an ACD with a sensitizing to metals revealed by patch testing by the European standard series.

Results Sixty-nine construction workers were included of whom 67 were men. They had a mean age of 46 years-old and an average professional seniority of 20.7 years. They were masons in 70% of cases. Occupational exposures to metals were mainly from cement (91%), leather (6%), metal instruments (3%) and used industrial oils (2%). Protective gloves were worn in 27% of cases. The lesions affected more than one anatomical region in 44% of cases, which were mainly hands (90%), feet (40%) and face (10%). Patch tests were positive for chromium, nickel and cobalt in 93%, 26% and 65% respectively. The relevance of positive tests was found in 94% of cases for chromium, 72% of cases for nickel and 85% for cobalt. The ACD to metals was considered as a compensable occupational disease in 90% of cases. An adjustment of workplace was prescribed in 99% of cases; mainly the use of adequate personal protective equipment (88%).

Conclusions ACD is common among construction workers considering the omnipresence of metals, poor work conditions and deficient coverage of this sector by occupational medicine. Chromium remains the main allergen. Protective measures could be a way to avoid job loss for this unorganized sector.

Health disparities

A COMPARATIVE STUDY OF DAY AND NIGHT SHIFT INDUSTRIAL WORKER’S BEHAVIORAL HABITS AND ITS IMPACT ON ORAL HYGIENE

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Introduction Due to poor habits and a lack of awareness, night shift industrial workers’ dental health-related quality of life is poor. The study examined worker’s oral hygiene knowledge, attitudes, and behaviors; investigated shift-related behavioral changes on oral hygiene; and made practical recommendations to improve worker’s oral health.

Material and Methods 250 day-and night-shift steel workers were investigated. The KAB questionnaire assessed their oral hygiene knowledge, attitude, and behavior. Dental exams and WHO adult questionnaires were used to assess their oral health. SPSS 15.0 was used for descriptive and multivariate analysis.

Results 125 day and night shift workers were recruited. Day shifters outperformed night shifters in knowledge, attitude, and behavior (score 6.67 for night versus 7.50 for day). Night shift workers smoked 21% more than day shift workers. Night shift workers are twice as likely to skip work due to toothache as day shift workers, according to the oral health examination that affected productivity. Night shift employees exhibited a 3-fold increased risk of poor oral health (95% CI 0.97–14.97) due to behavioural differences (p-value = 0.0001).

Conclusion Our preliminary research indicates that shift work and a lack of dental hygiene awareness have a negative impact on the oral health of industrial workers. Therefore, there is an urgent need for dissemination of information regarding the best dental hygiene practices among workers and to create evidence by in-depth research, which could pave the way for oral health to be included in labor legislation.

Heat and cold

THERMAL DISCOMFORT AND OCCUPATIONAL HEALTH – THE LINKAGE

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Introduction Strenuous jobs in work settings with process generated heat cause a poor indoor thermal environment, a risk factors for health and productivity of the occupants. The relationship between thermal comfort and productivity loss in Indian work environments has not been investigated prior to this study.

Materials And Methods After gaining consent, we conducted a cross-sectional study with 570 workers; including 440 workers from a high heat-generating (HHGI) steel industry and 130 workers from a low heat-generating (LHGI) garment industry. We monitored the Wet Bulb Globe Temperatures (WBGT), workers’ perception of thermal comfort using ASHRAE E255, collected workers’ perception on safety issues, Heat Related Illnesses (HRIs), and Productivity Loss (PL) using a modified HOTHAPS questionnaire. All data were analysed using R-software and SPSS Version 16.0.

Results The average attributable WBGT was 30°C±3.8°C (WBGT maximum of 41°C during summer) in HHGI and 27°C±3.3°C (WBGT maximum of 33°C during summer) in LHGI. Regardless of the season, workers in HHGI reported significantly higher thermal discomfort (94%) than those in LHGI (48%) even after adjusting for potential confounders. The probability of thermal discomfort was 108 times greater (95% CI 34.5–841.5), and related HRIs were 2.14 times higher and significantly more prevalent among HHGI workers (95% CI 1.03–4.44). Thermal discomfort and perceived PI were also significantly associated (p = 0.03) with HHGI workers having a nearly 4-fold increased risk of PL relative to LHGI workers (95% CI 3.1–65.7).

Conclusion The evidence of a link between thermal discomfort and adverse health and productivity loss among indoor workers necessitates additional in-depth investigation to establish definitive conclusions. This emphasises the crucial need for workplace interventions and protective policies that would benefit the economy and worker health especially in the climate change context.