

EFFECT OF SAFETY OF HEALTH AND ERGONOMY ON ORGANIZATION PERFORMANCE IN NSC POLYTECHNIC SURABAYA

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ABSTRACT

This research takes the object in NSC Polytechnic Surabaya engaged in education program D-3 which includes business administration, hospitality, engineering, accounting still have not apply safety and health standard at lecture room, work room, meeting room This study aims to examine the significant effect between the variables of occupational safety, occupational health, ergonomics on the performance of polytechnic organizations nsc surabaya From the results of F-test concluded safety work, occupational health, ergonomics affect the performance of the organization From the t test concluded This is not a feasible model of regression to predict the effect of safety, occupational health, ergonomics on organizational **Keywords: Safety, health work Ergonomic, and the Organization performance**

1. INTRODUCTION

1.1 Background Issues

Human Resources (HR) is one factor that is very important and has the greatest role in a company. Every company realizes that professional, reliable, competent and diligent human resources are the key for the company / institution in achieving its goals. Employees, lecturers, students as a dominant resource in the company is one of the internal factors of the company / institution of higher education that plays an important role in producing a quality performance. Good employee performance can have a positive impact on the company as a whole. One of them is increasing the completion of the responsibilities that the company provides to the workers. If done earnestly by employees then the resulting output will be satisfactory, but otherwise if done with an atmosphere that is not conducive to produce output far from satisfactory.

The security and protection factors in work are among the factors that affect the organization's performance. When employees, students, lecturers have a sense of security and comfort because they feel getting good protection from the company, then employees, lecturers, students with a calm feeling and will work and learn well. It is expected that employees, lecturers, students like this will have maximum performance. One of the efforts in applying protection for employees, lecturers, students is by implementing the program Occupational Safety and Health (K3). Occupational Safety and Health (OSH) Program is a program system designed for workers and employers as an effort to prevent the occurrence

of occupational accidents and diseases caused by working relationships in the work environment by identifying the things that potentially cause work accidents and anticipatory actions in case of such case. According Mangkunegara (2009: 161), safety is the protection of employees from injuries caused by work-related accidents. Safety risks include aspects of the work environment that can cause fire, electric shock, cuts, bruises, sprains, broken bones, loss of body tools, sight and hearing. Occupational health is an endeavor and rules to maintain labor conditions from events or circumstances that adversely affect health and morals, whether they are perfect physical, mental or social conditions that enable a person to work optimally.

A University Insurance will improve its performance if there is good cooperation and relationship between management and staff, lecturers, students. Because by improving employee performance, Lecturer and student achievement will automatically improve organizational performance. And employees, lecturers, students should be treated like a business partner and not as a laborer alone. Based on the results of the study it has been disclosed that the total number of accidents occurring in general can be qualified that accidents caused by human error itself is 78% and work accident caused by dangerous condition of equipment used in work is 20% the other is 2% (Fathoni, 2008: 4).

The results of this study indicate that human behavior is the main cause of workplace accidents in the workplace. The impacts resulting from these accidents can be bad, such as the loss of life,

disability, and damage to production, which ultimately harm all parties. Implementation of ergonomics for improvement of health, safety and labor productivity and improvement of product quality in a production process increasingly felt. Therefore, the implementation of ergonomics needs to be done better by adjusting machines, tools and work equipment to the workforce that can support ease, comfort and efficiency work (Eko Nurmianto, 2008).

Ergonomi which is a multi and interdisciplinary approach that seeks to harmonize tools, ways and work environment to the ability of skill and employment limitation so as to create healthy working conditions, safe, secure, comfortable and efficient. In this case ergonomics also seeks to create health and safety for the workforce so as to increase work productivity. The purpose of ergonomics and OSH is almost the same that is to create health and safety. Therefore ergonomics and OSH need to be applied in all workplaces to improve worker health and safety in order to increase labor productivity. But in reality the application of ergonomics and OSH in companies, especially in small and medium enterprises is still far from expected. Ergonomics and Occupational Health programs often occupy low and final priorities for corporate management. Indeed health and safety is not a whole thing, but not realized that without health and safety everything does not mean anything (I Dewa Putu Sutjana, 2006).

