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

O-202 A CROSS SECTIONAL STUDY TO ASSESS THE OCCUPATIONAL HEALTH HAZARDS AMONG FISHERWOMEN IN A METROPOLITAN CITY

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Introduction Fish trade is a traditional occupation that has been a livelihood for thousands in India with the majority of fish vendors being women. Security in all aspects is required for hygienic handling of fish, for the health and well-being of vendors, for consumer health and for enabling women to engage in such occupation in a dignified manner. Research regarding the working conditions and health status of fishing communities particularly in developing countries is scarce.

Materials and Methods It is a community based Observational Cross-Sectional study. Eight fish markets comprising of women fish vendors working for > 1 year (age >30 years) in a metropolitan city were selected. Cluster sampling method was used. Sample size is 225. Study period was 2 years. An Interview Schedule and Physical instruments were used. Chi-square test was used.

Results Majority of study subjects had Diabetes mellitus (24%) and were overweight (54.7%). 28.9% had addiction to smokeless tobacco. 55.1% of participants had musculoskeletal pain of which low back pain 69 (30.7%) was most common. There was a strong statistically significant association between mode of carrying boxes and Musculoskeletal Pain status, \( \chi^2(1) = 56.35, p < 0.001 \) and Cramer’s V, \( \chi^2(1) = 0.5, p<0.001. \) There was a highly strong association between duration of occupation and Musculoskeletal pain status, \( \chi^2(3) = 89.67, p < 0.001 \) and Cramer’s V = 0.631, p<0.001. 90.2% participants got injured of which majority had incisional wounds 124 (61.1%). 55.1% participants suffered from skin infections of which majority 28 (12.4%) had itching and redness of hands and legs. There was a statistically significant association between duration of occupation and skin infections, \( \chi^2(3) = 140.53, p < 0.001 \). There was a statistically significant association between use of gloves (63.2% participants) and skin infections, \( \chi^2(1) = 20.395, p < 0.001. \)

Conclusions Various measures including ergonomic solutions that women Fish vendors can take to reduce these health hazards needs to be addressed.

Intervention studies

O-203 IDENTIFYING THE NEED FOR GAMIFIED HABIT-BUILDING MOBILE APPLICATION FOR PCOS MANAGEMENT IN FEMALE STUDENTS IN JABALPUR, INDIA

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Introduction Polycystic ovary syndrome (PCOS) is a common endocrine disorder predominantly affecting women of reproductive age. India has witnessed a 30% raise in PCOS cases in the last couple of years. Contrary to surgical and pharmaceutical treatments, lifestyle modifications for women with PCOS are a more affordable first line of treatment, albeit maintaining positive behavioural changes can be challenging. Some studies support that gamification can have a positive impact on health-related behaviours. This paper aims to determine the need for gamified habit-building mobile application for PCOS management in girl students.

Methods 108 students of ages 18 to 32 years were considered for the 1st phase of the study. A questionnaire was prepared to conduct a non-experimental survey to gain knowledge about the prevalence of PCOS. In phase two of the study, 22 PCOS-positive students were selected from the cohort to understand their PCOS symptoms, management methods and use of mobile applications for well-being through semi-structured interviews.

Result Out of 108 participants, 26 students (24.07%) declared themselves medically diagnosed with PCOS. 22 subjects were interviewed for the next phase. Almost all (95.45%) mentioned using multiple mobile applications to manage their health conditions. 17 subjects (77.27%) acknowledged spending more than 30 mins a day playing digital games for entertainment. 20 interviewees (91%) agreed that elements of gamification like rewards, theme and social influence, might be useful for staying motivated to follow a healthy routine. All 20 subjects (91%) admitted that they would use a gamified application if available, for building and maintaining healthy habits to manage their PCOS condition.

Conclusion The study concludes that students with PCOS would use a PCOS-specific gamified mobile application to stay motivated to build and maintain healthy habits to manage PCOS.

COVID 19

O-204 INTENSIVE CARE UNIT PHYSICIANS’ CHALLENGES ON OCCUPATIONAL SAFETY AND HEALTH DURING THE COVID-19 PANDEMIC: A SCOPING REVIEW

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Introduction Demand exceeded capacity during COVID ‘surges’ in certain intensive care units around the world, resulting in avoidable deaths, workload pressures on staff, longer and more intensive care, and an increased risk of staff infection during intensive interventions. A limited number of studies examined intensive care physicians’ experiences and perceptions during the COVID-19 pandemic. This review summarises the available published articles related to the challenges faced by ICU consultants during the COVID-19 pandemic from an occupational safety and health perspective.

