

Analisis Tekanan Panas Terhadap Tekanan Darah Pekerja Sektor Konstruksi Proyek Depo Light Rail Transit (LRT) Jabodebek Bekasi Timur Tahun 2021 = Analysis of Heat Stress and Blood Pressure of workers in the construction sector of the Depo project Light Rail Transit (LRT) Jabodebek East Bekasi 2021

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Abstrak

Indonesia telah diprediksi oleh Badan Meteorologi, Klimatologi dan Geofisika memiliki tren peningkatan suhu sekitar 0.03°C setiap tahunnya sehingga diperkirakan akan meningkatkan risiko penyakit terkait panas di Indonesia. Peningkatan suhu diprediksi akan menimbulkan kerugian ekonomi karena penurunan kesehatan seperti meningkatnya tekanan darah atau penyakit terkait panas lainnya dan peningkatan angka kematian. Tujuan penelitian ini mengetahui hubungan tekanan panas dan faktor individu terhadap tekanan darah pekerja sektor konstruksi proyek Depo Light Rail Transit (LRT) Jabodebek. Penelitian ini menggunakan analisis analitik dengan desain crosssectional dan menggunakan analisa data univariat, bivariat dan multivariat. Jumlah sampel dalam penelitian ini dihitung menggunakan rumus uji hipotesis proporsi dua populasi dan diambil dengan metode pengambilan sampel secara acak sederhana berjumlah 185 pekerja. Variabel dalam penelitian ini adalah tekanan darah, tekanan panas dan faktor individu. Tekanan panas diukur menggunakan alat Thermal Environment Monitor QuestTemp 34o dan anemometer. Sedangkan tekanan darah diukur menggunakan Spygmomanometer (Merk Omron tipe HEM-7130). Hasil penelitian menunjukkan bahwa tekanan panas ($\text{OR} = 4,356$; 95% CI: 2,003 – 9,474), usia ($\text{OR} = 4,611$; 95% CI: 1,598 – 13,304), status hidrasi ($\text{OR} = 3,942$; 95% CI: 1,031 – 15,077), riwayat keluarga mengalami hipertensi ($\text{OR} = 4,038$; 95% CI: 1,329 – 12,269) dan merokok ($\text{OR} = 11,020$; 95% CI: 3,593 – 33,801) berhubungan signifikan dengan tekanan darah pekerja. Untuk mencegah kejadian tekanan darah tinggi, perusahaan disarankan segera melakukan pengendalian lingkungan kerja dan meningkatkan program promosi kesehatan agar risiko penyakit terkait panas dapat diantisipasi khususnya kepada pekerja yang berisiko (mengalami tekanan panas, berusia 40 tahun, dehidrasi, memiliki riwayat keluarga mengalami hipertensi dan merokok).

..... The Meteorology, Climatology, and Geophysics Agency predicted that Indonesia would have a trend of increasing temperatures of around 0.03°C every year, so it is estimated that it will increase the risk of heat-related diseases in Indonesia. An increase in temperature is predicted to cause economic losses due to declining health, such as increased blood pressure or other heat-related diseases and increased mortality. The purpose of this study was to determine the relationship between heat stress and blood pressure of workers in the construction sector of the Depo project Light Rail Transit (LRT) Jabodebek. This cross-sectional study analyses WBGT and blood pressure data from construction workers. The number of samples in this study was calculated using the hypothesis test formula for the proportion of two populations and was taken with a simple random sampling method totaling 185 workers. The variables in this study were blood pressure, heat pressure and individual factor. Thermal pressure was measured using a QuestTemp 34o Thermal Environment Monitor tool and an anemometer. While blood pressure is measured using a sphygmomanometer (Omron brand type HEM-7130). The results showed that heat stress ($\text{OR} = 4,356$; 95%

CI: 2,003 – 9,474), age (OR= 4,611; 95% CI: 1,598 – 13,304), hydration status (OR= 3,942; 95% CI: 1,031 – 15,077), genetic factor (OR= 4,038; 95% CI: 1,329 – 12,269), and smoking (OR= 11,020; 95% CI: 3,593 – 33,801) relationship with blood pressure of workers. The company is suggested to immediately control the work environment and improving health promotion programs to anticipate the risk of heat-related diseases especially for workers who are at risk (heat stress, dehydration, age, family history of hypertension and smoking).