NSC Surabaya Polytechnic engaged in education program D-3 which includes business administration, hospitality, engineering, accounting still have not apply safety and health standard at lecture room, work room, meeting room.

From the description above, researchers are interested to conduct research with the title "Occupational Health Safety and Ergonomics on the Performance of NSC Polytechnic Organization Surabaya".

1.2 Problem Formulation

1. Is there any significant influence between Safety variable to Performance Organization Polytechnic NSC Surabaya.
2. Is there any significant influence between Health variables on the performance of NSC Polytechnic Organization of Surabaya.
3. Is there a significant influence between Ergonomic variables on Performance

2. LITERATUR REVIEW FRAMEWORK, HYPOTHESIS

2.1 Safety

Safety indicates a safe or secure condition of suffering, damage or loss at work. Safety risks are aspects of the work environment that can cause fires, bruises, sprains, fractures, visual and hearing impairments (Mangkunegara, 2009: 161). While Husni (2005: 136) argues that work safety related to work accidents, ie accidents that occur in the workplace or known as an industrial accident. Industrial accidents are an unexpected and undesirable event that messes up processes that have been arranged in an activity.

Based on the above definition can be concluded that the safety of work is an attempt to prevent accidents so that humans can feel safe and safe conditions of suffering, damage or loss in the workplace. Prevention efforts can be reviewed from two factors is physical environmental factors and environmental factors psychologically.

2.2 Occupational Health

Occupational health programs are an important thing and need to be considered by the company. A good occupational health program is undertaken by doing preventive measures against the onset of illness and in the form of prevention of diseases caused by work processes.

Mathis (2002: 245) explains that occupational health refers to general physical, mental, and emotional stability. A healthy person is free of disease, injury and mental and emotional problems that can interfere with normal human activity in general.

Based on the above opinion concluded that occupational health is an effort and the rules - rules to maintain the conditions of labor from events or circumstances that harm health and morals, both perfect physical, mental and social conditions that enable a person to work optimally.

2.3 Ergonomics

The term ergonomomy comes from the Latin word ergon meaning work and "nomos" which means law and can be defined as the study of human aspects in its work environment which is reviewed anatomically, physiologically, psychologically, engineering, management and design / design (Eko Nurmianto, 2008: According to Mira (2009) there are several aspects in the application of ergonomics to note, among others:

1. Human factors

Structuring in the work system requires the human factor as the actor / user becomes the central point. In the field of design is known the term Human Centered Design (HCD) or design centered on humans. Designing with the principle of HCD, based on the human characters that will interact with the product. As a central point then the element of human limitations must be a benchmark in the arrangement of an ergonomic product. There are several limiting factors that should not be exceeded in order to work safely, comfortably and healthily, namely: internal factors and external factors. These internal factors are internal factors such as age, sex, muscle strength, shape and body size, etc. While factors outside (external factor) that can affect the work or come from outside human, such as: disease, nutrition, work environment, socio-economic and customs, etc ..

2. Anthropometric Factors

Anthropometry is a systematic measurement of the human body, especially the ins and outs of both the dimensional size and shape of the human body. An anthropometry that is a body size is used to design or create a workplace that is appropriate to the size of the user's body. The size of the work tool determines the attitude, motion and position of the workforce, thus the application of anthropometry is absolutely necessary to ensure the existence of a good working system. The size of the tool work is closely related to the user's body. If the equipment is not appropriate, then the power work will feel uncomfortable and will be more slow in work that can cause work fatigue or other symptoms of muscle diseases as a result of doing work in an unnatural way.

3. Body Attitude Factors in Work

Labor relations in the attitude and interaction of the workplace will determine the efficiency, effectiveness and productivity of work, in addition to SOP (Standard Operating Procedures) contained in each type of work. All unnatural body attitudes in work, for example the attitude of reaching the goods beyond his reach should be avoided. The use of standardized work tables and chairs by people of higher body size or overestimated seating will have a significant effect on their work.

4. Human and Machine Factors

The use of technology in the implementation of production will lead to a reciprocal relationship between the human as the perpetrator and the machine as a means of work. In the process of production, this relationship becomes so close that it is a unity. Ergonomically, the relationship between man and machine must be a harmonious, harmonious and appropriate relationship.

