

Slips & Falls

Employee experience and perception of floor slipperiness: A field survey in fast-food restaurants

By Kai Way Li, Theodore K. Courtney, Yueng-Hsiang Huang, Wen-Ruey Chang and Alfred J. Filiaggi

SLIP AND FALL INCIDENTS are a significant safety problem in workplace environments. Courtney, et al (1118) reported that same-level falls accounted for 20 to 40% of occupational injuries in the developed countries studied. Slips also contributed to 40 to 50% of these fall-related injuries. The 2005 Liberty Mutual Workplace Safety Index estimates that in the U.S. the direct cost of disabling workplace injuries from same-level falls is \$6.9 billion annually, ranking second to overexertion (Liberty Mutual 1). The Washington State Department of Labor and Industries (L&I) reported an average workers' compensation cost per claim for same-level falls of \$6,745 from 1997 to 2001 (L&I 1).

Falls are also a leading cause of occupational injuries in Taiwan. In 2002, a total of 13.9% of occupational injuries were related to falls (CLA 1). Among these reported falling cases, 76.6% were the falls on the same level, which accounted for 10.6% of all occupational injuries.

Restaurant workers are one of the largest groups of injured workers each year (BLS 22). Same-level falls make up the largest proportion (26%) of cases with days away from work in restaurants, while slips and trips without a subsequent fall contributed another 5% of such cases (Filiaggi and Courtney 18). The top 10 risk industrial classes for same-level falls in Washington State included restaurants, which recorded 6 times the number of claims of the next highest industry (nursing homes). Other high-risk industries for same-level falls included logging, wood frame building construction, roofing, state healthcare facilities, motels and hotels, wholesale meat dealers, building construction and trucking (L&I 2).

Floor slipperiness is a critical issue in studying slip-and-fall problems in restaurants. This article describes a field study conducted at 10 fast-food restaurants in Taiwan to quantify the experience of slips and falls at work and employee perception of floor slipperiness in the major working areas of restaurant kitchens.

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Participating Restaurants

The operations of fast-food restaurants in Taiwan are similar to those in the U.S. except that the former, in general, have smaller kitchen spaces and fewer workers on duty than the latter. In addition, the fast-food restaurants in Taiwan rely less on previously cooked or prepared foods, which makes raw meat processing more common.

The mean (\pm SD) age of the 10 participating restaurants was 32.4 (\pm 26.7) months. Quarry tile was the typical flooring material in the restaurant kitchens. The tiles in 7 of the 10 restaurants originally had grit embedded on the surface; however, in most cases, the grit had been severely reduced due to the wear and