

## Pajanan PM10 dan Kejadian Gejala ISPA pada Pekerja Pabrik Pembuatan Batako di Kabupaten Banyuwasin Tahun 2008 = PM10 Exposure and Symptom of Ari Among Workers on Brick Factory at Banyuwasin District Year 2008

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### Abstrak

PM10 adalah salah satu indikator pencemaran udara yang lazim digunakan saat ini. Pencemaran udara oleh PK<sup>o</sup> di luar ruangan terjadi akibat kegiatan industri, polusi kendaraan bermotor, pembukaan hutan dengan cara dibakar, letusan gunung berapi dan instalasi pembangkit tenaga listrik. Pabrik batako sebagai salah satu industri kecil, berpotensi menyumbang PM10 di lingkungan kerja, yang jika tidak diwaspadai dapat merugikan kesehatan pekerja, diantaranya gejala infeksi saluran pernafasan akut (ISPA).

Desain study cross sectional digunakan dalam penelitian ini dengan tujuan untuk mengetahui hubungan pajanan PM10 pabrik batako dengan gejala ISPA pada pekerja pabrik batako di Kabupaten Banyuwasin. Sebanyak 165 pekerja dari 30 pabrik batako menjadi responden dalam penelitian ini. Pengukuran konsentrasi PM10 pabrik dan parameter lain, seperti kelembaban udara, kepadatan rumah, luas ventilasi, karakteristik responden, seperti umur, status gizi dan kebiasaan merokok serta gejala ISPA diukur dalam penelitian ini.

Hasil penelitian menunjukkan adanya hubungan yang bermakna antara PM10 dan gejala ISPA pekerja pabrik batako ( $p=0,000$ ,  $OR=7,60$ ). Juga ada hubungan bermakna antara kebiasaan merokok dengan gejala ISPA ( $p=0,002$ ,  $OR=4,42$ ) dan kelembaban rumah dengan gejala ISPA ( $p=0,009$ ,  $OR=3,18$ ). Pemerintah dan pihak terkait perlu melakukan pemantauan terhadap kualitas udara pabrik batako dan melakukan penyuluhan untuk mencegah atau meminimalkan dampak kesehatan yang mungkin terjadi akibat pencemaran udara pada pabrik batako.

.....PM10 is air pollution indicator which often used for ambient particulate. Air pollution caused by PM10 in out of room is able to be caused by industry activities, vehicle pollution, forest for burning, mountains eruption and generator instalation. A brick factory has a great chance to contribute PM10 on its environment. It would have a bad health impact, among other thing is symptom of ARI (Accute Respiratory Infection).

Cross sectional study used in this research aims to know about relationship between PM10 exposure of brick factory with ART symptom on its worker in Banyuwasin Regency. 165 workers from 30 brick factory became respondent in this research. Besides, PM10 concentration measuring of brick factory and others parameter was tested, such as air humidity, house density, large of ventilation, including respondent characteristic ( ages, nutrient status, smoking habit).

The result of this research indicates that PM10 has strong relationship with ART symptom of brick factory workers ( $p=0,000$ ,  $OR=7,60$ ), then smoking habit variable ( $p=0,002$ ,  $OR=4,42$ ) and house humidity ( $p=0,009$ ,  $OR=3,18$ ). Brick factory workers with standard PM10 concentration has a great chance to have ART symptom 7,6 times higher than a factory with low PM10 concentration. Smoking habit of the workers will have chance 4,5 times higher to have ARI symptom than un-smoking workers. And for the workers who live in un-fulfill humidity area have a big chance to have ARI symptom 3 times higher than they who live in

standard humidity house. In this research, hope the government and related instances are monitoring to the air quality of brick factory and giving much information to avoid and minimize bad health impact which might be caused by air pollution in brick factory.