5. Working Organizing Factors

Organizing work mainly involves work time, rest time, overtime and other work that can determine the level of health and labor efficiency. A good working time and rest time pattern is required, especially for heavy physical work. Working hours for 8 (eight) hours / day cultivated to the extent possible not exceeded, if not inevitable, should be cultivated a new working group or reproduce shift work. For overtime work should be eliminated, as it can decrease efficiency and work productivity and increased rates of work and accidents

6. Control Factors Working Environment

The humane working environment is the driving factor for enthusiasm and work efficiency. While a poor working environment (beyond the established threshold value), which exceeds human tolerance to deal with it, will not only reduce labor productivity but will also cause occupational diseases, occupational accidents, environmental pollution so that the workforce does not taste safe, comfortable, healthy and safe. There are various work environment factors that affect the health, safety and efficiency and work productivity, namely physical factors such as: the influence of noise, lighting, work climate, vibration, chemical factors: such as the influence of chemicals, gas, steam, dust, physiological factors: attitudes and ways of working, the determination of working hours and rest, shift work, overtime work, psychological factors such as: workplace atmosphere, inter-worker relations and biological factors, such as: bacterial, fungal, viral, worm infections.

To control the work environment can be done through several stages / ways of control techniques, administrative control and control with the provision of personal protective equipment (PPE).

2.4 Organization Performance

Performance is a description of the level of achievement of the implementation of an activity in realizing the goals, objectives, mission and vision of the organization contained in the strategic planning of an organization. While the measurement of performance is a process of assessment of the progress of work against goals and objectives

Performance measurement has several important elements in it, among others:

(1) **Establish organizational goals, objectives, and strategies.** Objectives are general statements about what the organization wants to achieve. Goals are organizational goals that have been explicitly stated with clear time constraints. Strategies are the means or techniques that organizations use to achieve goals and objectives;

(2) **Formulate indicators and measures of performance.** Performance indicators refer to performance appraisals indirectly are things that are only a performance indication. Performance measures refer to performance appraisals directly.

(3) **Measuring the level of achievement goals and objectives of the organization.**

If we already have clear indicators and performance measures, performance measurement can be implemented. Measure level the achievement of objectives, targets and strategies is to compare actual results with predetermined performance indicators and measures;

(4) **Perform performance evaluation.**

Performance evaluation will provide an overview to the recipient of information on the value of the organization's performance. performance information can be used by the management company for various things, among others:

(a) **Feedback.**

The results of measurement to performance achievement serve as the basis for management or organizational management for performance improvement in the next period. Can be used as a basis for reward and punishment of managers and members of the organization;

(b) **Assessment of organizational progress.**

Performance measurements performed over a given period of time are very useful for assessing the progress the organization has made;

c) **Improving the quality of decision-making and accountability**

Performance measurement produces highly useful information for management decision-making as well as stakeholders (Sony, 2006) The Balanced Scorecard concept was created to complement the traditional limitations and performance appraisals that focus more on the financial aspect.

Traditional performance appraisal is not able to describe the aspects outside of finance that turned out to be able to affect the company's performance significantly including the financial performance of the company. Other influential aspects are service aspects, internal business process aspects and aspects of learning and growth. These aspects affect the entire performance of the company even on the aspects of learning and growth are able to influence and determine the survival of the company in the future.

The second group or support group is a group that supports performance in the core group. Supporting groups describe the attributes the company provides to its products and services creating customer loyalty and satisfaction. Attributes are divided into three categories, among others:

1) **Service product attributes.**

These attributes include functional attributes, pricing and quality of products / services. For attributes this, every customer has its own inner tendency choose products / services.

2) **Customer relationship.**

In this category includes how the customer feels after buying the product / service and receiving the service company. The customer's feeling is greatly influenced by the quality of the product / service and the quality of service

3) **Image and Reputation.**

This category Describes intangible factors that can make customers interested in a product / service. This category allows companies to actively build their image and reputation in society.

In the current era of globalization, companies that will be able to survive and win the competition is a company that is able to understand and meet the desires, needs and expectations of its customers. This proves that the customer is the main source of income for the company which is also one part/component of the financial target.

