

EFFECT OF CONTINUOUS NOISE LEVELS ON BLOOD PRESSURE

Analytical Observational Study on Carpenters in Genuk District

PENGARUH TINGKAT KEBISINGAN KONTINYU TERHADAP TEKANAN DARAH

Studi Observasional Analitik pada Tukang Kayu di Kecamatan Genuk

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ABSTRACT

Background: Hypertension is one health problem that has become a silent killer in society. One of the factors in the occurrence of hypertension is noise, the noise will be responded by the brain then causes the release of stress hormones so that it can cause an increase in blood pressure. This study aims to determine the effect of continuous noise level on blood pressure on carpenters in District Genuk.

Methods: The type of research used was observational analytic research with cross sectional study design using 32 samples of carpenters in Genuk Subdistrict in February - March 2019 according to the inclusion criteria, namely carpenters aged 20-50 years, working period of 2-5 years, having a hearing level normal, normal BMI, no history of hypertension and do not have the habit of consuming alcoholic beverages. Data retrieval is done directly by measuring blood pressure and noise intensity. Then the data were analyzed using Chi-square test.

Results: Chi-square test results (Fisher Exact test) continuous noise level on blood pressure obtained $p = 0.001$ ($RP = 3.667$, $IK95\% = 1.097 - 12.250$). It was found to be 75.0% of the sound exposure of electric saws for carpenters in Genuk District which included high level noise categorization, and as much as 75.0% the percentage of carpenters who had hypertension in Genuk Subdistrict.

Conclusions: There is an influence of continuous noise level on blood pressure.

Keywords: Noise level, hypertension, continuous noise