

# **RATE PULSE AND BLOOD PRESSURE ON WORKERS IN THE PRODUCTION AREA EXPOSED TO NOISE**

**(Noise Case Study at PT. Atlantic Award Metalindo in 2022)**

Risma Putri Vandini<sup>1</sup>, Demes Nurmayanti<sup>2</sup>, Ernita Sari<sup>3</sup>

Ministry of Health RI Health  
Health Polytechnic Ministry of Health Surabaya  
Environmental Sanitation Study Program Applied Undergraduate  
Email : [risma.putri18@gmail.com](mailto:risma.putri18@gmail.com)

## **ABSTRACT**

The intensity of noise in the work environment at PT. Atlantic Anugrah Metalindo on the grinding area in 2021 of 97.5 dBA. High and continuous noise can cause an increase in blood pressure and pulse rate for workers. The purpose of this study was to analyze the pulse and blood pressure of production workers exposed to noise at PT. Atlantic Anugrah Metalindo.

This type of research was analytic observational with a cohort approach. The sampling technique used is simple random sampling. The sample is 31 workers from a population of 33 workers. Collecting data through observation, direct measurement and interviews. The data were analyzed using the SPSS program through the Wilcoxon Signed Rank Test alpha 0.05.

The results showed that the noise intensity in the production section that exceeded the Threshold Value (>85 dBA) was the laser and grinding area. The results of statistical tests for pulse and blood pressure obtained  $p < 0.05$  for the pulse rate of production workers before and after work, and  $p > 0.05$  for blood pressure of production workers before and after work.

Based on the results of the study, it can be concluded that there was a difference in pulse rate but there was no difference in systolic and diastolic blood pressure in production workers who were exposed to noise at PT. Atlantic Anugrah Metalindo. Advice for companies to provide Ear Protective Equipment and require workers to use them when working in noisy areas.

**Keyword** : Noise, Pulse Rate, Blood Pressure, Workers.

**Reference** : 16 books (1994 - 2017), 29 journals (2013 - 2022)