

# ***AN OVERVIEW OF WOOD DUST EXPOSURE AND ASSOCIATED RISK FACTORS FOR RESPIRATORY DISORDERS AMONG WORKERS AT UD KONSTITI JATI***

Nadhia Jellita Fiki Saputri<sup>1</sup>, Naris Dyah Prasetyawati<sup>2</sup>, Sigid Sudaryanto<sup>3</sup>, Choirul Amri<sup>4</sup>

<sup>1234</sup>Departement of Environmental Health, Poltekkes Kemenkes Yogyakarta  
Jl. Tatabumi No.3 Banyuraden, Gamping, Sleman  
Email: [nadhia.jellita05@gmail.com](mailto:nadhia.jellita05@gmail.com)

## **ABSTRACT**

**Background:** *Exposure to wood dust in the furniture industry has the potential to cause respiratory distress, while awareness and use of PPE is still low in workers, increasing health risks.*

**Objective:** *This study aims to find out the picture of wood dust exposure, work environment risk factors, relationship between length of work and respiratory complaints, and compliance with the use of PPE in UD Konstiti Jati workers.*

**Methods:** *This study used a quantitative descriptive design with an observational approach. A sample of 12 workers was taken using the total sampling technique. Data was collected through questionnaires, interviews, observations, and dust measurements using the Personal Dust Sampler.*

**Results:** *Results showed that most dust levels were still qualified (75%), but (25%0 exceeded the Threshold Value). The majority of workers did not experience respiratory distress (75%), although mild (16.7%) and moderate (8.3%) impairments were still found. All workers have risk factors, especially not using PPE and working in dusty environments. History of lung disease was the most dominant factor with an 11.4 times greater risk of respiratory distress, followed by smoking habits and the age of  $\geq 40$  years which each increased the risk by about 2.33 times. The average working period of workers reached 15.9 years, and compliance with the use of masks was still mostly in the sufficient category (75%).*

**Conclusion:** *Exposure to wood dust poses a risk to the respiratory health of workers. Although no serious disturbances have been found, the potential for long-term risks remains high, so it is necessary to increase the use of PPE, dust control, and K3 education.*

**Keywords:** *Wood Dust Exposure; respiratory disorders; Personal Protective Equipment; Furniture Workers*

## **GAMBARAN PAPARAN DEBU KAYU DAN FAKTOR RISIKO GANGGUAN PERNAPASAN PADA PEKERJA DI UD KONSTITI JATI**

Nadhia Jellita Fiki Saputri<sup>1</sup>, Naris Dyah Prasetyawati<sup>2</sup>, Sigid Sudaryanto<sup>3</sup>, Choirul Amri<sup>4</sup>

<sup>1234</sup>Jurusan Kesehatan Lingkungan Poltekkes Kemenkes Yogyakarta  
Jl. Tatabumi No.3 Banyuraden, Gamping, Sleman  
Email: [nadhia.jellita05@gmail.com](mailto:nadhia.jellita05@gmail.com)

### **INTISARI**

**Latar belakang:** Paparan debu kayu pada industri mebel berpotensi menyebabkan gangguan pernapasan, sementara kesadaran dan penggunaan APD masih rendah pada pekerja sehingga meningkatkan risiko kesehatan.

**Tujuan:** Penelitian ini bertujuan mengetahui gambaran paparan debu kayu, faktor risiko lingkungan kerja, hubungan lama kerja dengan keluhan pernapasan, serta kepatuhan penggunaan APD pada pekerja UD Konstitusi Jati.

**Metode:** Penelitian ini menggunakan desain deskriptif kuantitatif dengan pendekatan observasional. Sampel sebanyak 12 pekerja diambil menggunakan teknik total sampling. Data dikumpulkan melalui kuesioner, wawancara, observasi, serta pengukuran debu menggunakan Personal Dust Sampler.

**Hasil:** Hasil menunjukkan sebagian besar kadar debu masih memenuhi syarat (75%), namun (25%) melebihi Nilai Ambang Batas. Mayoritas pekerja tidak mengalami gangguan pernapasan (75%), meskipun masih ditemukan gangguan ringan (16,7%) dan sedang (8,3%). Seluruh pekerja memiliki faktor risiko, terutama tidak menggunakan APD dan bekerja di lingkungan berdebu. Riwayat penyakit paru menjadi faktor paling dominan dengan risiko sekitar 11,4 kali lebih besar mengalami gangguan pernapasan, diikuti kebiasaan merokok dan usia  $\geq 40$  tahun yang masing-masing meningkatkan risiko sekitar 2,33 kali. Rata-rata masa kerja pekerja mencapai 15,9 tahun, dan kepatuhan penggunaan masker sebagian besar masih dalam kategori cukup (75%).

**Kesimpulan:** Paparan debu kayu berisiko terhadap kesehatan pernapasan pekerja. Meskipun belum ditemukan gangguan berat, potensi risiko jangka panjang tetap tinggi sehingga diperlukan peningkatan penggunaan APD, pengendalian debu, dan edukasi K3.

**Kata kunci:** Paparan Debu Kayu; Gangguan Pernapasan; Alat Pelindung Diri; Pekerja Mebel