faal paru dan keluhan respirasi petugas stasiun pengisian bahan bakar umum spbu di jakarta pusat dan jakarta utara se rta faktor-faktor yang mempengaruhi = Lung function and respiratory symptoms of petrol station attendants in central and north Jakarta and its contributing factors

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Abstrak

Latar belakang: Stasiun pengisian bahan bakar umum SPBU semakin banyak didirikan untuk memenuhi kebutuhan bensin kendaraan bermotor yang semakin meningkat. Petugas SPBU merupakan profesi yang memiliki risiko tinggi terpajan oleh polutan berbahaya yang berasal dari emisi gas buang kendaraan bermotor dan uap bensin terutama saat melakukan pengisian bensin. Kombinasi pajanan gas buang kendaraan dan uap bensin ini diduga berperan terhadap penurunan faal paru.
Metode: Penelitian ini merupakan penelitian potong lintang yang dilakukan di SPBU wilayah Jakarta Pusat dan Utara pada bulan Agustus 2017-Februari 2018. Sebanyak 97 petugas SPBU diambil pada penelitian ini menggunakan teknik consecutive sampling. Subjek penelitian tersebut mengikuti wawancara dengan kuisioner, pemeriksaan spirometri dan foto toraks. Pengukuran kadar sulfur dioksida SO2 , nitrogen dioksida NO2 , karbonmonoksida CO , ozon O3 , particulate matter 2,5 PM 2,5 dan uap bensin benzene dilakukan di lokasi penelitian.
Hasil: Pada penelitian ini didapatkan hasil spirometri normal pada 56,7 subjek, kelainan berupa restriksi sebanyak 42,3 subjek, obstruksi pada 1 subjek dan tidak ada yang mengalami kelainan campuran restriksi dan obstruksi. Sebagian besar subjek 84,6 tidak mengalami keluhan respirasi, sebanyak 10,3 subjek mengalami batuk kering dan 5,1 subjek mengeluh batuk berdahak. Terdapat hubungan yang bermakna secara statistik antara arus puncak ekspirasi APE dengan masa kerja dengan nilai p 0,011 namun tidak didapatkan hubungan yang bermakna dengan parameter kapasitas vital paksa KVP , KVP, volume ekspirasi paksa pada detik pertama VEP1 , VEP1 dan rasio VEP1/KVP.
Kesimpulan: Prevalens kelainan faal paru petugas SPBU pada penelitian ini sebesar 43,3 dan keluhan respirasi pada 15,4 subjek. Diperlukan penelitian lebih lanjut secara kohort mengenai faktor-faktor yang mempengaruhi faal paru pada petugas SPBU.
<hr /><i>Background: To satisfy growing needs of petrol consumption in big city many new petrol stations has been built. Petrol station attendant is considered to have high risk exposure to dangerous pollutant from motor vehicle emission and petrol fumes, especially while filling up petrol tanks. Combination of those exhaust and petrol fumes is suspected to cause the reduction of lung function.
Methods: This research is a cross sectional study done in petrol station in Central Jakarta and North Jakarta region between August 2017 and February 2018. A total of 97 petrol station attendants were taken in this research using consecutive sampling technique. The subjects were interviewed with questionnaires, spirometry and chest radiograph. Measurements of sulfur dioxide SO2 , nitrogen dioxide NO2 , carbon monoxide CO , ozone O3 , particulate matter 2,5 PM 2,5 and steam gasoline benzene concentrations were performed at the study sites.
Results: In this study, normal spirometry results in 56.7 of subjects, abnormalities in the form of restriction

in 42.3 of subjects, obstruction in 1 of subjects and none of which experienced mixed disorders of restriction and obstruction. Most subjects 84.6 did not experience respiratory complaints, as many as 10.3 of subjects had a dry cough and 5.1 of subjects complained of cough with phlegm. There was a statistically significant association between peak expiratory flow and duration of work with a p value of 0.011 but no significant association with other parameters such as forced vital capacity FVC , FVC, forced expiratory volume in the first second FEV1 , FEV1 and the ratio of FEV1/FVC.
Conclusion: Prevalence of lung function abnormalities of petrol station attendant in this research is 43,3 and respiratory symptoms at 15,4 subject. Further cohort studies are needed on factors affecting lung function in gas station personnel.</i>