture 1 : Relationship between safety and health programs work with work motivation

Source: Triyana Iskandarsyah, *Safety and Occupational Health Role In Improving Cost Efficiency Company, Economic Development, Bandung; Sekretariat FE Unika Parahyangan, June Edition, 1990, pg. 38*

With the management attitude that comes from companies that do not just pay attention to her work, making these firms set a policy interests of workers. Thus it will be composed of a program of employment in which one of them is program occupational safety and health.

The implementation of occupational safety and health programs affect psikologis aspects and technical aspects. Good influence on the psychological aspect is that workers feel that the company cared for them so that their work motivation increases and would work better for the company did not disappoint. Another important thing is that workers will carry out their work without excessive worry

Will be crushed by accident and feel comfortable. While the influence of both the technical aspects of the reduction in accidents and illness due to the actual work will not occur.

The employees will work best because they feel the company has given back a commensurate timbale. This means increased labor productivity. With the increased productivity arising satisfaction for both companies and for employees, so that in the end will be achieved success for the company.

3. Design, Model and Implementation

3.1 Research method

Research method used is the statistical method applied probability because the inference to the population based on sample data that the truth is probability that the conclusions from sample data that will be applied to a population that has a chance of error and truth that is expressed in percentage. populations used were all employees of some 148 people.

3.1.1 Method of data collection

While the data collection method that is used:

1. Field research

Studies conducted to obtain data by conducting direct research at the site in order to obtain concrete data, the data is obtained by distributing questionnaires, interview and observation.

2. Research library

Data collection are sourced directly from the research object

3.1.2 Operationalization of variabels

1. Independent variabel

The variables that affect the other variables are not limited to, in this case is the "Safety and Health Program"

2. Dependent variabel

Is variables that are influenced by other variabels, in this case "Employee Motivation"

3.1.3 Data processing technique

To use the entire employee population as many as 148 people. in this case the sample broken down by level of education by 10% with an error rate of 5%

from the results of the stratified population, the sample must be stratified as well.

so the number of samples to:

college level

$10\% \times 12 \text{ people} = 1.2 = 2 \text{ people}$

Senior high school level

$10\% \times 91 \text{ people} = 9.1 = 10 \text{ people}$

Junior high school level

$10\% \times 23 \text{ people} = 2.3 = 3 \text{ people}$

Elementary school level

$10\% \times 22 \text{ people} = 2.2 = 3 \text{ people}$

so the total sample is 18 people

3.1.4 Data processing technique

Technique used is stratified random sampling that samples drawn by separating the elements of the population and the population is divided into homogeneous groups in advance so that members of the sample drawn in each strata.

Data have been obtained, analyzed by using Spearman rank correlation with the formula:

$$\rho = 1 - \frac{6\sum b_i^2}{N(n^2 - 1)}$$

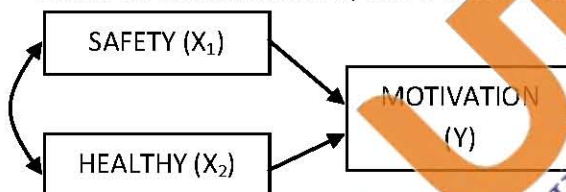
ρ = koeficient korelasi rank spearman

While to test the significance of the relationship, namely whether the relationship applies to the entire population of 148 people, it needs to test its significance using the formula:

$$t = \frac{R \sqrt{n-2}}{\sqrt{1-r^2}}$$

The next count value T is compared with the value of T table. if T count is smaller than the T table, so H_0 rejected and H_1 accepted. but on the contrary, if T count is greater than the T table then H_1 accepted which means it is significant that these coefficients can be may apply to the population where the samples taken 18 people.

Based on literature review, below is research design



Picture 2: Research Design

3.2 Hypothesis

H_0 : no association between occupational safety and health programs with employee motivation

H_1 : there is no relationship between occupational safety and health programs with employee motivation

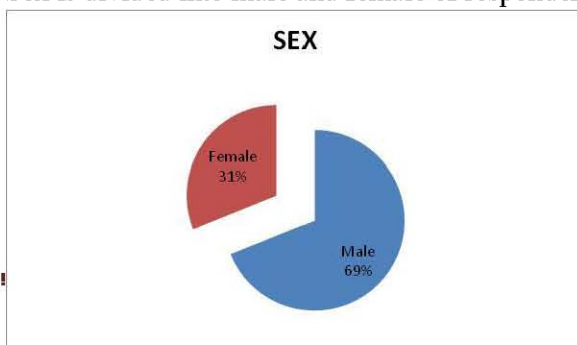
4. Result

4.1 Profile

Profiles of respondents are based on sex and level education

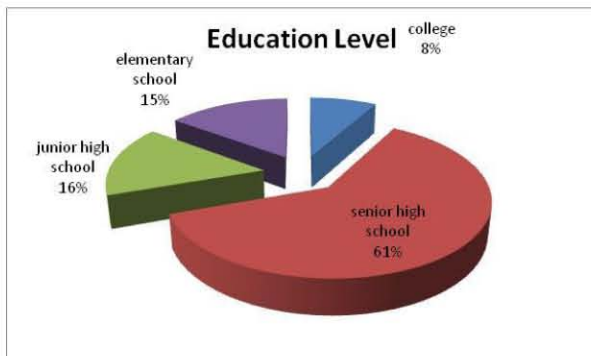
4.1.1 Sex

Sex is divided into male and female of respondents and the result can be seen below:



Graphic 1 that male is more than female as

4.1.2 Education Level



Graphic 2

Majority of respondent is 61% education level of senior high school, 16% junior high school, 15% elementary school and 8% college of level education.

