Occupational Health 2017

6th International Conference and Exhibition on

OCCUPATIONAL HEALTH & SAFETY

September 13-14, 2017 | Dallas, USA

Keynote Forum

Day 1

Zhimin Li et al., Occup Med Health Aff 2017, 5:3 (Suppl)
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Zhimin Li

Shenzhen Preventon and Treatment Center for Occupational Diseases, China

Prevention of musculoskeletal disorders in south China

Occupational injuries, such as musculoskeletal disorders (MSDs), seriously threaten frontline worker's health and can cause a great deal of loss in economy. According to the Bureau of Labor Statistics, United States, MSDs accounted for 33% of all worker injury and illness cases in 2013. It is among the most frequently reported causes of lost or restricted work time. In this project, we first described the annual occurrence rate of MSDs observed in a population of 3,479 workers in 60 factories in Shenzhen, China. About half of those workers reported that they had suffered from MSDs in the past 12 months. Then, we studied the association between a set of potential risk factors and MSDs by fitting the data into a logistic regression model. We found MSD risks increased in workers with over 55 working hours per week, high-stress level, and previous injury history. To prevent work-related MSDs in the workplace, we led a one-year participatory and didactic training program for 918 and 2,561 workers, respectively. Participants were asked to report their experience of ache, pain or discomfort in ten body parts before and after receiving the training. To evaluate the program in a more rigorous way, a randomized controlled trial (RCT) was conducted on the collected data. We found that the program could reduce the MSD prevalence rates, especially for lower extremities (drop to 9.9% from 16.8% with p-value<0.001) and wrists and fingers (drop to 8.3% from 12.9%, with p-value 0.002). Finally, we developed a method to measure the cost-benefit ratios of the programs and found that the participatory training was more effective to prevent MSDs than the didactic training.

Biography

Zhimin Li is the Director of Shenzhen Prevention and Treatment Center for Occupational Diseases and the Committee Head of Occupational Ergonomics Chapter, Chinese Ergonomics Society. He has been serving as the Associate Editor of the journal Occupational Health and Emergency Rescue. He has published 14 books and over 60 papers.

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Day 2

Jinky Leilanie Lu, Occup Med Health Aff 2017, 5:3 (Suppl)
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Jinky Leilanie Lu

University of the Philippines Manila, Philippines

Occupational and environmental health and safety implications of pesticide use and pesticide residues

Statement of the Problem: Eggplant (*Solanum melongena L.*) is an important vegetable crop that is widely cultivated in the tropical and subtropical areas in Asia. Globally, the top three eggplant producers are China, India, and Egypt. The Philippines has been one of the top 10 eggplant-producing countries based on area planted and crop productivity. This research study aims to describe the insecticide residues found in soil, water, and eggplant fruits in eggplant farms in Sta. Maria, Pangasinan.

Methodology & Theoretical Orientation: The study design is a cross sectional of randomly selected eggplant farms in Sta. Maria, Pangasinan. Soil, water, and eggplant fruits were collected and subjected to gas chromatography analysis for multi-pesticide residues.

Findings: Farmers from Sta. Maria, Pangasinan were found to be applying a broad spectrum of insecticides on their eggplant crop. Soil samples from 11 (about 42%) out of the 26 farms tested positive for the insecticide residues, six of which from four farms exceeded or surpassed the acceptable maximum residue limit. These residues were profenofos, triazophos, chlorpyrifos, cypermethrin, and malathion. No insecticide residues were detected from water samples taken from the 26 farms. The farmers reported applying Prevathon and Malathion to control pests in their eggplant crops. The farmers and farm workers in the soil and water study reported experiencing itchiness of the skin (63.8%), redness of the eyes (29.3%), muscle pains (27.6%), and headaches (27.6%), as being related to their pesticide exposure.

Conclusion & Significance: In summary, a maximum of 20% of the eggplant samples tested positive for insecticide residues at any one stage of sampling done.

Biography

Jinky Leilanie Lu holds a Master's Degree of Occupational Health and Ph.D, and a Research Professor of the National Institutes of Health, University of the Philippines Manila with the Institute of Health Policy and Development Studies. She has authored two books, *Gender, Information Technology*, and *Health* which won the National Academy of Science and Technology book award in 2010, and reprinted by the University of Hawaii Press, 2007, and *Basics of Occupational Health and Safety: Guidebook for Practitioners and Industries*. She has produced 51 journal articles, and 28 of which are Science Citation Indexed. She also contributed a chapter in the Handbook of Anthropometry Physical Measures of Human Form in Health and Disease, published by Springer in 2012. She is a staunch advocate, both as an engaged academic and scientist, in promoting epidemiology of occupational health and safety.

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