2.5 Occupational Safety and Health Relations with Organizational Performance

Occupational safety and health (K3) is an important aspect in the effort to improve the performance of the organization and can provide protection to employees, lecturers, students to be free from accidents and unhealthy environments that can harm employees, lecturers, students and institutions.

According to Siagian (2002: 263) the importance of maintaining the health and well-being of members of the organization has been widely recognized among managers because employees, lecturers, healthy and fit students, in the physical sense and in the mental sense of psychology, will be able to show excellent performance, productivity high and low laziness.

The influence of occupational health and safety with organizational performance is crucial to the progress of the company, because the maximum working conditions will affect the results of its performance, especially companies provide comfort, safety assurance, and adequate facilities can make workers, students calmly do their responsibilities.

Mangkunegara (2010: 162) states that "in addition to the purpose of avoiding workplace accidents in the company's production process, safety programs also increase enthusiasm, work harmoniousness, and employee participation" with increased excitement, harmony of work and work participation hence an impact on increased organizational performance. Accident prevention is a major part of the maintenance function of employees, faculty, students.

The physical condition of employees, faculty, students can be reviewed through illness, tension and pressure as well as through accidents. Most OSH efforts are being directed at prevention of illnesses arising from the workplace environment even more, employee health, lecturers, students who have resulted in a level high absence and low performance.

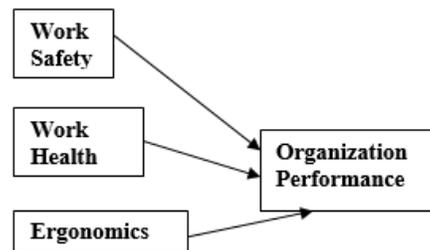
Based on the description above, then one of the factors that affect the organization's performance is occupational safety and health. Institutions / Companies need to maintain the safety and health of employees, faculty, students, health concerns physical or mental health. The health of employees, lecturers, poor students will result in a tendency for high absenteeism and low production. The existence of a good health program will benefit the employees, lecturers, students materially, because they will less absent work, lectures with a pleasant environment, so as a whole will be able to improve work performance and more productive.

2.6 Ergonomic Relationship with Organizational Performance

Ergonomics is one branch of science that studies the effectiveness of the use of physical objects and facilities by humans. The purpose of the study of ergonomics to maintain and improve performance and productivity with attention to health, safety, security, and job satisfaction In the application means the interaction between human factors and other elements or components and subsystems of a system. If interpreted in general, then the ergonomics into rules related to work. The point is that the work space to be comfortable to occupy, whether it involves penyerasian space and space security.

2.7 Conceptual Framework

Conceptual Framework Model describes the relationship of variables to be studied in the form of influence or causal relationship between variables in this study. The variables in this study are Occupational Safety and Health, Ergonomics, Organizational Performance



2.8 Hypothesis

1. Safety has a significant influence on organizational performance in NSC Polytechnic surabaya.
2. Health Work has a significant influence on organizational performance in NSC Polytechnic surabaya.
3. Ergonomi has a significant influence on organizational performance in NSC Polytechnic Surabaya

3. Research Method

3.1 Types of Research

This research was conducted at Polytechnic of NSC Surabaya. By using survey research on respondents consisting of: students, lecturers, staff Polytechnic NSC Surabaya.

3.2 Sample

Researchers take a random sample of 100 people consisting of 50 Students, 50 Employees / Lecturers.

3.3 Data Collection Techniques

Data collection techniques as following: Questioner that is data collection by How to make a list of questions asked to respondents who have been specified as a sample.

3.4 Types and Data Sources

The data collected consist of: Primary data, data obtained directly from the respondents and processed and the authors obtained data in accordance with the needs of research.

3.5 Data Analysis Techniques

1. Descriptive Analysis

Descriptive Analysis suggests incoming data by way grouped in tabular form, then given an explanation according to descriptive method.

2. Quantitative Analysis

Quantitative Analysis is an analysis related to statistical calculation sought with SPSS program.

