

ABSTRACT

PT. X is a company running to manufacture wooden doors. Workers exposed by the dust of wood as the consequence the employee get respiratory symptoms just because of the dust wood. This research aims to analyze the correlation between level of dust wood and work environment with employee's respiratory symptoms in the production division of PT. X.

This work is cross sectional research with analytical approach. The population is 120 labors and the sample is 93 workers by applying proportional random sampling. Meanwhile, the data collection technique is gained by measuring the quantity of dust with Low Volume Dust Sampler (LVDS), the measurement of physical work environment is obtained with Quest Time 36, anemometer, observation and questionnaire from American Thoracic Society (ATS-DLD-78-A).

The highest level of dust wood measurement are 1,71 mg/m³. Measurement of temperature, humidity and speed of airflow is not sufficient of standart. The result of correlation test showed that there is a correlation between age ($p = 0,000$), work period ($p = 0,000$), smoking habit ($p = 0.02$), use of PPE (mask) ($p = 0.01$), dust wood level ($p=0,000$) with the respiratory symptoms. There is a correlation between temperature ($p = 0,000$), humidity ($p = 0,000$), speed of airflow ($p = 0.001$) with level of dust wood. Workers who work at temperature, humidity, speed of airflow, most of laborers (60,2%) got respiratory symptoms.

In conclusion, age, years of working, smoking habits, the use of PPE (mask), level of dust wood have a direct correlation with respiratory symptoms. Temperature, humidity and speed of airflow have correlation with level of dust wood. The company is advised to carry out further examination of the workforce that has a tendency of lung disease, provide counseling on the importance of using PPE (mask).

Keywords: Level of Dust Wood, Physical Work Environment, Respiratory Symptoms.

ABSTRAK

PT. X merupakan perusahaan yang bergerak di bidang pembuatan pintu kayu. Tenaga kerja selalu terpapar debu kayu sehingga debu yang terhirup dapat menimbulkan keluhan pernapasan. Tujuan penelitian yaitu menganalisis hubungan kadar debu kayu dan lingkungan kerja fisik dengan keluhan pernapasan pada tenaga kerja di bagian produksi PT. X.

Penelitian ini termasuk penelitian *cross sectional* yang bersifat analitik. Populasi penelitian sebanyak 120 pekerja dan sampel sebanyak 93 yang dihitung menggunakan *proporsional random sampling*. Pengumpulan data didapatkan melalui pengukuran kadar debu dengan Low Volume Dust Sampler (LVDS), pengukuran lingkungan kerja fisik dengan *Quest Time 36* dan anemometer, observasi serta kuesioner dari *American Thoracic Society (ATS-DLD-78-A)*.

Hasil Pengukuran kadar debu tertinggi yaitu 1,71 mg/m³. Pengukuran suhu, kelembapan dan kecepatan aliran udara tidak memenuhi standar. Hasil pengujian menunjukkan terdapat hubungan antara usia ($p=0,000$), masa kerja ($p=0,000$), kebiasaan merokok ($p=0,02$), penggunaan APD (masker) ($p=0,01$), kadar debu kayu ($p=0,000$) dengan keluhan pernapasan. Ada hubungan antara suhu ($p=0,000$), kelembapan ($p=0,000$), kecepatan aliran udara ($p=0,001$) dengan kadar debu kayu. Tenaga kerja yang bekerja pada suhu, kelembapan, kecepatan aliran udara yang tidak memenuhi standar sebagian besar mengalami keluhan pernapasan sebanyak (60,2%).

Kesimpulan yang dapat ditarik yaitu usia, masa kerja, kebiasaan merokok, penggunaan APD (masker), kadar debu kayu berhubungan dengan keluhan pernapasan. Suhu, kelembapan, kecepatan aliran udara berhubungan dengan kadar debu kayu. Perusahaan disarankan untuk melakukan pemeriksaan lanjutan pada tenaga kerja yang mempunyai kecenderungan penyakit paru kerja, memberikan penyuluhan tentang pentingnya menggunakan APD.

Kata Kunci: Kadar Debu Kayu, Lingkungan Kerja Fisik, Keluhan Pernapasan