Gambaran konsentrasi partikulat matter 2,5 (PM2,5) pada waktu masak dan gangguan fungsi paru pada pekerja dapur rumah makan di Kota Solok tahun 2015 = Particulate matter 2,5 (PM2,5) consentration during cooking activity and lung function disorder among kitchen workers in several restaurants in Solok City 2015

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Abstrak

[Particulate Matter (PM) terutama partikel <2,5 μg/m3 atau PM2.5, adalah komponen utama yang terkandung dalam asap dari bahan bakar biomassa. Efek yang terkait dengan paparan jangka panjang PM2,5 meliputi peningkatan gejala pernapasan bagian bawah, penyakit paru obstruktif kronik dan penurunan fungsi paru. Salah satu pengguna bahan bakar biomassa yang cukup tinggi di Sumatera Barat adalah usaha rumah makan, tujuan dari penelitian ini menganalisis asosiasi faktor lingkungan dengan konsentrasi PM2,5 pada waktu masak di dapur rumah makan Kota Solok dan menganalisis konsentrasi PM2,5 pada waktu masak dengan fungsi paru pekerja dapur rumah makan. Penelitian ini adalah penelitian dekriptif analitik dengan menggunakan desain studi cross-sectional, dengan jumlah sampel adalah 71 orang (total sampling). Analisis multivariat hubungan faktor lingkungan dengan PM2,5 pada waktu masak didapatkan hubungan signifikan ventilasi OR: 5,655 (95% CI: 0,780 ? 40,994) dan lama waktu masak OR: 12,013, (CI: 1,113 ? 129,714). Analisis multivariat hubungan PM2,5 pada waktu masak dengan gangguan fungsi paru, yaitu PM2,5 OR: 3,60 (CI: 95%, 0,921 ? 14,072), Umur OR: 1,443, (CI 95%, 0,380 ? 5,477), dan masa kerja OR: 13,854, (95% CI: 3,283 ? 58,388). Terdapat hubungan bermakna antara faktor lingkungan dengan konsentrasi PM2,5 pada waktu masak yaitu variabel lama masak dan ventilasi. Sedangkan untuk konsentrasi PM2,5 pada waktu masak ada hubungan yang bermakna dengan gangguan fungsi paru pekerja dapur dengan dikontrol oleh umur dan masa kerja;Particulate Matter (PM), particularly inhalable particulate (<2,5 μm), is the main components in biomass emission. Long term exopusre of PM2,5 had been proved to increase lower respiratory disorder, chronic obtructive pulmonary disease (COPD), and decrease lung function. Padang Restaurant is one of the main user of biomass fuel in west sumatera. The aim of this research was to analize the association of PM2,5 concentration during cooking and lung function disorder among restaurant kitchen workers. This was a cross-sectional study with 71 workers were included. There was a significant association between PM2,5 and ventilation OR: 5,655 (95% CI: 0,780 ? 40,994) and cooking duration OR: 12,013, (CI: 1,113 ? 129,714). Multivariate analysis between PM2,5 and lung function disorder showed significant association, PM2,5 OR: 3,60 (CI: 95%, 0,921 ? 14,072), age OR: 1,443, (CI 95%, 0,380 ? 5,477), and working duration

OR: 13,854, (95% CI: 3,283 ? 58,388). There was a significant association between environmental factors (ventilation and cooking duration) and PM2,5 concentration during cooking. Meanwhile PM2,5 concentration and lung fuction showed significant association after controled by age and working duration., Particulate Matter (PM), particularly inhalable particulate (<2,5 μm), is the main components in biomass emission. Long term exopusre of PM2,5 had been proved to increase lower respiratory disorder, chronic obtructive pulmonary disease (COPD), and decrease lung function. Padang Restaurant is one of the main user of biomass fuel in west sumatera. The aim of this research was to analize the association of PM2,5 concentration during cooking and lung function disorder among restaurant kitchen workers. This was a cross-sectional study with 71 workers were included. There was a significant association between PM2,5 and ventilation OR: 5,655 (95% CI: 0,780 – 40,994) and cooking duration OR: 12,013, (CI: 1,113 – 129,714). Multivariate analysis between PM2,5 and lung function disorder showed significant association, PM2,5 OR: 3,60 (CI: 95%, 0,921 – 14,072), age OR: 1,443, (CI 95%, 0,380 – 5,477), and working duration OR: 13,854, (95% CI: 3,283 – 58,388). There was a significant association between environmental factors (ventilation and cooking duration) and PM2,5 concentration during cooking. Meanwhile PM2,5 concentration and lung fuction showed significant association after controled by age and working duration.]