

KORELASI ANTARA KADAR Pb DARAH DAN TEKANAN DARAH PADA PEKERJA BENGKEL MOTOR DI PURWOKERTO

ABSTRAK

Latar Belakang: Paparan berlebih serta kronik timbal (Pb) dapat menyebabkan berbagai masalah serius pada tubuh salah satunya adalah hipertensi. Sebagian besar paparan Pb berkaitan dengan pekerjaan. Pekerja bengkel motor termasuk pekerjaan dengan prevalensi paparan Pb tertinggi. Penelitian ini bertujuan untuk mengetahui korelasi antara kadar Pb darah dan tekanan darah pada pekerja bengkel motor di Purwokerto.

Metode: Penelitian ini menggunakan *cross sectional study*. Jumlah sampel, sebanyak 60 pekerja bengkel motor di Purwokerto. Tekanan darah sistolik dan diastolik diukur dengan spigmomanometer digital sedangkan kadar Pb darah diukur dengan metode *atomic absorption spectroscopy* (AAS). Uji Pearson digunakan untuk mencari korelasi antarvariabel. Uji *one-way ANOVA* juga dilakukan untuk membandingkan rata-rata berbagai kelompok menurut usia dan lama kerja, sedangkan riwayat hipertensi di keluarga, serta riwayat merokok dianalisis dengan *independent t-test*.

Hasil: Rata-rata tekanan darah sistolik dan diastolik adalah $130,01 \pm 18,791$ mmHg dan $86,78 \pm 13,375$ mmHg sedangkan rata-rata kadar Pb darah adalah $1,84 \pm 0,319$ µg/dl. Sebanyak 25% responden mengalami peningkatan tekanan darah sistolik dan 35% responden mengalami peningkatan tekanan darah diastolik. Hasil uji pearson menunjukkan nilai $p=0,645$ dan $p=0,648$ ($p>0,05$).

Kesimpulan: Tidak terdapat korelasi antara tekanan darah sistolik dan diastolik dengan kadar Pb darah.

Kata kunci: kadar Pb darah, tekanan darah, pekerja bengkel

CORRELATION BETWEEN BLOOD LEAD LEVEL AND BLOOD PRESSURE IN MOTORCYCLE WORKSHOP WORKERS IN PURWOKERTO

ABSTRACT

Background: Excessive and chronic exposure to lead (Pb) can cause serious problems in the body, one of which is hypertension. Most of lead exposure is related to occupation. Motorcycle workshop workers are among the jobs with the highest prevalence of lead exposure. This study aims to determine the correlation between blood lead level and blood pressure in motorcycle repair workers in Purwokerto.

Methods: A cross sectional study was conducted for 60 motorcycle workshop workers in Purwokerto. Systolic and diastolic blood pressure were measured using a digital sphygmomanometer while blood lead level was measured using atomic absorption spectroscopy (AAS). Correlation between the variables were analyzed with Pearson test. One-way ANOVA test was performed to compare the averages of various groups according to age and length of work. History of hypertension in family and history of smoking were analyzed with independent t-test.

Results: The mean of systolic and diastolic blood pressure are 130.01 ± 18.791 mmHg and 86.78 ± 13.375 mmHg while the average blood lead level is 1.84 ± 0.319 $\mu\text{g/dl}$. 25% of respondents experience an increase of systolic blood pressure and 35% of respondents experience an increase of diastolic blood pressure. Pearson test shows a value of $p=0.645$ and $p=0.648$ ($p>0.05$).

Conclusion: There is no correlation between systolic and diastolic blood pressure with blood lead levels.

Keywords: blood lead level, blood pressure, motorcycle workshop worker