2.1 Multiple Linear Regression Analysis

In analyzing the data of this study, then in the first stage of the researcher conducted a questionnaire test, the test validity, reliability. To see the effect of safety and health on organizational performance used multiple linear regression is as follows:

$$Y = a + b_1X_1 + b_2 X_2 + b_3 X_3$$

Where

Y= The Bounded Variable is Organization Performance

a = The constant of the regression equation multiple

b1= Safety regression coefficient Work

X1= Independent variable is Safety Work

b2 = Health regression coefficient Work

X2 = The independent variable is Health Work

b3 = Regression Coefficient Ergonomics

X3 = The independent variable is Ergonomics

(Sugiarto & Dergibson, 2000)

2.2 Instrument Test

1. Test Validity

Validity test is a statement of the extent to which data is collected in a questionnaire can measure what you want measured and used to determine the feasibility of the items in a list of questionnaires in defining a variable. Assessing the validity of each item can be seen from the corrected item - the total correlation of each question. A question is valid if r count > r table.

Then the item the question is valid (Riduwan & Sunarto, 2007) By formula:

$$r_{xy} = \frac{n \sum xy - \sum x \sum y}{\sqrt{(n \sum x^2 - (\sum x)^2)(n \sum y^2 - (\sum y)^2)}}$$

Description :

rxy = Value of validity or correlation coefficient

X = score of a particular question (independent variable)

Y = total question score (dependent variable)

n = number of respondents to test

(Umar, 2002)

2. Data Reability Test

Reliability test is a measure of a stability and consistency of respondents in answering things related to construct questions that are the dimensions of a variable and arranged in a form of questionnaire. Test reliability is done by cronbach alpha test. Determination of realibel or not a research instrument can be seen from the value of alpha and r table it. If the value of cronbach alpha > r table then the research instrument is said to be reliable, meaning that the measuring tool used is correct. Or the reliability of a variable construct is said to be good if it has a cronbach alpha value greater than 0.60 (Riduwan & Sunarto, 2007).

With Formula

$$r_{11} = \frac{k}{k - 1} \times \left\{ 1 - \frac{\sum S_i}{S_t} \right\}$$

r 11 = Instrument Reliumber of items tested

Si = variance score Variance value Answer the item to i

St = Value of Total Score Variance

2.3 Hypotesis Testing

1. Test F

Test F is used to find out the positive and significant relationship between two or more independent variables with variables are bound simultaneously or together.

2. Test t

T test is used to find out the relation of independent variable partially with dependent variable. Test t (test the significance of product moment correlation) by comparing t table with t count.

4. RESULT AND DISCUSSION

1. Descriptive Analysis

The analysis in this section will show that the distribution of items from the variables of Work Safety (X1), Working Health (X2), and Organization Performance (Y) variables as a whole are obtained from respondents' answers through questionnaires, either in the number of respondents or in numbers percentage.

a) Table 1. Frequency Distribution of Safety Variables (Employee, Lecturer)

| Item | Description | Average |
|--------------------------------------|---|--------------|
| X1.1 | Availability of fire alarms in NSC Polytechnic Surabaya area | 3,2 |
| X1.2 | Available Hydrant Pump or Apar in case of fire | 4,34 |
| X1.3 | NSC Polytechnic provides emergency stairs in accordance with standard in case of disaster such as earthquake, etc . | 3,2 |
| X1.4 | Availability of evacuation point or assembly poin | 3,1 |
| X1.5 | The NSC Polytechnic always provide training or guidance in case of natural disaster such as earthquake, fire etc. | 3,1 |
| Average Total Safety Variable | | 3,396 |

Source: Primary Data Processed, 2018

Based on the results of respondents' answers, the average total respondent respondent safety variables of 3.396. This suggests that the safety variables in NSC Polytechnic have been done well

b) Table 2. Frequency Distribution of Variable Safety (Student)

| Item | Description | Average |
|--------------------------------------|---|--------------|
| X1.1 | Availability of fire alarms in NSC Polytechnic Surabaya area | 4 |
| X1.2 | Available Hydrant Pump or Apar in case of fire | 4,2 |
| X1.3 | NSC Polytechnic provides emergency stairs in accordance with standard in case of disaster such as earthquake, etc . | 3,8 |
| X1.4 | Availability of evacuation point or assembly point | 3,6 |
| X1.5 | The NSC Polytechnic always provide training or guidance if at any time of disaster such as earthquake, fire etc. | 3,8 |
| Average Total Safety Variable | | 3,876 |

