

## Skor risiko pajanan toluen dengan gangguan penghidu: studi pada pekerja mebel di Kelurahan Pondok Bambu = Score of toluene exposure risk with smell disorder: study in furniture workers in Pondok Bambu Village

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### Abstrak

Latar Belakang: Pekerja mebel di Kelurahan Pondok Bambu adalah pekerja informal yang dalam pekerjaannya terpajan dengan pelarut organik seperti toluen. Telah terbukti adanya pengaruh pajanan toluen terhadap kejadian gangguan penghidu. Belum ditemukan prevalensi gangguan penghidu akibat pajanan kimia di tempat kerja di Indonesia. Gangguan penghidu ini sering kali tidak dikeluhkan oleh penderita. Menurunnya fungsi penghidu dapat mempengaruhi kesehatan dan keselamatan pekerja karena akan terus menginhalasi zat kimia berbahaya.

Metode: Penelitian ini menggunakan desain potong lintang. Subjek adalah pekerja mebel di RW 01, Kelurahan Pondok Bambu yang berjumlah 44 orang. Pengumpulan data dilakukan melalui wawancara, pemeriksaan fisik, pemeriksaan fungsi penghidu dengan Sniffin Sticks dan pemeriksaan kadar lingkungan toluen dengan personal sampling.

Hasil: Dari 44 subjek, 37 (84,1%) dari mereka mengalami gangguan penghidu, yang termasuk kategori risiko pajanan tinggi adalah 14 (31,8%) orang dan yang berisiko pajanan rendah 30 (68,2%) orang. Sebanyak 13 (92,9%) subjek yang berisiko tinggi mengalami gangguan penghidu, sedangkan yang berisiko rendah 24 (80%). Tidak didapatkan perbedaan yang bermakna antara kedua kelompok dengan terjadinya gangguan penghidu. Median Kadar toluen rata-rata adalah 0,48 ppm (0,002 – 7,72). Didapatkan hubungan yang bermakna antara kebiasaan merokok dengan gangguan penghidu,  $p = 0,02$ , OR = 26,4 ( IK 95% 1,59 - 453,77). Variabel lain seperti kebiasaan minum alkohol, gejala rinitis kronik dan riwayat atopi tidak ada yang secara signifikan berhubungan dengan gangguan penghidu.

Kesimpulan: Kejadian gangguan penghidu pada subjek penelitian ini tidak berhubungan dengan besar risiko pajanan toluen di tempat kerjanya tetapi berhubungan dengan kebiasaan merokok.

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Background: Workers at the furniture industry of Pondok Bambu village are informal workers who may be occupationally exposed to organic solvents such as toluene. The influence of toluene exposure on smell disorders has been proven. The prevalence of smell disorders due to chemical exposure in the workplace in Indonesia is not yet been found. Occupational- related smell disorder is rarely complained by the patient. Decreasing of smelling function can affect the health and safety of workers as he will continue to inhale harmful chemicals.

Methods: This study used a cross-sectional design. 44 subjects recruited from the furniture industry in RW 01, Pondok Bambu village were studied. Data were collected through interviews, physical examination, quantitative smell function test with Sniffin Sticks and personal sampling airborne toluene levels measurement.

Results: Among the forty-four studied subjects, 37 (84.1%) subjects had smell disorder. Fourteen (31.8%) of them were categorized as high-risk exposure group and 30 (68.2%) as low-risk exposure group. Thirteen

(92.9%) subjects from the high-risk exposure group had smell disorder, whereas from the low-risk group were 24 (80%) subjects. Exposure risk status was not statistically significant with smell disorder. The median score of airborne toluene levels is 0.48 ppm (range from 0.002 to 7.72). Smoking habit was the only variable that statistically significant with smell disorder,  $p = 0.02$ , OR = 26.4, (95% CI 1.59 to 453.77). Other variables such as alcohol consumption, chronic rhinitis symptoms and atopic history were not statistically significant.

Conclusion: The smell disorders on the studied subjects is not associated with the exposure risk to toluene in the workplace but related to smoking habit.