

Occupational heat stress in construction industry – Implications on health and social life

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Occupational Heat stress, a well-known consequence for workers in tropical settings, as the temperatures are high for most part of the year which when combined with high humidity and high physical workload can cause the body's thermal balance to tip causing physiological decrements. In construction industry during summer, poor working conditions, access to minimal cooling systems and high production targets increases the heat stress for the workers. Though permissible limits are set for thermal severity, at high heat stress conditions, the skin surfaces and respiratory organs of workers may be subjected to extreme discomfort, water deficiency, salt deficiency and heat related illnesses which impact the workers' health and social life. This study was initiated to assess occupational heat stress and self-reported impacts on health and social life of construction workers in South India. This cross-sectional study conducted during the summer of 2012 included about 200 workers and data comprised of WBGT and self-reported health and social life impacts due to heat stress. WBGTs were in the range of 30.2°C – 36.2°C, with ambient temperatures as high as 42.0°C, and relative humidities ranged from 45 to 78%. About 89% of the workers reported a range of health impacts during summer months which were compounded by higher workload in achieving production targets. 17-27% extra time was spent to complete the same tasks in summer which impacted the social life of the women workers (93%) compared to the men (27%). Results of the study reemphasize the need for designing comprehensive prevention strategies and warrants more regional and sector specific studies to evaluate and design feasible adaptation strategies.

Biography

Professor Vidhya Venugopal, a doctorate in Environmental Chemistry did post-doctoral research at Central Queensland University, Australia. She was awarded British Cheverning Scholarship to study Environmental Management at Manchester, UK. Trained in Sweden and Germany on Climate Change & Health, she serves as a visiting faculty at University of Heidelberg. She worked at Johnson & Johnson, Canada as Research Scientist for 9 years and served the Health and Safety committee. Currently she teaches Environmental & Occupational Health and Industrial Hygiene. A BOHS certified Occupational Hygienist; she heads the Industrial Hygiene services and offers consultancy services to about 152 industries. Her research passion is CC & Occupational Heat Stress.

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