

HUBUNGAN FAKTOR LINGKUNGAN DAN FAKTOR INDIVIDU TERHADAP GANGGUAN FUNGSI PARU PADA PEKERJA LAS DI KECAMATAN CIMANGGIS DEPOK TAHUN 2024

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Abstrak

Penurunan kemampuan paru-paru untuk berfungsi secara optimal disebut dengan gangguan fungsi paru. Kasus Penyakit Paru Obstruktif Kronik (PPOK) di Jawa Barat mengalami kenaikan di tahun 2020. Penelitian ini bertujuan menganalisis hubungan antara faktor lingkungan dan faktor individu terhadap gangguan fungsi paru pada pekerja las di Kecamatan Cimanggis. Populasi penelitian ini sebanyak 106 pekerja las di Kecamatan Cimanggis yang semuanya dilibatkan sebagai partisipan penelitian. Desain studi yang digunakan adalah *cross-sectional* dan data dianalisis dengan uji *chi-square*. Lembar kuesioner digunakan untuk wawancara responden. Pengukuran $PM_{2,5}$ dan PM_{10} diukur menggunakan alat *air quality monitor*, sedangkan pengukuran kapasitas vital paru menggunakan alat spirometer MIR spirolab III. Hasil penelitian menunjukkan 82 dari 106 (77,4%) pekerja mengalami gangguan fungsi paru. Terdapat hubungan antara variabel $PM_{2,5}$ (p -value=0,042), umur (p -value=0,009), masa kerja (p -value=0,023), kebiasaan merokok (p -value=0,013), dan penggunaan APD (p -value=0,022) terhadap gangguan fungsi paru. Disimpulkan bahwa terdapat hubungan antara faktor lingkungan dan faktor individu terhadap gangguan fungsi paru. Disarankan pekerja membiasakan diri menggunakan alat pelindung diri dan mengurangi kebiasaan merokok.

Kata kunci: Faktor Individu, Faktor Lingkungan, Gangguan Fungsi Paru

THE RELATIONSHIP BETWEEN ENVIRONMENTAL AND INDIVIDUAL FACTORS AND LUNG FUNCTION DISORDERS IN WELDING WORKERS IN CIMANGGIS DISTRICT, DEPOK, 2024

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Abstract

The decrease in the ability of the lungs to function optimally is referred to impaired lung function. Chronic Obstructive Pulmonary Disease (COPD) cases in West Java have increased in 2020. The purpose of the study was to analyse the correlation between environmental factors and individual factors on lung function impairment in welding workers in Cimanggis District. The population of this study was 106 welding workers in Cimanggis District, all of them were all them participants. The study use a cross-sectional and data were analyzed by chi-square test. Questionnairsheet were use for interviewing participants. The levels of PM2.5 and PM10 were measured by using air quality monitor, while lung vital capacityes were measured MIR spirolab III spirometer. The results show 82 out of 106 (77.4%) workers had impaired lung function. There's a correlation between PM2.5 (p-value=0.042), age (p-value=0.009), working period (p-value=0.023), smoking (p-value=0.013), the use of PPE (p-value=0.022) and lung function disorders. In conclusion, that there's a correlation between environmental and individual factors and lung function disorders. It's recommended for the workers to use protective equipment and reduce smoking habits.

Keywords: Individual Factors, Environmental Factors, Lung Function Impairment