Pneumoconiosis Compensation Fund Board

<< Comprehensive Risk Assessment of People with Silicosis: A Population-based Study>>

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Investigators

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Summary

Background: Silicosis is a debilitating lung disease. People with silicosis have reduced lung function and quality of life gradually, and present increasing health risk.

Objectives: This study explored the risk profiles among people with silicosis in Hong Kong underpinned by the Pittsburgh Mind–Body Center model.

Design and method: This project adopted a cross-sectional study design with sampling stratified by participants' degree of incapacity (DOI). Chinese people diagnosed with silicosis and registered with the Pneumoconiosis Compensation Fund Board (PCFB) were recruited.

A demographic data sheet and the St. George's Respiratory Questionnaire were used to collect the socio-demographic and clinical characteristics of the participants. The behavioral factors (smoking, drinking, physical activity level, and consumption of vegetable and fruits) as well as the psychological risk factors (anxiety and depressive symptoms, and social support) were examined by validated questionnaires. Biological and physiological parameters, including insulin resistance, high-sensitivity C-reactive protein (hs-CRP), hemoglobin, fasting blood glucose and lipid profiles, and plasma vitamin C level were ascertained by fasting blood sample.

Results: A total of 390 participants were recruited in the study with their distribution of DOI groupings [(i) DOI<30%, (ii) DOI 30%–60%, and (iii) DOI>60%] in proportion to the latest distributions to the client registry of the PCFB. Participants of the low DOI groups demonstrated significantly higher amounts of alcohol consumption, higher BMI, and higher waist circumference than participants of other DOI groups. Participants of the middle DOI group suffered from diabetes that required medication, with a longer duration of silicosis and consumed an inadequate amount of fruit than participants of other DOI groups. Participants in the high DOI group demonstrated poorer perceived respiratory and physical health, consumed less vegetable and fruit, were more physically inactive, and presented higher depression score and body fat mass percentage than participants in other DOI groups. The duration of silicosis, use of medication for diabetes, perceived physical health, hs-CPR, and body fat mass percentage were independently and significantly associated with the DOI in people with silicosis.

Conclusion: Inadequate physical activity and insufficient fruit and vegetable intake were the common modifiable behavioral factors that influenced the health of people with silicosis. To promote the health of people with silicosis, especially those with diabetes, intervention should improve diabetic control, body fat mass percentage, and hs-CRP level for this population.