Source: Primary Data Processed, 2018

Based on the results of respondents' answers, the average total respondent safety variables of 3.876. This suggests that the safety variables at NSC Polytechnic have been done well

c) **Table 3. Frequency Distribution of Variable Work Health (Employee, Lecturer)**

| Item | Description | Average |
|--------------------------------------|--|--------------|
| X1.1 | NSC Polytechnic provides first aid in case of accident or sudden illness | 4,22 |
| X1.2 | Available Clinic at NSC Polytechnic as additional facility for sick Employee | 3,1 |
| X1.3 | All employees, lecturers of NSC Polytechnic get health insurance. | 4,6 |
| X1.4 | NSC Polytechnic provides education on the importance of Health. | 3,5 |
| X1.5 | NSC Polytechnic provides health education / implementation of the importance of healthy living on campus for all employees, lecturers. | 3,34 |
| Average Total Safety Variable | | 3,744 |

Source: Primary Data Processed, 2018

Based on the results of respondents answers, the average total respondent health work variables of 3.744. This suggests that the safety variables at NSC Polytechnic have been done well

d) **Table 4. Frequency Distribution of Health Variables (Student)**

| Item | Description | Average |
|------|--|---------|
| X1.1 | NSC Polytechnic provides first aid in case of accident or sudden illness | 4,1 |

| | | |
|--------------------------------------|---|--------------|
| X1.2 | Available Clinic at NSC Polytechnic as additional facility for sick Employee. | 4,1 |
| X1.3 | All NSC Polytechnic Students get health insurance | 4,3 |
| X1.4 | NSC Polytechnic provides education on the importance of Health | 4,2 |
| X1.5 | NSC Polytechnic provides health education / implementation of the importance of healthy living inside the campus for all students | 4 |
| Average Total Safety Variable | | 4,136 |

Source: Primary Data Processed, 2018

Based on the results of respondents answers, the average total of respondents' answers health variables of 4.136 This indicates that the safety variables at NSC Polytechnic have been done very well

e) **Table 5 Frequency Distribution of Ergonomic Variables (Employee, Lecturer)**

| Item | Description | Average |
|------|---|---------|
| X1.1 | Tables & Chairs provided are in accordance with standard and comfort | 3,54 |
| X1.2 | The height of the computer desk is adjusted to the user's point of view | 4 |
| X1.3 | The workspace of NSC Polytechnic is suitable with comfort | 3,92 |
| X1.4 | Workspace | 4,04 |

| | | |
|---|---|-------------|
| | lighting is right | |
| X1.5 | Available backbone support to keep your posture upright | 3,4 |
| Average Total Ergonomic Variable | | 3,78 |

Source: Primary Data Processed, 2018

Based on the results of respondents' answers, the average total respondents Ergonomic variable of 3.78. This suggests that the safety variables at NSC Polytechnic have been done well

f) **Table 6 Frequency Distribution of Ergonomic Variables (Student)**

| Item | Description | Average |
|---|--|-------------|
| X1.1 | The tables & chairs provided are in accordance with the standard and comfort. | 4,1 |
| X1.2 | The distance between the seat and the screen (Projector) or whiteboard is in accordance with the standard. | 4,2 |
| X1.3 | The broad class of NSC Polytechnic is in keeping with the convenience. | 3,86 |
| X1.4 | Classroom lighting is right | 4 |
| X1.5 | Dena learning class and other teaching room is in accordance with the standard and comfort | 4 |
| Average Total Ergonomic Variable | | 4,04 |

Source: Primary Data Processed, 2018

Based on the results of respondents' answers, the average total respondents Ergonomic variable of 4.04. This suggests that the safety variables at NSC Polytechnic have been done well

g) **Table 7 Organizational Performance (Employee, Lecturer)**

| Item | Description | Average |
|---|---|--------------|
| X1.1 | Application of Health and Safety (K3) can make employees / lecturers work in accordance with the standard that has been set | 4,26 |
| X1.2 | The importance of standard comfort, safety and health in an organization can improve employee / lecturer performance. | 4,48 |
| X1.3 | Chair / Table can provide comfort Employees / lecturers in work so that it can work effectively and efficiently. | 4,28 |
| X1.4 | Good lighting can make Thorough in completing a given task | 4,54 |
| X1.5 | Comfortable atmosphere can be employees / Lecturers work well | 4,58 |
| Average Total Organization Performance Variables | | 4,428 |

Source: Primary Data Processed, 2018

Based on the results of respondents' answers, the average total respondents Ergonomic variables of 4.428 This states that the variable Performance Organization at NSC Polytechnic has done well.

