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The Relationship of Sitting Work Attitude with Job Satisfaction of the Employees in the Weaving Machine in PT Iskandar Indah Printing Textile Surakarta

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ABSTRACT. Some workers in the weaving machine use additional footrests because the chair size is too high and some workers have to adjust the position of the legs because the chair size is too short. The purpose of the study to determine the level of job satisfaction of workers in the weaving machine of PT Iskandar Indah Printing Textile Surakarta. This study used a saturated sampling technique with a cross-sectional approach. The object of research amounted to 24 people. Collecting data using observation sheets, anthropometry sets to measure anthropometric data of workers, and questionnaires to assess job satisfaction. Data processing and analysis techniques were carried out by using the chi-square statistical test. From the results of the analysis, it is known that the value of sig. for the measurement of sitting work attitude with job satisfaction of 0.033. This value means that the p-value > 0.01 but < 0.05, the test results are declared significant. There is a relationship between sitting work attitude and job satisfaction of workers in the weaving machine. The conclusion of this study is the level of job satisfaction of workers in the machine section of PT Iskandar Indah Printing Textile Surakarta is that there are 16 workers (66.7%) who experience job dissatisfaction and 8 workers (33.3%) who experience job satisfaction.

Keywords: sitting work attitude, job satisfaction, ergonomics.

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1. Introduction

Developments in the industrial sector have recently continued to increase, even in large, medium, and small industries. Development in the industrial sector is aimed at expanding employment, business and improving the quality and protection of workers. Employee's protection such as improving salary, working conditions, and other social security in order to improve the well-being to them.

The application of ergonomics to improve the health, safety, and productivity of employees as well as to improve product quality in a production process is needed. Therefore, the implementation of ergonomics needs to be adjusted better by adjusting machines, tools and work equipment for the employees that can make the workplace safer, comfortable and efficiency (Nurmianto, 2003).

The employees prefer a physical work environment that is clean, comfortable, and supported by modern equipment. Provide an idea that the physical work environment has an important role to create job satisfaction to the employee (Wibowo, 2014). The work chair in the weaving machine is a piece of must-have work equipment. Because the employees work by sitting to weave the thread. This work is not be able to

be done by standing up because it creates an excessive work fatigue.

Sitting requires less energy than standing because it can reduce the amount of static muscle load on the legs. However, the wrong sitting posture will lead to back problems. The emergence of complaints due to a non-ergonomic sitting position can affect the level of worker fatigue. Sitting requires less energy than standing because it can reduce the amount of static muscle load on the legs. However, the wrong sitting posture will lead to back problems. The emergence of complaints due to a non-ergonomic sitting position can affect the level of worker fatigue (Tarwaka, 2011)

Based on the result of the research in the textile industry in Pemalang that the employees in weaving machines have complaints of back pain are amounted of 28 workers (60%) and did not complains of back pain are 18 workers (40%). (Koesyanto, 2013).

The chair in the weaving machine in PT Iskandar Indah Printing Textile Surakarta is not ergonomic because it does not match the body size of the employees. The highest of the employee is about 160cm and the shortest is about 147cm. This can be proven that some employees use additional footrests because the size of the chair is so high and some workers have to adjust the position of their feet to the height of their chairs as a result of the chair size is so short in order to work

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comfortably. However, working with non-ergonomic chairs for 7 hours/day continuously is assumed to result in a decrease in the level of job satisfaction of the employees.

2. Materials and Methods

This study using an analytic survey research method with a cross-sectional approach in which data concerning the independent variable or risk and the dependent variable or effect variable, will be collected at the same time (Notoatmojo, 2010).

The sample in this study was 24 employees in the weaving machine in PT Iskandar Indah Printing Textile Surakarta. The sampling technique used the saturated sampling technique and data analysis with a chi-square statistical test using the SPSS version 16 computer program.

Ergonomic chair measurement using an anthropometry set. It is said to be ergonomic if the size of the chair by all dimensions of the employee's body and not to be non-ergonomic if the size of the chair does not match one or all of the dimensions of the employee's body. Meanwhile, job satisfaction was measured using a job satisfaction questionnaire. There are 29 questions in the questionnaire with the yes-no answer. The questions is about feeling pain in the whole body such as head, neck, and back pain, waist until leg and about how they enjoy their job. It is based on the theory if job satisfaction depends on the work environment.

