Discussion Self-management and relevant knowledge are the important preventive factors of NCD prevention and there should be combined with the effective follow-up measure. However, this finding should be applied in large scale or in community.

1307 USING ETHNOGRAPHIC INTERVIEWS TO FACILITATE A PARTICIPATORY ERGONOMICS STUDY AMONG HOME-BASED MAPUCHE WEAVERS IN SOUTHERN CHILE

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Introduction While there is extensive literature on ergonomic hazards related to weaving, research on implementing interventions is limited. The Mapuche represent Chile's largest indigenous population and weaving represents an important source of income for women. While home-based work allows for flexible scheduling, it can also lead to working long hours, difficulty balancing professional and domestic responsibilities and greater occupational health issues. Participatory approaches have proven successful in addressing occupational health problems, however, there is scant research related to home-based artisans.

Methods A convenience sample of 35 home-based Mapuche weavers in Southern Chile were recruited for the study. Of these, 10 participated in ethnographic interviews. Purposive sampling was used to obtain a representative sample across communities, identified health issues; workspace type; and years of weaving experience. Semi-structured interviews were conducted in the weavers' homes along with videos, photograph and written observations of the weaving workspaces. The interviews focused on workday organisation; weaving workspace; self-identified health issues, perceived causes and potential solutions to hazard prevention. Data were analysed using Atlas.ti.

Results Each interview yielded a 'day-in-the-life' visual. This graphic model helped facilitate discussions around time management, health issues, potential causes and treatment. In addition to weaving, participants identified farm work (n=9), housework (n=9), wool production (n=7) and dyeing (n=7) as tasks that caused health issues. Respondents identified weaving as the cause of eyestrain (n=7), back (n=6), shoulder (n=5) and hand pain (n=4). Interventions identified, implemented and currently being evaluated include: provision of eye exams, a kinesiologist workshop and provision of headlamps.

Conclusion This project demonstrates the importance of using ethnographic methods to strengthen participatory approaches to artisan occupational health. The data provided unique insight into the complex relationship between home-based work, health and sustainable interventions. This work yielded a culturally appropriate methodology that can be applied to other home-based artisans.

922 WORK EQUIPMENT AND UNSAFE USE IN MICRO AND SMALL ENTERPRISES

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Aim The detection of unsafe handling with work equipment in small and micro enterprises.

Introduction A well elaborated occupational safety and health policy is crucial, yet, can micro and small scaled enterprises (MSE's) develop a good safety program, according working with workequipment?

Methods Idewe, a Belgian external service for prevention and protection at work, uses the online risk-assessment tool 'BRIE' (i.e. Better Risk Inventarisation and Evaluation) to guide occupational health and safety experts during periodic company visits. BRIE risk-assessments were performed in a convenience sample of MSE's during the period 2015–2016. A selection of questions about safety handling (n=6) was assessed. Examples are:

- Has the employer already made an inventory of the working-equipment?;
- Are there good safetyinstructions for all work equipments?;
- Have the employees been trained on safe use of work equipment?

Only the MSE's where all safety factors (work equipment-related) were scored, were included for analysis. Prevalences were calculated using frequencies.

Results Brie provides, 1/a list of important sector specific OSH issues (e.g. workequipment), 2/advice regarding good practices, legal information and preventive actions and 3) an evaluation of sector specific occupational risks. Data was available from 1950 MSE's. About 59% of the companies, did not have an inventory of there workequipment. 53% of the companies did not have any instruction for there working-equipment. Only 33% scored positive on training or education of there employees about safe use of their work equipment.

Discussion Brie risk-assessments reveal that assessments and policies regarding safe use of working equipment is non-existing in a significant number of MSE's. MSE's therefore need extra support, information, and advise.

Thermal Factors

100 THE EFFECTIVENESS OF DAYTIME BATH AMONG NEW CONSCRIPTS IN A TRAINING UNIT FOR HEAT INJURY PREVENTION

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Introduction Heat injury is a common illness among new conscripts during basic training course in Thailand and heat stroke is a major cause of death. There are a lot of methods to reduce the body temperature of conscripts to prevent heat injury. The conscripts are allowed to take a bath in the evening every day as regular bath during training. Daytime bath is one of the procedures. The objective of this study is to compare the effectiveness between daytime bath and regular bath for heat injury prevention among new conscripts in training unit.

Methods A quasi-experimental study was conducted in 93 new conscripts in training unit. The data of their body temperature before and after daytime bath in the time of 1200 and 0300

pm were collected. The body temperature data after regular bath were collected in the time of 0600 pm. The paired t-test was used to compare the difference between body temperature means before and after daytime bath and ANOVA was used to compare the difference between body temperature means after daytime bath and regular bath.

