

HUBUNGAN TINGKAT KEBISINGAN DENGAN TEKANAN DARAH PADA PEKERJA LAS DI KECAMATAN CAKUNG TAHUN 2026

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Abstrak

Peningkatan tekanan darah masih menjadi masalah kesehatan masyarakat di Indonesia dengan proporsi tekanan darah yang belum terkontrol mencapai 43%. Pekerja las berisiko terpapar kebisingan dari mesin gerinda dan mesin pemotong logam yang dapat melebihi Nilai Ambang Batas (NAB) 85 dBA sehingga berpotensi memengaruhi tekanan darah. Penelitian ini bertujuan menganalisis hubungan tingkat kebisingan dengan tekanan darah pada pekerja las di Kecamatan Cakung, Jakarta Timur tahun 2026. Penelitian menggunakan desain observasional analitik dengan pendekatan *Cross-Sectional*. Penelitian ini melibatkan 107 pekerja las yang dipilih sesuai kriteria inklusi melalui teknik *Purposive Sampling*. Variabel tingkat kebisingan diukur menggunakan *Sound Level Meter*, sedangkan tekanan darah diukur dengan tensimeter digital. Karakteristik responden diperoleh melalui instrumen kuesioner. Data dianalisis menggunakan uji *Chi-Square* dan *Cox Regression*. Sebanyak 83,18% responden mengalami peningkatan tekanan darah dan 62,62% terpapar kebisingan di atas NAB. Tingkat kebisingan tidak berhubungan secara signifikan dengan peningkatan tekanan darah (*Crude PR*=1,152; 95% CI: 0,741–1,792; $p=0,497$), sedangkan riwayat hipertensi berhubungan signifikan dengan peningkatan tekanan darah (*Crude PR*=3,842; 95% CI: 1,445–10,214; $p=0,011$). Setelah dikontrol terhadap variabel perancu, tingkat kebisingan tetap tidak berhubungan secara signifikan dengan peningkatan tekanan darah (*Adjusted PR*=1,063; 95% CI: 0,689–1,639; $p=0,781$). Pemantauan tekanan darah secara berkala serta pengendalian paparan kebisingan sesuai standar di lingkungan kerja perlu dilakukan untuk mendukung upaya kesehatan kerja.

Kata Kunci: Kebisingan, Pekerja Las, Tekanan Darah

THE RELATIONSHIP BETWEEN NOISE LEVELS AND BLOOD PRESSURE AMONG WELDERS IN CAKUNG DISTRICT IN 2026

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Abstract

Elevated blood pressure remains a public health issue in Indonesia, with 43% of cases remaining uncontrolled. Welders are at risk of exposure to noise from grinders and metal-cutting machines, which can exceed the Threshold Limit Value (TLV) of 85 dBA, potentially affecting their blood pressure. This study aims to analyze the relationship between noise levels and blood pressure among welders in Cakung Subdistrict, East Jakarta, in 2026. The study employed an analytical observational design with a cross-sectional approach involving 107 welders selected using purposive sampling. Noise levels were measured using a sound level meter, blood pressure was measured using a digital sphygmomanometer, and respondent characteristics were obtained through a structured questionnaire. Data were analyzed using the Chi-Square test and Cox Regression. A total of 83.18% of respondents experienced elevated blood pressure, and 62.62% were exposed to noise levels above the NAB. Noise levels were not significantly associated with elevated blood pressure (Crude PR = 1.152; 95% CI: 0.741–1.792; $p=0.497$), whereas a history of hypertension was significantly associated with elevated blood pressure (Crude PR=3.842; 95% CI: 1.445–10.214; $p=0.011$). After adjusting for confounding variables, noise levels remained not significantly associated with increased blood pressure (Adjusted PR = 1.063; 95% CI: 0.689–1.639; $p = 0.781$). Regular blood pressure monitoring and control of noise exposure in accordance with workplace standards are necessary to support occupational health efforts.

Keyword: Blood Pressure, Noise, Welders