3. Results and Discussion

This is the results of the univariate analysis of the characteristics of the respondents and the results of the

Tabel 5

Results of the bivariate analysis of research between Sitting Work Attitude and Work Satisfaction

Sitting Work Attitude	Work Satisfaction				Total		Chi Square Test
	Yes		No		f	%	p
	f	%	f	%			
Ergonomic	6	25	7	29,2	13	54,2	0,033
Non ergonomic	10	41,7	1	4,2	11	45,8	
Total	16	66,7	8	33,3	24	100	

Sitting work attitude is divided into 2 groups there are ergonomic and non-ergonomic attitude which is measured using an anthropometry set. It is said to be ergonomic if the size of the chair is matched the dimensions of the employee's body. The width of the chair which is adjusted to the width of the hips and the height of the chair is adjusted to the height of the knee. And it is said to be not ergonomic if the size of the chair does not match one or all of the body dimensions (hip-width and knee height). After measuring the size of the chair and the dimensions of the employee's body, it was found that 13 employees had ergonomic and 11 employees had non-ergonomic sitting work attitude.

The result based on measurements of the anthropometry of the chair in the weaving machine is:

1. Height: 49 cm

The chair height is measured from the knee to the foot in upright sitting position.

2. Width: 33 cm

The width of the chair mat is adjusted to the width of the worker's hips in upright sitting position.

3. Length: 44 cm

The length of the chair mat is measured to the length of the hips to the knee. It is measured while the employee in sitting

bivariate analysis of research on employees in the weaving machine section of PT Iskandar Indah Printing Textile Surakarta:

Table 1.

Distribution of Respondents by Age

Age	Frequency	(%)
15-64	24	100
Total	24	100

Table 2

Distribution of Respondents Based on Working Period

Working Period	Frequency	(%)
10-35	24	100
Total	24	100

Table 3

Distribution of Respondents Based on Sitting Work Attitude

Work Attitude	Frequency	(%)
Ergonomic	13	54,2
Not Ergonomic	11	45,8
Total	24	100

Based on the results of the study, 24 workers had an age range of 15-64 years. Working-age is an age level in which people able to work productively. According to the Central Statistics Agency (BPS), 15-64 years of age are adults or working age or productive age.

The average of working period of the employee's between 10 until 35 years. According to Budiono (2003), education can shape and increase the knowledge and skills of the workforce in completing their tasks. Education will also affect a person's way of thinking and acting in dealing with work.

upright position and measuring the horizontal length from the outer part of the hips to the indentation of the inner knee (popliteal). The thighs and inner legs forms an angle.

The results of the seat size calculation use 0.95 percentile, which means that 95% of the population is below that size and the remaining 5% is above that size. Tarwaka, et al (2004) said that anthropometric data can be used to design clothes, workplaces, work environments, machines, tools, work facilities and products for consumers.

Based on the analysis using the chi-square test p-value is 0.033 which mean the p-value <0.05 but still > 0.01, there is a relationship between sitting work attitude and job satisfaction. Although some employees work in ergonomic chairs, but in reality, there are still some employees feel job dissatisfaction.

Job satisfaction is influenced by a good and comfortable work environment, whereas sitting work attitude is one component of the work environment. This study is in line with the theory that work attitude can affect job satisfaction (As'ad, 2003).

4. Conclusion

Based on the results of about sitting work attitudes with job satisfaction, there are some conclusions:

1. The recommended chair size according to the anthropometry of employees at the weaving machine of PT Iskandar Indah Printing Textile Surakarta is 49 cm for the height, 33 cm for the width and 44 cm for the length of the chair. There is stramm chair which is suitable with the condition in the weaving machine.
2. Based on the results of research conducted on 11 June 2013, at the weaving machine of PT Iskandar Indah Printing Textile Surakarta, there were significant results between sitting work attitude and job satisfaction. This is because the p-value of sitting work attitude with work fatigue of 0.033 which means if the p-value is <0.05 but still > 0.01 so the test is declared significant.
3. The level of job satisfaction of workers in the beaker of PT Iskandar Indah Printing Textile Surakarta is that there are 16 workers (66.7%) who experience job dissatisfaction and 8 workers (33.3%) who experience job satisfaction.

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