

Analysis of characteristics and pulmonary function status of garlic crackers home industry workers in Sidoarjo East Java Indonesia

ABSTRACT

Background this research showed that flour dust has the potential on pulmonary function impairment. The basic material for making garlic crackers came from flour, flour dust had the potential on the worker's pulmonary function status. Purpose of the research was to analyze the characteristics and measure the pulmonary function status of garlic crackers home industry workers in Sidoarjo Regency East Java Indonesia. Research method was cross sectional design, the sample was a total sampling of 15 workers. The measurement of pulmonary function was carried out using a Spirometry tool by officers of UPT Occupational Safety and Health Surabaya. Data analysis used analysis of the results of a cross tabulation (crosstab). Time of the research was March to December 2019. Results of the research from the measurement of pulmonary function, 33.3% had an abnormal status, with details of 20% of workers had a light restriction category and 13.3% a light obstruction category. The results of the cross tabulation of characteristics of respondents with pulmonary function status showed that there was a relationship between age and pulmonary function status with a coefficient contingency value of 0.442. Male sex with pulmonary function status with a coefficient contingency value of 0.577, smoking habits with a pulmonary function status with a coefficient of contingency value of 0.577, working period over 10 years with a pulmonary function status with a contingency coefficient value of 0.106. The type of effects of respiratory impairments from flour dust exposure were affected by the dose and duration of exposure. Mask (Personal Protective Equipment) with pulmonary function status with a coefficient contingency value of 0.186. There was a relationship between flour dust and pulmonary function status with contingency coefficient value of 0.408. Conclusion Increasing age and long working period need to protect pulmonary function for workers in the potential environment of flour dust by increasing obedience to using masks (Personal Protective Equipment), and stopping smoking habits especially for male workers. Workers who experienced pulmonary function impairments should take further treatment so it would not get worse and get proper treatment so it would not reduce productivity while working.

Keyword: Workers characteristics; Workers pulmonary function status