

Gambaran gangguan pendengaran sensorineural yang diukur dengan audiometri pada pekerja alas kaki sektor informal di Ciomas-Bogor yang terpajan toluen dan Bising (studi saat "low season"/produksi rendah) = Exposure of toluen and noise study on Sensorineural hearing measured by audiometri on informal worker of footwear in Ciomas Bogor (studied carried out during "low production")

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Abstrak

Pendahuluan: Gangguan pendengaran pada pekega selain disebabkan oleh bising di tempat kerja juga dapat disebabkan oleh bahan kimia termasuk pelarut organik. Toluena termasuk pelarut organik yang banyak digunakan industri sektor informal alas kaki. Penelitian ini bertujuan untuk mengetahui prevalensi gangguan pendengaran sensorineural (SNHL) dan dilakukan pada bulan Januari-Juli 2008.

Metode: Desain penelitian adalah cross sectional dengan subyek penelitian sebanyak 85 orang pekerja alas kaki di Desa Mekarjaya-Ciomas. Pengumpulan data dilakukan dengan menggunakan kuesioner, pengamatan langsung dan pemeriksaan fisik, termasuk pemeriksaan audiometri di lapangan menggunakan audiometric booth. Data lingkungan kerja diperoleh dengan melakukan pengukuran kadar toluena menggunakan teknik Gas Chromatography, pengukuran bising menggunakan Sound Level Meter dan pengukuran ventilasi tempat kerja. Data dianalisis dengan SPSS II .5. Semua variabel dilakukan uji bivariat, variabel dengan nilai $p < 0.25$, dilakukan uji multivariat menggunakan Stata 6.

Hasil: Jenis pelarut organik tertinggi yang terkandung dalam lem adalah toluena (46.45%). Kadar toluena di tempat kerja terendah 0.0003 ppm dan tertinggi 4.8663 ppm. Intensitas bising tempat kerja dibawah 85 dB. tidak mempunyai hubungan bermakna dengan terjadinya SNHL. Pada analisis bivariat terdapat empat faktor yang dapat dilakukan analisis multivariat yaitu: Umur, kadar toluena, mobilitas dan kegiatan lain. Dari faktor-faktor tersebut, faktor yang dominan mempunyai hubungan dengan kejadian SNHL adalah kadar toluena (OR 5.87 dan CI = 1.739 - 19.834) hal ini menunjukkan bahwa responden yang terpajan toluena dengan kadar lebih besar dari 0.22 ppm (walaupun dibawah NAB) mempunyai risiko menderita SNHL hampir enam kali lebih besar dibandingkan responden dengan pajanan toluena di bawah 0.22 ppm.

Introduction: Hearing defect of worker can be caused by chemical. included solvent. Toluene is one of organic solvent were often use in industry, especially in footwear industry. The objective of this study was to examine prevalence on sensorineural hearing loss (SNHL). This study was conducted in Januari to July 2008.

Method: Design of research was cross sectional involving 85 workers in village Mekarjaya-Ciomas. Data collection was made using by questioner. observation and examination on workplace applying audiometric booth. Environment data of toluena exposure was collected and measured through Gas Chromatography, noise level was measured using Sound Level Meter and ventilation was also measured. SPSS version 11.5 was used for data analysis. Subsequently, bivariate analysis was selected to examine data, variables of value $p < 0.25$ were chosen for multivariate analysis using stata 6.

Results: The highest organic solvent content is toluene within glue (46.45%). Measurement on toluena in workplace at lowest level was 0.0003 ppm and was 4.8663 ppm at the highest. Noise intensity at workplace

was under 85 dB, and has no significance on SNHL. Result of bivariate analysis there are four factors used for multivariate analysis such as age, solvent level, mobility and other activities. Out of these factors a dominant to SNHL were toluene level (OR = 5.87 and CI = 1.739- 19.834), this showed that respondent with higher than 0.22 ppm (although under NAB) has a higher risk on SNHL up to six times greater than the respondent of toluene lower than 0.22.