

Hubungan pelarut organik dengan gejala neurotoksik pada pekerja alas kaki di sektor informal Ciomas Bogor: Menggunakan kuesioner Swedish Q16 = The Correlation between organic solvent and neurotoxic symptoms among informal sector footwear workers at Ciomas Bogor: Based on Swedish Q16 questionnaire

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Abstrak

Latar belakang : Terpajan pelarut organik merupakan kejadian sehari-hari yang dialami oleh banyak pekerja. Pelarut organik banyak digunakan dalam proses pembuatan alas kaki disektor formal maupun informal. Menurut beberapa penelitian beberapa jenis pelarut organik mempunyai sifat neurotoksik sehingga perlu deteksi gejala-gejala tersebut yang mungkin timbul pada para pekerja. Kuesioner Swedish Q16 adalah kuesioner deteksi dini yang paling sering digunakan untuk penupisan pekerja yang terpajan pelarut organik. Penelitian ini bertujuan untuk mengetahui prevalensi gejala neurotoksik akibat pajanan pelarut organik menggunakan Kuesioner Swedish Q16, serta mengetahui beberapa faktor yang mempengaruhi seperti : umur, pendidikan, masa kerja, status gizi, pemakaian APD, kebiasaan minum alkohol, merokok, cuci tangan, makan minum di tempat kerja dan hasil pemantauan kadar pelarut organik di lingkungan, kerja.

Metode : Penelitian ini menggunakan desain penelitian cross-sectional dengan subyek penelitian 138 orang pekerja alas kaki di sektor informal Ciomas Bogor. Pengumpulan data dilakukan dengan menggunakan kuesioner dan pengamatan langsung, sedangkan lingkungan kerja dilakukan dengan pengukuran personal sampling dan hasilnya diperiksa menggunakan teknik Gas Chromatography. Gejala neurotoksik dideteksi menggunakan kuesioner Swedish Q16. Pengumpulan data dilakukan pada bulan September-Oktaber 2006. Hasilnya diolah menggunakan program statistik SPSS 11,5.

Hasil : Hasil identifikasi lem didapatkan lem kuning mengandung : toluen (45,3%), benzen (5,18%) dan metil etil keton (18,68%), lem putih mengandung : toluen (41,31%), benzen (3,52%) dan aseton (19,24%). Kadar toluen di lingkungan kerja rata-rata 1,12 ppm, tertinggi 2,48 ppm dan terendah 0,33 ppm. Keluhan terbanyak kesemutan (62,3%), sakit kepala (62,3%), mudah Ietih (56,5%). Prevalensi gejala neurotoksik pads subyek penelitian sebesar 55,8%. Pada analisis bivariat faktor umur, masa kerja dan IMT memiliki hubungan bermakna terhadap terjadinya gejala neurotoksik. Setelah dilakukan analisis multivariat didapatkan umur < 28 tahun memiliki risiko 6 kali lipat untuk mengalami gejala neurotoksik. ($p = 0,000$; $OR = 6,235$). Penieriksaan finger tapping test dilakukan secara sub sampling pada 53 subyek dan dipemleh basil tidak normal pada tangan kanan 47,2% dan tangan kiri 43,3%.

Kesimpulan : Prevalensi gejala neurotoksik pada pekerja industri alas kaki sektor informal , Ciomas , Bogor yang terpajan pelarut organik sebesar 55,8%. Faktor umur berhubungan dengan terjadinya gejala neurotoksik ($OR = 6,235$; $p = 0,000$).

<hr><i>Background : Exposed by organic solvent is form of occurrence day by day for many workers. Organic solvent is used in many process on footwear manufacture both formal and informal sector.

According to several studies, many organic solvents have neurotoxic characteristics; so need to early detection for symptoms that influences to workers. The Swedish Q16 is a questionnaire that often use for workers screening from exposed by organic solvent. The goal of this study is to identification of glue, prevalence neurotoxic symptoms cause by organic solvent exposure, with Swedish Q16 Questionnaire, and to know factors of influences as : age, education, working periode, body mass index, using of PPE, drink of alcohol, washing hand, smoking, eat and drink at workplace and organic solvent level in workplace.

Method : The design of this study was cross sectional, and the total number of sample were 138 footwear workers. Data collecting was conducted to interview, direct monitoring and measuring personal sampling at workplace which checking by Gas Chromatography technique. Neurotoxic symptoms detected by Swedish Q16 Questionnaire. Data collecting was done on September-October 2006. All data research result processing by Statistic Program SPSS version 11.5.

Result : Identification of glue has result that content of yellow glue are toluene (45,3%), benzene (5,18%) dan metyl etyl ketone (18,68%), white glue content are : toluene (41,31%), benzene (3,52%) dan acetone (19,24%). Degree of toluene at workplace was average 1,12 ppm, and range 2,48 ppm to 0,33 ppm. Highest complaint from subject are : tingling ((62,3%), headache (62,3%), fatigue (56,5%). Study's subject neurotoxic symptoms prevalence was 55,8%. On bivariate analysis, age factor, work periode, body mass index, have related to neurotoxic symptoms outcome. On multivariate analysis be found that age < 28 years have risk six time to experience with neurotoxic symptoms, ($p < 0,000$; OR = 6,235). Examination on finger tapping test to be done as sub sampling on 53 subject and the result is unnormally on right hand 47,2% and left hand 43,3%.

Conclusions : Prevalence of neurotoxicity symptoms in informal sector footwear workers at Ciomas Bogor was 55,8%. Age factor was related to the neurotoxic symptoms (OR = 6,235 ; $p = 0,000$).