Results There were 93 conscripts participating in this study with response rate of 100%. The results of the analyses showed that the body temperature after daytime bath is lower than before bath in statistically significant ($p < 0.05$). But, the difference of body temperature between daytime bath and regular bath is not statistically significant. ($p > 0.05$).

Discussion Both regular and daytime bath showed effectiveness in decreasing body temperature. Therefore, daytime bath can be used as additional method to reduce body temperature in the daytime period to prevent heat injury.

189 OCCUPATIONAL HEAT EXPOSURE OF TRAFFIC POLICE WORKERS IN AHMEDABAD, INDIA

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Introduction Climate change is causing rising levels of extreme heat. Traffic police workers form a vulnerable group exposed to high atmospheric temperature in temperate countries like India. A heat exposure assessment among traffic police has not been previously undertaken in an Indian city. Therefore, a pilot study was conducted with plans for an exhaustive study in future.

Methods This study was conducted over a six-week period during June and July 2015 at four Traffic junctions in Ahmedabad on 16 traffic policemen. Personal ambient temperature was measured by data loggers, Wet-bulb-globe temperature and ambient temperature measurements were also recorded. Ahmedabad city Temperature Measurement data corresponding to the monitoring period was collected from Indian Meteorological Department. A questionnaire was administered to all participants to collect demographic data and history of heat related symptoms. Follow up was done to capture prevalence of heat-related symptoms over the study period.

Result The average age of study participants was 35.1 years. 94% of participants reported that the summer is the most uncomfortable season to work. The dry bulb and globe bulb temperature ranged from $31.6^{\circ}\text{C} \pm 0.3^{\circ}\text{C}$ to $36.8^{\circ}\text{C} \pm 1.6^{\circ}\text{C}$ and $34.6^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$ to $49.1^{\circ}\text{C} \pm 3.0^{\circ}\text{C}$ respectively. Area WBGT heat stress measurements for all four traffic junctions ranged from 28.2°C to 36.1°C during the study period. Participants experienced high heat exposures during the study period. Daily WBGT measurements exceeded the maximum recommended exposure at each of the four outdoor worksites.

Discussion This study offers one of the first data sets on ambient heat exposure of traffic police workers in an urban context. The occupational heat stress exposure resulting from outdoor work in traffic junctions is likely to have implications for health. Further, it is observed that the exposures of people who work near roadways is not well characterised by conventional temperature monitoring stations. Various strategies are recommended to protect traffic police from heat exposures.

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THE EFFECTS OF AMBIENT TEMPERATURE ON WORK-RELATED INJURIES IN ADELAIDE, AUSTRALIA—WORKERS' COMPENSATION CLAIMS INCREASE WITH HIGH TEMPERATURES

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Introduction Ambient thermal stress may directly, or indirectly, increase the risk of work-related injuries, particular for outdoor workers. However, little is known about the overall injury burden contributed by ambient temperatures (both high and low). The objectives of this study were to examine the relationship between ambient temperatures and work-related injuries and illnesses as well as quantify the associated burden at both ends of the temperature spectrum.

Methods Daily numbers of worker's compensation claims for injuries and illnesses in the Adelaide metropolitan area from 2003–2013 ($n=224,631$) were provided by the jurisdictional regulator. Daily weather data were obtained from the Australian Bureau of Meteorology. We used a time-stratified case-crossover regression model combined with distributed lag non-linear to quantify the cumulative effect of temperatures over the previous 7 days. The burden of low and high temperatures was computed and further separated into effects related to mild and extreme temperature ranges. Analyses were stratified by worker, work environment and injury characteristics.

Results As the daily maximum temperatures rose above 25°C , the risk of work-related injuries and illnesses also increased. Compared with the optimum temperature (minimum claim likelihood), extreme high temperatures (99th percentile) were associated with a 30% (95% CI: 18% to 44%) increase in overall claims whereas no statistically significant association was observed with cold temperatures (1st percentile). Longer delayed effects were seen for cold temperatures, whereas acute effects were seen in hot conditions. Notably, moderate temperature ranges were associated with greater injury burden than extreme temperatures.

Conclusion The results suggest a J-shaped relationship between temperature and injury claims with the highest extreme temperatures having the greatest risk but the more common hot days having the greatest burden. Companies and supervisors should be aware that heat-related injuries can arise even in moderately hot conditions. Injury prevention interventions should therefore consider ambient temperature risks more broadly.

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HOT ENVIRONMENT: EFFECTS OF A POWER ASSISTED FILTERING DEVICE INCORPORATING A FULL FACE MASK ON NEWTON MANIKIN THERMOPHYSIOLOGICAL RESPONSE

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