

عنوان مقاله:

Thermal Comfort Assessment and Heat-Related Illnesses among Sellers in Periodic Local Markets: A Case Study in Hot and Dry Climate of Iran

محل انتشار:

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خلاصه مقاله:

Background:This study aims to evaluate the thermal conditions of periodic local markets and determine the thermal comfort and sensation of sellers, as well as the prevalence of heat-related diseases in the hot and dry climate of Iran. **Methods:**In this study, thermal comfort and sensation of 330 sellers from periodic markets in Qom city, a dry and hot climate in Iran, were evaluated. Measurements were performed for 15 days, from July 16 to August 1. To assess environmental thermal condition, wet bulb globe temperature (WBGT) index and discomfort index (DI) were determined, and participants' tympanic temperature was determined to consistency assessment with thermal indices. Finally, the effects of environmental, personal, and working conditions on the prevalence of heat-related diseases among sellers were determined. **Results:**The environmental indices, including DI and WBGT index, had the most association with heat-related illnesses and tympanic temperature ($P<0.05$). The sellers perceived the environmental conditions as warm to hot after 1:00 pm. Besides, they expressed an uncomfortable or very uncomfortable situation after 12:00 pm. The findings showed that environmental parameters play a more important role in the prevalence of heat-related diseases and heat strain than individual and occupational factors. **Conclusion:**The sellers may be at risk of heat stress in outdoor markets in nearly half of the workday in the summer months. Therefore, it is very important that these people receive the necessary training in the prevention of heat illness in order to take appropriate protective measures in accordance with local conditions.

کلمات کلیدی:

Thermal comfort, Thermal sensation, Periodic market, Heat stress, آسایش حرارتی,

احساس گرما, بازار دوره ای, تنش گرمایی

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