

Analisis Risiko Kesehatan Lingkungan Paparan Partikulat (TSP, PM10, PM2.5) terhadap Pedagang Kaki Lima di Kelurahan Glodok, Jakarta Barat Tahun 2022

Syifa, Nada

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Abstrak

Pencemaran udara luar ruangan telah menjadi salah satu risiko lingkungan terbesar terhadap kesehatan. Pedagang kaki lima dianggap sebagai populasi yang paling berisiko karena bekerja dalam waktu yang cukup lama dan secara terus-menerus terpapar polusi udara. Penelitian ini bertujuan untuk mengestimasi risiko kesehatan akibat paparan agen risiko partikulat yaitu Total Suspended Particulate (TSP), PM10, dan PM2.5 terhadap pedagang kaki lima di Kelurahan Glodok, Jakarta Barat. Penelitian menggunakan pendekatan Analisis Risiko Kesehatan Lingkungan (ARKL) menggunakan data primer dengan jumlah sampel pedagang kaki lima sebanyak 65 responden. Berdasarkan hasil pengukuran, konsentrasi TSP sebesar 43 $\mu\text{g}/\text{m}^3$, PM10 sebesar 25 $\mu\text{g}/\text{m}^3$, dan PM2.5 sebesar 16 $\mu\text{g}/\text{m}^3$. Seluruh konsentrasi partikulat masih di bawah standar baku mutu Indonesia, namun untuk PM2.5 sudah sedikit melebihi standar baku mutu World Health Organization (WHO). Berdasarkan hasil perhitungan menggunakan nilai rata-rata dan nilai tengah, tingkat risiko seluruh paparan partikulat (TSP, PM10, PM2.5) menunjukkan nilai RQ 1 atau dinyatakan aman. Berdasarkan hasil perhitungan setiap responden, terdapat 2 responden berisiko terhadap paparan PM10 dan PM2.5. Pengelolaan risiko yang dapat dilakukan adalah menurunkan konsentrasi partikulat hingga batas aman, salah satunya dengan mengembangkan substitusi bahan bakar dengan yang lebih ramah lingkungan dan menggunakan sumber tenaga alternatif rendah polusi seperti tenaga listrik.

Outdoor air pollution has become one of the greatest environmental risks to health. Street vendors are considered to be the population at risk because they work long hours and are constantly exposed to air pollution. This study aims to estimate the health risks due to exposure to particulate risk agents, namely Total Suspended Particulate (TSP), PM10, and PM2.5 to street vendors in Glodok Urban Village, West Jakarta. The study used an Environmental Health Risk Analysis (EHRA) approach using primary data with a sample of 65 street vendors. Based on the measurement results, the concentration of TSP was 43 $\mu\text{g}/\text{m}^3$, PM10 was 25 $\mu\text{g}/\text{m}^3$, and PM2.5 was 16 $\mu\text{g}/\text{m}^3$. All particulate concentrations are still below the Indonesian quality standards, but PM2.5 has slightly exceeded the World Health Organization (WHO) quality standards. Based on the results of calculations using the average and median values, the risk level of all particulate exposures (TSP, PM10, PM2.5) shows an RQ1 or is declared safe. Based on the calculation results of each respondent, there are 2 respondents at risk of exposure to PM10 and PM2.5. Risk management that can be done is to reduce the concentration of particulates to a safe limit, one of them is by developing fuel substitution with more environmentally friendly and using alternative sources of low-pollution energy such as electric power.