

**HUBUNGAN ANTARA UMUR, MASA KERJA, PEMAKAIAN
ALAT PELINDUNG KEBISINGAN DENGAN GANGGUAN FUNGSI
PENDENGARAN PADA PEKERJA DI BAGIAN KOMPONEN
LOGAM PT. MEGA ANDALAN KALASAN (MAK)
KABUPATEN SLEMAN**

Machfudz Eko Arianto¹, Adi Heru Sutomo², Agus Surono³

INTISARI

Latar Belakang: Gangguan fungsi pendengaran merupakan salah satu masalah Keselamatan dan Kesehatan Kerja (K3) disuatu pabrik. Gangguan fungsi pendengaran adalah suatu penyakit menurunnya atau hilangnya fungsi pendengaran di satu telinga maupun kedua telinga. Umur, masa kerja, pemakaian alat pelindung kebisingan merupakan faktor-faktor yang dapat mempengaruhi gangguan fungsi pendengaran.

Tujuan: Penelitian ini bertujuan untuk mengetahui hubungan umur, masa kerja, pemakaian alat pelindung kebisingan dengan gangguan fungsi pendengaran pada pekerja di bagian komponen logam PT. Mega Andalan Kalasan Kabupaten Sleman.

Metode: Jenis penelitian observasional analitik, menggunakan desain *Cross Sectional*. Subjek penelitian sebanyak 52 orang. Variabel bebas antara lain umur, masa kerja, dan pemakaian alat pelindung kebisingan. Variabel terikat adalah gangguan fungsi pendengaran.

Hasil: Hasil penelitian menunjukkan sejumlah 31 orang mempunyai pendengaran normal dan 21 orang mempunyai gangguan fungsi pendengaran yaitu tuli ringan. Hasil analisis menunjukkan ada hubungan yang signifikan antara umur dengan gangguan fungsi pendengaran ($P = 0,001$ dan $r = 0,433$). Ada hubungan yang signifikan antara masa kerja dengan gangguan fungsi pendengaran ($P = 0,003$ dan $r = 0,408$). Tidak ada hubungan yang signifikan antara pemakaian alat pelindung kebisingan dengan gangguan fungsi pendengaran ($P = 0,693$ dan $r = 0,156$). Analisis multivariat dengan metode *Backward* menunjukkan koefisien korelasi (R) sebesar 0,437, nilai R^2 sebesar 0,191, nilai $F = 5,782$, nilai $P = 0,006$

Kesimpulan: Ada hubungan antara umur dengan gangguan fungsi pendengaran. Ada hubungan antara masa kerja dengan gangguan fungsi pendengaran. Tidak ada hubungan antara pemakaian alat pelindung kebisingan dengan gangguan fungsi pendengaran. Ada hubungan yang signifikan secara bersama-sama umur dan masa kerja dengan gangguan fungsi pendengaran pada pekerja di bagian komponen logam PT. Mega Andalan Kalasan Kabupaten Sleman.

Kata Kunci: Gangguan fungsi pendengaran, umur, masa kerja, pemakaian alat pelindung kebisingan, PT. Mega Andalan Kalasan

**CORRELATION BETWEEN AGE, EMPLOYMENT PERIOD,
HEARING PROTECTION DEVICE USAGE AND NOISE-INDUCED HEARING
LOSS AMONG EMPLOYEES IN THE METAL DIVISION OF MEGA ANDALAN
KALASAN PROPRIETARY LIMITED
(PT. MAK), IN SLEMAN REGENCY**

Machfudz Eko Arianto¹, Adi Heru Sutomo², Agus Surono³

ABSTRACT

Background: Noise-induced hearing loss is one of the hearing diseases related to Occupational Health and Safety in manufacturing factories. The disease is characterized by the decrease in the hearing function or loss of hearing in one ear or both ears. Age, employment period, the use of hearing protection devices, are the factors that can affect noise-induced hearing loss.

Objective: This study sought to determine the correlation between age, employment period, the use of hearing protection devices and noise-induced hearing loss among employees in the Metal Division of Mega Andalan Kalasan Proprietary Limited (PT. MAK), in Sleman Regency.

Methods: The research is an observational study, using cross sectional design. The research subjects were 52 people. The independent variables are age, employment period, and the use of hearing protection devices. The dependent variable is the noise-induced hearing loss.

Results: The results showed 31 people have normal hearing and 21 people suffered noise-induced hearing loss categorized as mild deafness. The result of analysis showed a significant correlation between age and hearing disorders ($P = 0.001$ and $r = 0.433$). There was a significant correlation between employment period and hearing disorders ($P = 0.003$ and $r = 0.408$). There is not significant correlation between use hearing protection devices and hearing disorders ($P = 0,693$ and $r = 0,156$). The multivariate analysis with Backward method showed a correlation coefficient (R) by 0.437, R^2 value by 0.191, $F = 5.782$, $P = 0.006$.

Conclusion: There is a correlation between age and noise-induced hearing loss. There is a correlation between employment period and noise-induced hearing loss. There is not correlation between use hearing protection devices and noise-induced hearing loss. There is a significant correlation between the age together with the employment period and the noise-induced hearing loss among employees in the Metal Division of Mega Andalan Kalasan Proprietary Limited (PT. MAK), Sleman.

Keywords: hearing disorders, age, employment period, hearing protection devices, Mega Andalan Kalasan Proprietary Limited.

¹ Postgraduate Program of Occupational Health Sciences Faculty of Medicine, Gadjah Mada University (email: machfudz_eko@ymail.com)

² Postgraduate Program of Occupational Health Sciences Faculty of Medicine, Gadjah Mada University

³ Postgraduate Program of Occupational Health Sciences Faculty of Medicine, Gadjah Mada University