Work organisation, including precarious work/Working conditions

P-323 INVESTIGATING RELATIONSHIP OF HEALTH PROBLEMS REPORTED BY INDIAN OFFICE WORKERS WITH WORKPLACE HABITS AND OFFICE INDOOR ENVIRONMENTAL CONDITIONS

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Introduction Office going population spends a significant part of their lives inside offices. The type of indoor environment that the office buildings provide and workplace habits like prolonged sitting, have a direct effect on workers’ health. This poster will present health problems reported by workers in 30 Indian offices and will relate these health problems with the workplace habits and the indoor environmental quality (IEQ) inside the offices. The presented findings are part of a research that was conducted to evaluate the IEQ of Indian workplaces and its association with workers’ health.

Material and Methods Workers’ health and workplace habits data was collected through an anonymous survey conducted online. These 30 offices had a combined occupancy of about 30,000 and around 1,500 workers participated in the survey. Workers were questioned about their workplace habits and health problems. Office IEQ data (indoor air quality, outdoor views, lighting, thermal comfort, acoustics) was gathered through onsite measurements and site inspection.

Results 66% respondents reported musculoskeletal problems with pain in the neck and shoulder being the most reported issue (32%). Prolonged sitting and infrequent breaks were found to have a direct association with the musculoskeletal problems. 37% reported facing sleep-related problems. Lack of access to outdoor views was linked with higher number of sleep-related problems. 60% reported eye-related issues (eye strain-27% and dry eyes-11%). Longer working hours and lack of access to outdoor views were linked with higher reports of eye problems. 45% reported health issues which could be linked to unhealthy indoor air quality. Only 1 out of the 30 offices had the indoor air quality in compliance with the Indian Society of Heating, Refrigerating and Air Conditioning Engineers’ IEQ Standard, 2019.

Conclusions The study found that workplace habits and poor IEQ conditions in offices have a negative impact on office workers’ health.

COVID 19

P-330 STUDY TO ASSESS CHALLENGES FACED IN BIOMEDICAL WASTE MANAGEMENT BY WASTE HANDLERS DURING COVID 19 PANDEMIC IN A TERTIARY CARE HOSPITAL

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Introduction Coronavirus disease 2019 (COVID 19) saw an overhaul in the biomedical waste management (BMWM) practices. Waste handlers were at the brunt of these changes. If the challenges pertaining to BMWM at the ground level are better understood, more effective measures to overcome them can be formulated.

Methodology This qualitative research using in-depth interviews was done on 17 participants during August to November 2021 in a tertiary care institute in Mumbai. Thematic analysis was conducted on the qualitative data obtained.

Results Three major themes were generated from the transcripts. They are challenges and concerns faced by BW handlers, enablers/motivators, opportunities and future practices. Various challenges faced by waste handlers were difficulties in segregation and transport of BMW, exhaustion from PPE usage and fear of acquiring and spreading COVID 19 from work, stigma faced from public, and handling COVID 19 deaths. Support from family and colleagues, incentives and a positive change in public perception enabled them to work.

Conclusions It is of utmost importance to address challenges faced by waste handlers in BMWM. This will improve hygiene, workplace safety and reduce transmission of diseases. Onus should also be on periodic training in BMWM.

Musculoskeletal disorders

P-331 OCCUPATIONAL PROBLEM IDENTIFICATION ON ARTISANS OF JODHPUR WOODEN HANDICRAFT AND DESIGN INTERVENTION

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Introduction Jodhpur is highly famous state of India for its handicrafts. Commercialization of this handicraft sector with increased demand resulted, prolonged working hours and working beyond physical capacity. Thus, increasing incidents of occupational hazards among the artisans. Modifying the workstation and tools to better assist the artisans have found to reduce the occupational risks among the artisans. This study aims to evaluate the musculoskeletal risks and to develop a workstation for reducing the risks.

Methods 80 artisans were considered for the study randomly from different handicraft export houses of Jodhpur and Barmer Rajasthan. Questionnaire, environmental effects, and illumination were performed to identify occupational health issues affecting physical abilities of artisans. Further, design methodologies such as concept generation, selection and design development were performed to provide an effective solution.

Results The questionnaire revealed that most of the artisans faced severe discomfort in their wrist, upper back, and lower back as a result of repetitive and bad working postures due to poorly developed makeshift workstation. Artisans also reported health issues such as itching and redness eyes, nasal blockage, runny nose, and cough. Along with strain in eyes due to working in low illumination, causing long term eye problems. Among the different concepts, the features provided by the final concepts successfully addressed most of the risk such as, unnecessary repetitive actions and postural load.