Material and Methods The PRISMA-ScR guidelines were applied to four online databases, including Medline, Scopus,
Abstracts

Web of Science (WOS), and PsycINFO, to identify articles published between January 2020 and October 2022. During the COVID-19 pandemic, ICU consultants’ experiences and perspectives on occupational safety and health as a primary outcome are examined.

Results The full texts 61 articles were then considered; 25 articles met the inclusion criteria, which include English language full texts of available articles, qualitative studies, and ICU consultants. Eight main themes emerged from the synthesis: COVID-19 infection, psychosocial distress, moral distress, physical distress, workplace violence, social stigma, structural and organisational issues, and risk communication. Phenomenological studies make up the majority of the qualitative research, followed by grounded theory studies and case studies.

Conclusions The global impact of the COVID-19 pandemic on intensive care services has been catastrophic. The key to maintaining ICU services during a pandemic is preparedness, adaptation, and mitigation. Consequently, it is essential to acknowledge the ICU consultant’s perspective in order to mitigate all potential ICU service disruptions. However, anticipating action for a variety of issues or challenges is best explored through a qualitative interpretive description study directed at ICU consultants with on-the-ground experience.

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

O-206 DETERMINANTS OF E-WASTE WORKERS’ INTENTION TO WEAR RESPIRATORY PROTECTIVE EQUIPMENT AT WORK IN HONG KONG

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Introduction E-waste workers in Hong Kong are exposed to more chemicals because more e-waste needs to be handled locally. However, studies suggested that many e-waste workers are unwilling to wear respiratory protective equipment (RPE) for different reasons. This study aimed to identify the determinants of e-waste workers’ intention to wear RPE in Hong Kong.

Material and Methods We recruited 109 e-waste workers from June 2021 to September 2022. A workplace RPE intention scale (WRPIEs) was developed based on validated Robertson’s RPE behavior intention model and Hong Kong Occupational Safety Culture Index. The WRPIEs was consolidated by exploratory factor analysis and further enhanced by confirmatory factor analysis. Multivariate linear regression was used to test the association between the identified domain factors and the intention to use RPE at work.

Results Most of the participants were aged over 40 years (76%), had middle school or below educational degrees (83%), wore RPE (94%) at work, and had increased time of wearing RPE after the Covid-19 pandemic (69%). Four domain factors (containing 17 manifest variables) were confirmed, including ‘subjective norms (SN)’, ‘supportive working conditions (SWC)’, ‘autonomy’, and ‘occupational safety and health’. The enhanced WRPIEs had good indices in internal consistency reliability (Cronbach’s alpha ranged: 0.78–0.94), good composite reliability (range: 0.79–0.95), and model fit (SRMR=0.05, RMSEA=0.03, CFI=0.99). Among the identified domain factors, SN (β=0.36) and SWC (β=0.30) significantly increased e-waste workers’ intention to wear RPE at the workplace.

Conclusions This newly validated WRPIEs scale can help capture Chinese e-waste workers’ intention to wear RPE. Results from this study also suggested that various stakeholders could enhance SN and SWC to facilitate workers’ willingness to wear PPE. (Acknowledgements: GRF/UGC-165056/13S & VCDFFII-136366853. Ethics approval: CREC 2020.039; *shelly@cuhk.edu.hk)

Exposure assessment

O-209 A QUANTITATIVE SOLAR ULTRAVIOLET RADIATION JOB-EXPOSURE MATRIX FOR THE GENERAL WORKING POPULATION OF EUROPE (UVR EUROJEM)

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Introduction Solar ultraviolet radiation (UVR) causes skin cancer, is a risk factor for cataract, and the primary predictor of serum vitamin D levels, but there are significant knowledge gaps in several health outcomes. Outdoor workers are exposed to high levels of solar UVR. The objective was to develop a European quantitative job-exposure matrix (JEM). This UVR JEM will be part of the EuroJEM for harmonised assessment of multiple exposure across Europe in EPHOR.

Materials and Methods A systematic literature search yielded 12 studies providing weekday arithmetic mean erythema weighted UVR levels obtained by personal dosimeters (n=223) expressed by the Standard Erythemal Dose (SED) for 49 occupations classified by the European version of the International Standard Classification of Occupations, ISCO-88(COM). Nine experts (Northern, Central and Southern Europe) rated