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VIOLENCE AND WORKING CONDITIONS: FINDINGS FROM A VICTIMISATION SURVEY IN BRAZILIAN MID-SIZED CITY

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Introduction The objective was to analyse the association of violence at work with work conditions.

Methods A questionnaire was applied to 1129 individuals. A correspondence analysis (CA) was performed to verify the association between working conditions and violence. It was done analysis of the association between the type of aggressor and the types of violence.

Results 19.0% were victims of violence at work. 50.6% were services workers and 58.3% came from the formal labour market. Individual external to the workplace committed 34.1% of violent acts. Boss committed 30.8% of verbal violence and 25% of psychological violence. 38.5% of verbal violence and 25% of physical violence came from the worker's family member. The CA found a greater association between moral violence and verbal violence in the work at transportation, storage, postal services, education and industry. Physical violence and racism were associated to domestic services and trade.

Discussion The bad working conditions were associated with higher occurrence of violence. These findings point the need for discussion of this issue in Brazil.

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THE EXTENT OF SILICA EXPOSURE IN BRAZIL, RUSSIA, INDIA, CHINA AND SOUTH AFRICA

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Introduction The risk to health for workers exposed to silica is well established, however the number of workers exposed is less well known, particularly in developing economies. In order to successfully address the issue of exposure and its effects an accurate assessment of the problem is required. The emerging economies of Brazil, Russia, India, China and South Africa (BRICS) are major geopolitical entities with diverse industrial economies, acting as indicators of development in their respective geographical areas, making them ideal as a focal point on which assessments may be focused.

Methods A narrative literature review was performed to provide information regarding the key industrial areas for exposure in each of the BRICS nations. Where available qualitative estimates on the key industries associated with silica exposure in each Nation were determined.

Results Due to similarities in the economic and industrial landscape of the BRICS mining was the most common exposure cause, with high levels also seen in construction and manufacturing. Neither detailed nor approximate records of exposure were available from any of the Nations, although non-industry specific estimates could be accessed for each Nation with the exception of Russia, where very little published information was available.

Conclusion Future efforts to reduce exposure are dependent on an accurate assessment and recording of exposure levels. Currently there is very little large-scale empirical data available from any of the Nations assessed though with the exception

of Russia all of the Nations profiled have some publically available records through both academic research and governmental monitoring. From this review it is apparent that further work is required by industry and governments to provide and publish accurate data regarding silica exposure.

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EPIDEMIOLOGICAL ANALYSIS CORRELATED WITH SOCIOECONOMIC AND PRODUCTION ASPECTS OF A FACTORY IN SOUTHERN BRAZIL

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Introduction Absenteeism generates several consequences in the manufacturing process. Its reduction is a challenge for any manager. An important step for its understanding, and subsequent reduction and control, is to carry out the analysis of the medical certificates handed by the missing employees. Based on this premise, this paper aims to present the epidemiological profile of 2016 of a company in the automotive sector of the South region of Brazil, as well as the programs and actions taken from these data.

Method An organisational, cross – sectional study developed through data and indicators obtained through the analysis of medical certificates submitted by employees who were absent from work by health reasons in 2016.

Results A total of 4371 medical certificates were observed, impacting 13409 days of work lost, in a population that varied around 5380 employees. On a monthly measure, 363.9 certificates were obtained, delivered by 238.2 employees, which impacted 1117.9 days lost and 7445.33 hours lost. With these scores, it was possible to define the Frequency Index by Operators (IF2) of 4.42, the Medical Certificate Frequency Index (IF1) of 6.75 and the Severity Index (GI) of 0.8. Further on the most frequent causes, firstly find the diseases comprised by ICD-10 M, followed by Z, J, S-T and K. When the criterions are the lost days, remains the ICD-10 M followed by Z, S-T and F.

Discussion The results are similar to the data found in the literature and allow a good correlation with the socioeconomic aspects of the country. The production data are consistent with the variation in the pace of work and entry of new projects. Health promotion in a comprehensive way contributes to the biopsychosocial well-being of employees, as well as their satisfaction and working commitment.

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ASBESTOS-RELATED DISEASES IN CURITIBA: THE BRAZIL-ITALY PROJECT

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Introduction Brazil is one of the major producers of chrysotile, a well-known carcinogen, but few studies evaluated its impact locally. For these reasons, a joint project, supported by CAPES, Brasilia, was started between the Federal University of

Paraná (UFPR), Curitiba, Brazil, and the Fondazione IRCCS Ca' Granda, Milan, Italy.

Methods The objects of the joint project include:

- a cohort mortality study among asbestos–cement workers in the Curitiba Metropolitan Region;
- the implementation of a registry of malignant mesothelioma (MM) in Curitiba based on the Italian model.

