EFFECT OF WORK ENVIRONMENT ON THE RISK OF BREAST CANCER IN INDONESIA

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ABSTRACT

Background: Breast cancer is the second-leading cause of cancer death in the world and the most common cancer among women in Indonesia. Combination of genetic, hormonal, and environmental factors are the cause of breast cancer. The chemical carcinogen from mining and industry in the working environment can increase the risk of breast cancer. This study aimed to determine environmental exposure in the workplace on breast cancer in Indonesia.

Subjects and method: This was a cross sectional study. A sample of 35,595 female workers were selected for this study. The dependent variable was breast cancer. The independent variable was exposure of carcinogen in the workplace. The data were obtained from the Non-Communicable Disease Research by the National Institute of Health Research and Development Ministry of Health in 2016. The data covered 34 provinces in Indonesia. The data were analyzed by a multiple logistic regression.

Results: As many as 7.5% of women were exposed to carcinogen in the workplace. 3.4% of unmarried women had breast cancer and 1.2% of married women had breast cancer. The risk of breast cancer increased with exposure of carcinogen in the workplace (OR= 1.85; 95% CI= 1.39 to 2.47; $p < 0.001$). Age, marital status, education, and social economic condition, were also associated with the risk of breast cancer.

Conclusion: The risk of breast cancer increases with exposure of carcinogen in the workplace among female worker.

Keywords: breast cancer, carcinogen, workplace, women

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