

## **ABSTRACT**

### **COMPARISON OF AVERAGE HEARING THRESHOLD BETWEEN WORKERS WHO GOT HIGH AND LOW NOISE EXPOSURE IN PT. PERKEBUNAN NUSANTARA VII UNIT BEKRI**

By

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**Background:** Noise Induced Hearing Loss is the hearing loss caused by exposure to loud noise in the long term. Multi Center Study (MCS) said that Indonesia is one of countries in Southeast Asia where the prevalence of hearing loss was as high as 4.6%. The National Survey of Health Sense of Sight and Hearing in seven provinces, the rate of hearing loss in Indonesia amounted to 16.8% with one of the causes is the noise. In The purpose of this research is to know the difference between the labor hearing threshold that gets high and low noise exposure.

**Methods:** The study design was an observational analytic cross sectional sampling technique stratified random sampling. The research sample required is 50 people. Data acquired through direct measurement. Test analysis using statistical Mann Whitney test.

**Result:** The results of measurements of the average hearing threshold of the workers earned the average of 20.19 dB threshold of hearing left ear and 19.71 dB right ear in the lower exposure to noise, while at a high of noise exposure the average hearing threshold 22.22 dB left ear and 22.76 dB right ear. The results of the analysis of the Mann-Whitney test p value = 0.023 left ear and p=0,072 right ear which mean there are differences between the mean hearing threshold in workers who got high and low noise exposure.

**Conclusion:** The average hearing threshold of workers who work in noisy environments higher have a hearing threshold higher than the average hearing threshold of workers who work in noisy environments is low.

Keywords: NIHL, noise, hearing threshold, hearing loss

## ABSTRAK

### PERBANDINGAN RERATA AMBANG DENGAR ANTARA TENAGA KERJA YANG MENDAPAT PAPARAN BISING TINGGI DAN RENDAH DI PT. PERKEBUNAN NUSANTARA VII UNIT BEKRI

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**Latar belakang:** Gangguan pendengaran akibat bising adalah gangguan pendengaran yang disebabkan paparan bising tinggi dalam jangka waktu yang lama. Survei *Multi Center Study (MCS)*, Indonesia merupakan salah satu negara di Asia Tenggara dengan prevalensi gangguan pendengaran cukup tinggi, yakni 4,6%. Survei Nasional Kesehatan Indera Penglihatan dan Pendengaran di 7 provinsi, angka gangguan pendengaran di Indonesia sebesar 16,8% dengan salah satu penyebabnya adalah kebisingan. Tujuan penelitian ini yaitu mengetahui perbedaan ambang dengar antara tenaga kerja yang mendapat paparan bising tinggi dan rendah.

**Metode Penelitian:** Desain penelitian menggunakan observasional analitik *cross sectional*, dengan teknik pengambilan sampel *consecutive sampling*. Sampel penelitian membutuhkan 50 responden. Data didapatkan melalui pengukuran langsung. Uji analisis menggunakan uji statistik *Mann Whitney*.

**Hasil penelitian:** Hasil pengukuran rerata ambang dengar para pekerja di tempat rendah paparan bising yaitu sebesar 20,19 dB telinga kiri dan 19,71 dB telinga kanan, sedangkan rerata ambang dengar di tempat tinggi paparan bising sebesar 22,22 dB telinga kiri dan 22,76 dB telinga kanan. Hasil analisis uji *Mann-Whitney* didapatkan nilai  $p=0,023$  telinga kiri dan  $p=0,072$  telinga kanan yang artinya terdapat perbedaan rerata ambang dengar pada pekerja yang mendapat paparan bising tinggi dan rendah.

**Simpulan:** Rerata ambang dengar pekerja yang bekerja di lingkungan bising tinggi memiliki ambang dengar yang lebih tinggi dibandingkan dengan rerata ambang dengar pekerja yang bekerja di lingkungan bising rendah.

Kata kunci: NIHL, kebisingan, ambang dengar, gangguan pendengaran