

# Pengukuran debu respirable talcum powder dan analisis hubungannya dengan gangguan fungsi paru dan keluhan subyektif karyawan PT. XYZ tahun 2015 = Respirable dust of talcum exposure measurement and its correlation analysis with pulmonary function disorder and subjective health complaint of employees in PT. XYZ year 2015

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## Abstrak

[Pajanan debu bedak talk (talcum powder) adalah salah satu kontaminan yang dapat menyebabkan gangguan fungsi paru baik obstruktif, restriktif maupun campuran pada karyawan di tempat kerja. Tujuan penelitian adalah untuk mempelajari hubungan antara pajanan debu respirable talcum powder dengan gangguan fungsi paru dan keluhan subyektif karyawan di PT.XYZ tahun 2015. Penelitian ini menggunakan metode survei yang dilakukan tanpa intervensi, yang bersifat analitik dengan rancangan cross sectional. Besar sampel sebanyak 18 dari

populasi 42 orang yang diambil secara purposive sampling. Variabel yang diamati adalah tingkat pajanan debu respirable talcum powder pada karyawan, umur, lama bekerja, kebiasaan merokok, kebiasaan olah raga, riwayat penyakit paru dan penggunaan APD. Jenis data adalah data primer dan sekunder, dan pengumpulan data dari hasil pengukuran debu, pemeriksaan spirometri, foto thorax, hasil kuesioner dan wawancara responden. Analisis data yang digunakan adalah analisis univariat, bivariat dan multivariat. Hasil penelitian menunjukkan bahwa ada hubungan yang signifikan antara pajanan debu respirable bedak talk dengan keluhan subyektif hidung tersumbat, sakit tenggorokan dan batuk ( $p < 0,05$ ) dan ada hubungan antara kebiasaan merokok dengan sakit tenggorokan dan penggunaan APD dengan keluhan hidung tersumbat dan sakit tenggorokan. Hasil analisis regresi logistik dari tiga variabel pajanan debu bedak talk, kebiasaan merokok dan tidak menggunakan APD menunjukkan bahwa merokok variabel

paling dominan dan beresiko 25 kali mengalami keluhan sakit tenggorokan dibandingkan dengan yang tidak merokok. Disarankan untuk memperbaiki instalasi Local Exhaust Ventilation pada proses bedak, pemantauan dan pengukuran debu bedak talk secara rutin, MCU secara berkala, program promosi kesehatan di tempat kerja, penyediaan APD bagi karyawan dan pelatihan tentang penggunaan dan

perawatannya. Talcum dust (powder) exposure is one of particulate contaminant that can cause pulmonary function disorder either obstructive, restrictive or combination. The research aimed to learn the correlation between respirable dust of talcum exposure with pulmonary function disorder and health subjective complaint from exposed

employees in PT. XYZ, 2015. The research was analytical study with cross sectional design using survey method without any intervention. There were 18 samples from 42 employee of total population by purposive sampling. The observed variables were respirable dust of talcum exposure to employees, age, work length, smoke habits, exercise habits, history of pulmonary disease and PPE usage. The data were generated from primary and secondary data, and collected

from respirable dust measurement, pulmonary examination (spirometry test and photo thorax), questionnaires and interview. The data was analyzed by univariate, bivariate and multivariate. The research

showed that there was significantly correlated between respirable dust of talcum powder exposure with health subjective complaint of nasal congestion, sore throat and cough ( $p < 0,05$ ) and there was correlation between smoke habits with sore throat and PPE usage with nasal congestion and sore throat. The multiple logistic regression analysis from three variables i.e. respirable dust of talcum powder exposure, smoke habits and PPE usage showed that smoker among employees was the most dominant factor and had risk until 25 times induced health subjective complaint compared with non-smokers. It is recommended to improve Local Exhaust Ventilation for talcum

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