(h) Table 8 Organizational Performance (Student Achievement)

| Item | Description | Average |
|--|---|---------|
| X1.1 | Increased student achievement with the comfort in applied NSC Polytechnic | 4 |
| X1.2 | Increase student insight into the importance of standard comfort, safety and health in an organization. | 4,1 |
| X1.3 | Students become more active with a comfortable classroom and campus atmosphere | 4,16 |
| X1.4 | Good lighting can make students more concentrated on the knowledge gained so as to improve performance | 4,28 |
| X1.5 | Lay Out settings / layout in the classroom already gives students comfort in learning so as to improve the pretation. | 4,22 |
| Average Total Organization Performance Variables | | 4,156 |

Source: Primary Data Processed, 2018

Based on the results of respondents' answers, the average total respondents Ergonomic variables of 4.428 It is stated that the variable Organizational Performance at Polytechnic NSC has been done well.

(i) Table 9 Test Validity Safety (Employee, Lecturer)

| Item | count r |
|------|---------|
| 1.1 | 0,881 |
| 1.2 | 0,377 |
| 1.3 | 0,909 |
| 1.4 | 0,920 |
| 1.5 | 0,923 |

Source: Primary Data Processed, 2018

The result of the question for the X1 safety variable shows that Question 1 to 5 is valid because it is greater than 0.3

(J) Table 10 Test Validity Healte (Employee, Lecturer)

| Item | count r |
|------|---------|
| 2.1 | 0,671 |
| 2.2 | 0,347 |
| 2.3 | 0,717 |
| 2.4 | 0,838 |
| 2.5 | 0,823 |

Source: Primary Data Processed, 2018

The result of the question for the X2 Healte variable shows that Question 1 to 5 is valid because it is greater than 0.3

(K) Table 11 Test Validity Ergonomic (Employee, Lecturer)

| Item | count r |
|------|---------|
| 3.1 | 0,219 |
| 3.2 | 0,359 |
| 3.3 | 0,400 |
| 3.4 | 0,473 |
| 3.5 | 0,455 |

Source: Primary Data Processed, 2018

The result of the question for the X3 Ergonomic variable shows that Question 1 to 5 is valid because it is greater than 0.3

(L) Table 12 Test Validity Organizational Performance (Employee, Lecturer)

| Item | count r |
|------|---------|
| 4.1 | 0,013 |
| 4.2 | 0,337 |
| 4.3 | 0,219 |
| 4.4 | 0,098 |
| 4.5 | 0,052 |

Source: Primary Data Processed, 2018

The result of the question for the Y Organizational Performance variable shows that Question 1 to 5 is valid because it is greater than 0.3

(M) Table 13 Test Validity Safety (college student)

| Item | count r |
|------|---------|
| 1.1 | 0,888 |
| 1.2 | 0,678 |
| 1.3 | 0,875 |
| 1.4 | 0,922 |
| 1.5 | 0,905 |

Source: Primary Data Processed, 2018

The result of the question for the X1 Safety variable shows that Question 1 to 5 is valid because it is greater than 0.3

(N) Table 14 Test Validity Healte (college student)

| Item | count r |
|------|---------|
| 2.1 | 0,466 |
| 2.2 | 0,582 |
| 2.3 | 0,502 |
| 2.4 | 0,543 |
| 2.5 | 0,611 |

Source: Primary Data Processed, 2018

The result of the question for the X2 Healte variable shows that Question 1 to 5 is valid because it is greater than 0.3

(O) Table 15 Test Validity Ergonomic (college student)

| Item | count r |
|------|---------|
| 3.1 | 0,324 |
| 3.2 | 0,320 |
| 3.3 | 0,154 |
| 3.4 | 0,133 |
| 3.5 | 0,215 |

