The effect of exposure to long working hours on stroke

Grace Sembajwe, Alexis Descatha, Sergio Iavicoli

international organizations to identify needs & link volunteers to continue the quest for improved working conditions.

Sp56-4

The India-WHWB Experience: Processing of coloured gemstones in Jaipur - a collaborative approach to worker health education

Lynda Lawson [1] and Om Malik [2]

[1] University of Queensland, Sustainable Minerals Institute, St Lucia, Queensland, Australia, [2] ECOH Management Inc. and Workplace Health Without Borders (WHWB), Toronto, Canada

Introduction: In collaboration with the Tiffany and Co Foundation, Workplace Health Without Borders (WHWB), The University of Queensland, the University of Lausanne, the American Gem Trade Association and local partners, we investigated health and safety issues and concerns in the gem cutting sector of Jaipur, and developed solutions to improve practices in Hindi and English.
Materials and Methods: Forty four gem cutting factories (including home-based workshops) in Jaipur were visited. Noise and dust measurements were collected and awareness messaging disseminated to educate workers about risks and the means to control them. Film and photographs were captured to document the processes.
Results: Fine dust inhalation - a major concern with variation depending upon the gemstone cut. Short term noise levels range from 70 to well above 90 decibels (dBA weighting). Sustained levels of 85 dBA are considered a risk for hearing loss.
Conclusions: Working collaboratively we collected and analysed data, and gathered footage, that informed the creation of educational material on the prevention of silica exposure and other relevant occupational health information in gemstone cutting and polishing. Training videos and posters were created in English and Hindi and distributed at the pilot locations. The posters and the training videos will be presented in this WHWB Special Session.

Special Session 57 Systematic reviews and meta-analyses on exposure to long working hours for the WHO/ILO Joint Estimates of the Work-related Burden of Disease and Injury

Chair: Frank Pega

Session introduction
The World Health Organization (WHO) and International Labour Organization (ILO), supported by a large number of individual experts, have developed and published the WHO/ILO Joint Estimates of the Work-related Burden of Disease and Injury (WHO/ILO Joint Estimates). As part of this workstream, the Organizations have recently produced and published the first estimate of burden of disease attributable to exposure to long working hours. This special session presents the systematic reviews and meta-analyses conducted as the base for these estimates and provides an open floor for discussions of future research for potential additional WHO/ILO Joint Estimates of burden of disease from exposure to long working hours.

Sp57-1

The effect of exposure to long working hours on ischaemic heart disease

Jian Li

Fielding School of Public Health, School of Nursing, University of California, Department of Environmental Health Sciences, Los Angeles, United States of America

Introduction: We aimed to systematically review and meta-analyse estimates of the effect of exposure to long working hours on ischaemic heart disease.
Materials and Methods: We followed a published protocol (Prospero: CRD42017084243). Risk of bias, quality of evidence and strength of evidence were assessed using adapted Navigation Guide and GRADE tools and approaches.
Results: Twenty-six cohort studies met the inclusion criteria, comprising a total of 763,376 participants (310,396 females). Across included studies, we did not have serious concerns for risk of bias. Compared with working 35-40 h/week, we were uncertain about the effects of working 41-48 h/week and 49-54 h/week on ischaemic heart disease incidence and mortality; working =55 h/week was associated with moderately increased risks of ischaemic heart disease incidence (RR 1.13, 95% CI 1.02 to 1.26) and mortality (RR 1.17, 95% CI 1.05 to 1.31), respectively. Subgroup analyses and sensitivity analyses found no evidence for differences by WHO region, sex, outcome definition, outcome measurement, and risk of bias.
Conclusions: Evidence on exposure to working =55 h/week was judged as ""sufficient evidence of harmfulness"" for ischaemic heart disease incidence and mortality.

Sp57-2

The effect of exposure to long working hours on stroke

Grace Sembajwe, Alexis Descatha and Sergio Iavicoli

Northwell Health, Occupational Medicine, Epidemiology, and Prevention, New York, United States of America

Introduction: We aimed to systematically review and meta-analyse estimates of the effect of exposure to long working hours on stroke.
Materials and Methods: We followed a protocol (Prospero: CRD42017060124). Risk of bias, quality of evidence and strength of evidence, was assessed using adapted Navigation Guide and GRADE tools and approaches.
Results: Twenty-two studies (20 cohort studies, 2 case-control studies) met the inclusion criteria, comprising a total of 839,680 participants (364,616 females). Across included (cohort) studies, we did not have serious concerns for risk of bias. Compared to working 35-40 h/week, we were uncertain about the effects of working 41-48 h/week; there may have been an increased risk for acquiring stroke when working 49-54 hours/week (RR 1.13, 95% CI 1.00 to 1.28) and a moderate increase for =55 h/week (RR 1.35, 95% CI 1.13 to 1.61) on stroke incidence. We were uncertain about the effect on mortality from stroke. Subgroup analyses and sensitivity analyses found no evidence for differences by WHO region, sex, outcome definition, outcome measurement, and risk of bias.
Conclusions: Evidence on exposure to working 49-54h/week and =55 h/week was judged as ""sufficient evidence of harmfulness"" for stroke incidence.

Sp57-3

The effect of exposure to long working hours on depression

Reiner Rugulies