Conclusion It can be concluded that a design intervention is needed to address the different occupational risks involved due to postural load. The final developed concept successfully
reduced the occupational risks considering the physical demands, thus reducing the reports of MSDs and increasing the productivity.

**Occupational epidemiology in unorganised sectors agriculture, construction, service sectors**

**P-332 AN EPIDEMIOLOGICAL CROSS-SECTIONAL STUDY OF PREVALENCE OF HAND HYGIENE IN FOOD HANDLERS IN A METROPOLITAN CITY**

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**Introduction** Food handlers act as an important source for dissemination of food borne illness and pose as a threat to the public health. Over the years due to high morbidity and mortality due to diarrheal diseases food borne illness have become public health problem of global concern. According to WHO the statistics as on 30th April 2020 it is estimated that almost 1 in every 10 people fall sick due to intake of contaminated food items and 420,000 die every year due to food borne illness.

**Material and Method** The study was conducted in a metropolitan city. Food handlers of food stalls of the streets formed the study population. Data was collected using a semi-structured questionnaire to evaluate the sociodemographic profile, educational status and hand hygiene practices of the participants. Data were analysed using an appropriate statistical test.

**Results** From the 75 food handlers which were included in the study 50 (66.6%) were males and 25 (33.3%) were females. It was observed that 52 participants (73.3%) of the participants were practising hand hygiene while handling food. 50 (66.6%) participants would clip their nails once a week, 20 (27.7%) believed that there is no need to clip one’s nails and 5 (6.6%) participants would clip their nails twice a week. Education status of the participants did not show any significant association with the practise of hand hygiene among the food handlers.

**Conclusion** Food handlers act as an important source in transmission of foodborne illnesses therefore it is necessary to sensitise and create awareness amongst them about the importance of hand hygiene.

**Musculoskeletal disorders**

**P-38 PSYCHOSOCIAL WORK CHARACTERISTICS AND LOW BACK PAIN IN NURSERY SCHOOL WORKERS IN JAPAN**

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**Introduction** Recent studies have indicated the potential influence of psychosocial work characteristics on low back pain (LBP), a common musculoskeletal problem. We aimed to identify psychosocial work characteristics that influenced LBP in school workers.

**Methods** We conducted a prospective cohort study with one year of observation. The baseline sample was 444 nursery school workers in Nagoya, Japan. A questionnaire survey was used for data collection. General characteristic information was collected and used the question ‘Where are you currently feeling LBP?’ was used to diagnose LBP. Logistic regression analysis was used to examine the prospective association of the psychosocial work characteristics, i.e., high job strain, low social support, effort-reward imbalance, and overcommitment, at baseline and LBP one year later.

**Results** At baseline, 270 (60.8%) subjects suffered from LBP. One year later, 208 provided information on LBP; 176 (84.6%) suffered from the persistence of LBP. Those with low social support at baseline showed a higher prevalence of persistent LBP than those without (89.9% vs. 80.0%). The adjusted odds ratio (95% confidence interval) of low social support at baseline for the persistence of LBP was 2.43 (1.01–5.87). Of 150 subjects who were free from LBP at baseline and provided information on LBP one year later, 45 (30.0%) experienced the onset of LBP. None of the psychosocial work characteristics was associated with the onset of LBP.

**Conclusions** In this prospective cohort study, low social support was not related to the onset of LBP but was associated with the persistence of LBP. High job strain, effort-reward imbalance, or overcommitment had no discernible effect on LBP.

**Pesticides**

**P-73 MORBIDITIES AMONG WORKERS OF AN ORGANOCHLORINE PESTICIDE INDUSTRY**

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**Introduction** Organochlorines pesticide industries are spread world over with large number of employees directly involved in the manufacturing, packing and transport of pesticides.

Prolonged durations of exposure to pesticides are known to adversely affect the health of those exposed, including neurological, endocrine, respiratory, haematological, skin, renal and liver diseases.

Considering the importance of the subject and lack of published evidence, this study was conducted with an aim of assessing morbidities among pesticide industry workers and to suggest suitable recommendations.

**Materials and Methods** The present study was conducted on 526 workers from a pesticide industry after obtaining ethical clearance. Selected health parameters were evaluated sociodemographic details, routine blood investigations (haemoglobin levels, HbA1c, lipid profile, liver function tests, renal function tests), ECG and audiometry findings.

**Results** A total number of 526 workers were evaluated, of which 499 workers (94.9%) were males and 27 (5.1%) were females. The mean age of the study population was 33.12 years.