Source: Primary Data Processed, 2018

The result of the question for the X3 Ergonomic variable shows that Question 1 to 5 is valid because it is greater than 0.3

(P) Table 16 Test Validity Organizational Performance (college student)

| Item | count r |
|------|---------|
| 4.1 | 0,336 |
| 4.2 | 0,281 |
| 4.3 | 0,298 |
| 4.4 | 0,323 |
| 4.5 | 0,354 |

Source: Primary Data Processed, 2018

The result of the question for the Y Organizational Performance variable shows that Question 1 to 5 is valid because it is greater than 0.3

(Q) Table 17 Test reliability (Employee, Lecturer) Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| ,912 | 20 |

Source: Primary Data Processed, 2018

Based on reliability testing above cronbach alpha of 0.912 is greater than the nominal value of cronbach alpha 0.6 therefore it can be concluded that the research instrument used measuring variables X1, X2, X3 and Y are reliable

(R) Table 18 Test reliability (college student) Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| ,932 | 20 |

Source: Primary Data Processed, 2018

Based on reliability testing above cronbach alpha of 0.932 is greater than the nominal value of cronbach alpha 0.6 therefore it can be concluded that the research instrument used measuring variables X1, X2, X3 and Y are reliable

(S) Table 19 Test F (Employee, Lecturer) Anova

| F | Sig |
|-------|-------|
| 4,436 | 0,008 |

- a. **Dependent Variable: Performance Organization**
 - b. **Independent Variabel: Safety, Healte Work, Ergonomic**
- Source: Primary Data Processed, 2018

The F value in the above example is 4.436. This number is the value of F arithmetic, which is then

compared with the value of F table. If the value of F arithmetic is greater than F table then it is concluded that there is a significant influence between Work Safety (X1), Occupational Health (X2) and Ergonomic (X3) simultan on Organization Performance (Y)

(T) **Tabel 20 Test F (college student) Anova**

| F | Sig |
|-------|-------|
| 7,885 | 0,000 |

- a. **Dependent Variable: Performance Organization**
- b. **Independent Variabel: Safety, Healte Work, Ergonomic**

The F value in the above example is 4.436. This number is the value of F arithmetic, which is then compared with the value of F table. If the value of F arithmetic is greater than F table then it is concluded that there is a significant influence between Work Safety (X1), Occupational Health (X2) and Ergonomic (X3) simultan on Organization Performance (Y)

(U) **Table 21 Test T (Employee, Lecturer) COEFFICIENTS**

| Model | B | Sig |
|---------------|-------|-------|
| Constant | 3,654 | 0,000 |
| Saftey | 0,201 | 0,011 |
| Healte | 0,249 | 0,41 |
| Ergonomi c | 0,139 | 0,140 |

- a. **Dependent Variable: Performance Organization**
Source: Primary Data Processed, 2018

It can be seen that the column of significance, the independent variable has a significance level above 0.05 (0.11 work safety, 0.41 occupational health, 0.140 ergonomics). This is not a feasible model of regression to predict the effect of safety, occupational health, ergonomics on organizational performance

(v) **Table 22 Test T (college student) COEFFICIENTS**

| Model | B | Sig |
|-----------|-------|-------|
| Constant | 2,223 | 0,000 |
| Saftey | 0,037 | 0,640 |
| Healte | 0,241 | 0,029 |
| Ergonomic | 0,197 | 0,104 |

- a. **Dependent Variable: Performance Organization**
Source: Primary Data Processed, 2018

It can be seen that the column of significance, the independent variable has a significance level above 0.05 (0.640 work safety, 0.029 occupational health, 0.104 ergonomics). This is not a feasible model of regression to predict the effect of safety, occupational health, ergonomics on organizational performance

5. Conclusion

- 5.1 From the analysis result of the description is concluded This indicates that the safety, Healty, Ergonomic, Organization Performance Variable at NSC Polytechnic have been done very well
- 5.2 From the results of F-test concluded safety work, occupational health, ergonomics affect the performance of the organization
- 5.3 From the t test concluded This is not a feasible model of regression to predict the effect of safety, occupational health, ergonomics on organizational

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