4.1.3 Table Statement questionnaire on health

NO	STATEMENT
1	Companies pay attention to the implementation of employee safety program
2	Company always supervise the implementation of safety
3	Guarantee the safety of employees such as insurance companies are given
4	Safety equipment is adequate protection
5	Crash safety devices such as heat-resistant clothing, masks checked periodically
6	Use of personal protective equipment at work sometimes interfere with comfort in working
7	Use of personal protective equipment has a very important role in reducing hazard

4.1.4 Table Statement questionnaire on safety

NO	STATEMENT
1	Working conditions are safe and healthy
2	Companies pay attention to the implementation of employee health programs
3	Workplace hygiene felt good enough
4	Room temperature conditions more comfortable making my work
5	Air humidity working environment does not feel damp
6	Air circulation is good enough
7	Companies already provide health facilities

4.1.5 Table Statement questionnaire on motivation

NO	STATEMENT
1	Attention to the implementation of occupational safety and health programs provided by the company to increase the motivation of my work
2	Implementation of occupational safety and health programs provided by the company at this very motivating me in work
3	I work motivation would increase if the collateral is adequate employee safety
4	Safety facilities dominated the accident to support the increased motivation of my work
5	Work motivation would increase if the personal protective equipment that is more modern than they are now

6	Improvement of health facilities to improve the motivation of my work
7	Provision of special health clinic employees to increase motivation of my work

4.1.6 The influence of safety, healthy and motivation work

Tabel Spearman rank correlation calculation

No. Resp.	Safety and Healthy Work (X ₁)	Motivation Work (Y ₁)	Rank (X ₁)	Rank (Y ₁)	B ₁	B ₁ ²
1	4.5	4	9.5	15	-5.5	30.25
2	4.5	5	9.5	6	3.5	12.25
3	5	5	3	6	-3	9
4	4.5	5	9.5	6	3.5	12.25
5	4	4	15.5	15	0.5	0.25
6	5	5	3	6	-3	9
7	4.5	4	9.5	15	-5.5	30.25
8	4.5	5	9.5	6	3.5	12.25
9	5	5	3	6	-3	9
10	5	5	3	6	-3	9
11	3.5	4	18	15	3	9
12	4.5	4	9.5	15	-5.5	30.25
13	4	4	15.5	15	0.5	0.25
14	5	5	3	6	-3	9
15	4	5	15.5	6	9.5	90.25
16	4	4	15.5	15	0.5	0.25
17	4.5	5	9.5	6	3.5	12.25
18	4.5	5	9.5	6	3.5	12.25
Total					0	297

Form the table above calculation is obtained $\sum b_1^2 = 297$, so:

$$\rho = 1 - \frac{6 \sum b_1^2}{n(n^2-1)} = 1 - \frac{6 \cdot 297}{18(18^2-1)} = 1 - 0.30 = 0.7$$

From the calculation results can be seen that there is a strong and unidirectional, which means if the safety and health program to increase the motivation of employees will increase. To see the interpretations of the strength of the relationship, then it can be used as guidelines in the table below:

4.1.7 Tabel guidelines to provide interpretation of the correlation coefficient

Interval Coefficient	Level relations
0.0 – 0.199	Very Low
0.20 – 0.399	Low
0.40 – 0.599	Medium
0.60 – 0.799	Strong
0.80 – 1.000	Very Strong

Source: Business Research Method, Dr. Sugiyono (2003, 183)

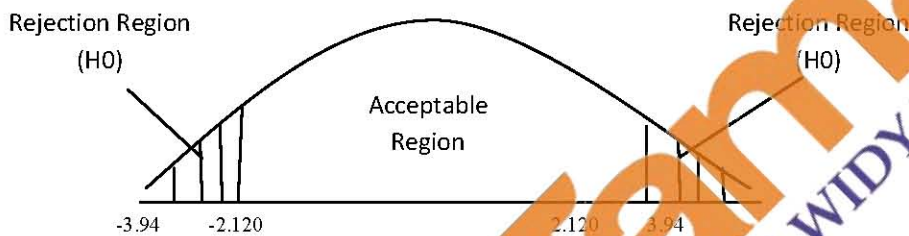
Relationship is valid for sample 18 people. To test signifikansi relationship, namely whether the relationship found was applicable to the entire population of 148 people, it is necessary to test its significance by using the formula:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.7\sqrt{18-2}}{\sqrt{1-0.7^2}} = 3.94$$

t count rates were then compared with the price of the t tables. For error 5% two-party testing and $dk=n-2=16$, then obtained t table=2.120

This can be described as follows:

Picture 3 Significance test of correlation coefficient with two-party test



Based on the calculation, the stated t counted on H_0 rejection region then it can be declared null hypothesis stating there is no relationship between occupational safety and health program to increase employee motivation is rejected and H_1 accepted which states there is a relationship between occupational safety and health program with increased motivation employee.

Mean correlation coefficient between occupational safety and health programs by oncreasing employee motivation of 0.7 is significant, meaning that these coefficient can be generalized or may apply to the population where the samples taken 18 people.

5. Conclusion

From the results of research and discussion that has been done, the authors conclude in this study were:

1. There is a strong and unidirectional, which means if the safety and health program to increase the motivation of employees will increase by 0.7 with a significance of 3.94
2. Safety program conducted by the department of prevention and fire prevention Bandung includes two activities that are programmed for construction personnel, the exercise routine and rescue.
3. Conduct health and fitness coaching by the company itself and by the health department.

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