

Hubungan pajanan debu batu dan faktor lainnya dengan gangguan fungsi paru : suatu studi pada pekerja laki-laki industri pemotongan batu informal di Kecamatan Kiara Pedes Kabupaten Purwakarta = Stone dust exposure and other factors related to lung function disorder a study among male workers of informal stone cutting industry at Kiara Pedes subdistrict Purwakarta Regency

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Abstrak

Latar Belakang : Industri pemotongan batu memiliki potensi bahaya berupa debu batu yang dihasilkan dari proses pemotongan batu. Debu batu berpotensi besar masuk dan mengendap di saluran napas pekerja yang terpajan debu batu tersebut. Dalam penelitian ini ingin diketahui hubungan pajanan debu batu dan faktor lainnya dengan gangguan fungsi paru.

Metode Penelitian : Desain penelitian cross sectional dengan analisis regresi logistik. Subjek penelitian diambil secara cluster sampling. Tingkat pajanan debu batu ditentukan dengan metode semikuantitatif dan faktor-faktor lainnya dengan kuesioner. Pemeriksaan fungsi paru dilakukan dengan menggunakan alat spirometer.

Hasil : Subjek penelitian adalah 70 pekerja laki-laki industri pemotongan batu informal dengan masa kerja lebih dari 5 tahun. Sebanyak 21,4% subjek mengalami gangguan fungsi paru, dengan gangguan fungsi paru restriksi sebanyak 14,3% dan gangguan fungsi paru obstruksi sebanyak 7,1%. Faktor risiko yang berhubungan bermakna dengan gangguan fungsi paru adalah tingkat pajanan debu batu. Faktor umur, pendidikan, status gizi, kebiasaan olahraga, kebiasaan merokok, masa kerja, kebiasaan menggunakan alat pelindung diri (APD) dan penyediaan APD tidak memperlihatkan hubungan bermakna dengan gangguan fungsi paru. Subjek dengan tingkat pajanan debu batu tinggi mempunyai risiko 5,889 kali mengalami gangguan fungsi paru dibandingkan subjek dengan tingkat pajanan debu batu rendah [odds rasio suaian (ORa) = 5,889; interval kepercayaan (CI) 95% = 1,436-24,153)].

Kesimpulan : Didapatkan hubungan bermakna antara tingkat pajanan debu batu dengan gangguan fungsi paru. Perlu dilakukan pengendalian terhadap pajanan debu batu untuk mencegah risiko gangguan fungsi paru pada pekerja industri pemotongan batu.

.....Background : Stone cutting industry have a potential hazard in stone dust resulted from stone cutting process. Stone dust has a significant potential to enter and settle inside exposed worker's respiratory tract. This study aims to identify the relationship between stone dust exposure and other factors with lung function disorder.

Method : This study was a cross-sectional study with logistic regression analysis. Study's subjects were taken with cluster sampling method. Level of stone dust exposure was determined by semi-quantitative method and the other factors were identified by a questionnaire. Lung function was tested with a spirometer.

Results : Study's subject was 70 male informal stone cutting industry workers with more than 5 years of service. In this study, it was found that lung function disorders was 21.4%, which restrictive lung function disorder was 14.3% and the obstructive lung function disorder was 7.1%. Risk factor significantly related to

lung function disorder was stone dust level of exposure. Age, education, nutritional status, exercise habit, smoking habit, length of employment, habit of using personal protective equipment (PPE) and provision of PPE showed no significant relationship with lung function disorder. Subjects with high level of stone dust exposure had 5.889 times the risk of lung function disorder compared to subjects with low level of stone dust exposure [adjusted odds ratio(ORa) = 5.889; 95% confidence interval (CI) = 1.436 - 24.153)].

Conclusion : The level of stone dust exposure significantly related to lung function disorder. Control measures are needed for stone dust exposure to prevent the risk of lung function disorder in stone cutting industry workers.