

HUBUNGAN PAJANAN AMONIA MENURUT DURASI DAN LAMA KERJA TERHADAP KELAINAN FUNGSI PARU PADA PEMULUNG DI TPA SUMUR BATU TAHUN 2023

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Abstrak

Kelainan fungsi paru merupakan penyakit yang dapat disebabkan oleh kebiasaan merokok, polusi udara, dan lain sebagainya. TPA merupakan salah satu lokasi yang menghasilkan polutan berupa ammonia yang dapat menyebabkan kelainan fungsi paru. Tujuan penelitian ini untuk mengetahui hubungan pajanan ammonia menurut durasi dan lama kerja terhadap kelainan fungsi paru pada pemulung di TPA Sumur Batu. Studi dilakukan pada 85 pemulung yang dipilih secara purposive sampling sejak Maret-Mei 2023. Instrumen yang digunakan adalah kuesioner berisi karakteristik responden, spirometry, dan spektrofotometer. Data dianalisis dengan menggunakan Uji Cox Regresi. Didapatkan dari hasil penelitian bahwa, 54,12% responden mengalami kelainan fungsi paru, 57,14% memiliki durasi kerja $\geq 9,5$ jam, dan 79,17% memiliki lama kerja $\geq 8,5$ tahun. Analisis multivariat antara kelainan fungsi paru dengan durasi dan lama kerja didapatkan PR pada durasi kerja 1,116 (95% CI 0,63-1,99) dan PR 3,413 (95% CI 1,51-7,71) pada lama kerja. Tidak didapatkan variabel confounding pada durasi kerja, sedangkan pada lama kerja didapatkan status merokok dan riwayat penyakit. Terdapat hubungan antara gejala kelainan fungsi paru dengan lama kerja, setelah dikontrol oleh variabel status merokok dan riwayat penyakit paru.

Kata Kunci : amonia, kelainan fungsi paru, lama kerja, durasi kerja, pemulung

**RELATIONSHIP BETWEEN AMMONIA EXPOSURE
ACCORDING TO DURATION AND LENGHT OF WORK
TO LUNG FUNCTIONAL DISORDERS IN SCAVENGERS
AT SUMUR BATU SANITARY LANDFILL,
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Abstract

Lung function disorders can be caused by smoking habits, air pollution, and so on. Sanitary landfills can produce ammonia which can cause lung function disorders. The purpose of this study was to determine the relationship between exposure to ammonia according to duration and length of work to lung function disorders in scavengers at Sumur Batu. The type of research used is analytic observational with quantitative methods and cross-sectional study design. The study was conducted on 85 scavengers selected by purposive sampling from March to May 2023. Data were obtained using a respondent characteristic questionnaire, spirometry, spectrophotometer, and analyzed using the Cox Regression Test. It was found from the study that 54.12% of respondents had pulmonary function abnormalities, 57.14% worked ≥ 9.5 hours/day, and 79.17% had worked for ≥ 8.5 years. Multivariate analysis between lung function disorders with duration and length of work found PR 1.116 (95% CI 0.63-1.99) and PR of 3.413 (95% CI 1.51-7.71). There were no confounding variables on the duration of work, whereas for length of work, smoking status and history of illness were obtained. There is a relationship between pulmonary function disorders and length of work, after controlling for smoking status and history of lung disease.

Keywords: ammonia, lung function abnormalities, duration of work, length of work, scavengers