MM cases are already collected (1998–2012) in the Curitiba Population-Based Cancer Registry (RCBP); but information on asbestos exposure is unavailable and diagnostic accuracy of MM has never been evaluated. For this reason, we translated the Italian standardised questionnaire on asbestos exposure and are implementing the database for MM cases in Portuguese. Clinical documentation of adult subjects with ICD-10 codes C45 (mesothelioma), C38 (mediastinal and pleural cancers), and C48 (peritoneal cancers) in the RCBP will be examined to evaluate diagnostic accuracy.

Results The questionnaire has been preliminarily tested on 40 workers in Curitiba. The software has been translated and adapted. Review of clinical records of 269 subjects is in progress; we identified about 20% of death certificate only cases. For the cohort study, we obtained lists of workers employed since the beginning of production in three asbestos-cement factories. We identified about 4000 workers, 2300 with valid date of birth.

Conclusion For the cohort study, we are exploring the existence of additional sources to complete missing information and contacting relevant institutions to perform the mortality follow-up. Within 2018 we foresee to have the questionnaire ready for use, the software implemented, and the clinical documentation review completed. This international collaboration is an important step towards a better assessment of the impact of chrysotile use in Brazil.

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NIGHT SHIFT WORK, BODY WEIGHT GAIN AND OBESITY OCCURRENCE: PRELIMINARY RESULTS WITH 3 YEARS OF FOLLOW-UP

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Introduction Previous studies in Asia developed areas showed inconsistent findings on the association between nightshift work and obesity occurrence, and there has been no study in Chinese. This study aims to examine the association between nightshift work, body weight gain and obesity occurrence in a Chinese night shift cohort after 3 years of follow-up.

Methods We recruited 5256 male workers from 6 companies in China in 2013. We used standardised questionnaire to collect participants' information on occupational history of shift work. Night shift work was defined as ever worked in a working schedule during 00–5 am at least once per month for no less than one year. Anthropometric parameters were measured using standard medical protocols. All participants were followed up till the end of 2017. Multiple logistic regression analysis was conducted to evaluate the association between night shift work and overweight (BMI ≥ 25), obesity (BMI ≥ 30) and BMI gain status.

Results We only included 492 male workers in this report, as the data of other participants have not been input whilst the overall results from entire cohort will be presented in ICOH 2018. The mean age of night shift work and daytime workers is comparable (30 vs 29 years). Compared with the daytime workers, slightly more night shift workers were current smokers (25.1% vs 23.7%) and alcohol drinkers (28.1% vs 22.2%), but fewer had vigorous physical activity (29.9% vs 59.4%). More nightshift workers than daytime workers slept less than 8 hours per night (60.5% vs 34.8%) but the proportion of working longer than 55 hours per week was substantially higher (6.6% vs 3.7%). After three years of follow-up, night shift workers showed more BMI gain than the daytime workers (1.45 ± 1.10 vs 1.32 ± 1.09). More night shift workers with large body mass index at baseline tended to retaining in the same category of overweight (BMI ≥ 24 kg/m²) status with odds ratios of 1.49 (95% CI: 0.95 to 2.33), and stayed in the same category of abdominal obesity with OR of 1.34 (95% CI: 0.86 to 2.11). More night shift workers developed abdominal obesity from normal body size during 3 year period of follow-up and the risk of abdominal obesity was 1.43 (95% CI: 0.75 to 2.73), but there was no statistical significance.

Conclusions This study provided preliminary evidence to on a possible link between nightshift work and obesity occurrence or body weight gain in Chinese male workers; however, these findings would be verified in a larger dataset of all 5256 workers.

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THE PREVALENCE AND RISK OF MUSCULOSKELETAL DISORDERS IN DENTAL TECHNICIANS IN SOUTH AFRICA

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Introduction Musculoskeletal disorders (MSDs) affect the health, productivity and careers of the working population. Disorders of the musculoskeletal system are some of the most common occupational diseases and injuries. Dental technicians are at risk of MSDs as much as other members of the dental professionals as a result of their daily activities which are labour intensive and involve manual work. The risk factors for MSDs among dental professionals are multifactorial.

Methods Quantitative research using a cross sectional correlational survey design was adopted. A purposive sample of 79 technicians was used with 72 valid questionnaires available for analysis. A modified Nordic musculoskeletal questionnaire was used to collect data. Statistical analysis, using SPSS 23 included frequencies, chi square test of independence, independent samples t-test and Pearson's correlation.

Result The 12 month prevalence of MSDs for dental technicians in South Africa was high (90%). For the different body regions, the prevalence ranged from 59.7%–68.1% and the body parts commonly affected are the neck (68.1%), shoulders (59.7%), wrists/hands (68.1%), upper back (68.1%) and lower back (68.1%). Factors that were identified to be strongly associated with MSDs among dental technicians in South Africa are age, years of practice, standing and vibration.