the Asbestos and Kgalagadi Relief Trusts that compensate qualifying miners and environmental claimants.

**Results** Women comprised 2.47% (n=394) of 15 940 cases. The women were older (56.6±17.11 years) than men (53.63±14.44 years) and had shorter mining-related exposures (7.21±7.71 versus 18.18±18.20 years). Most women had asbestos mining (46.19%) or environmental (14.72%) exposure; 87 (22.08%) were gold and 37 were platinum (9.39%) miners. Among men, there were 64.28% gold, 18.47% platinum and 5.55% asbestos miners, and 0.30% had environmental asbestos exposure. Disease proportions in women and men were: emphysema, 16.00% and 27.73%; silicosis, 3.30% and 23.13%; tuberculosis, 17.77% and 23.13%; lung cancer, 4.31% and 3.67%; asbestosis, 16.75% and 4.28% and mesothelioma, 17.26% and 2.00%.

**Discussion** The burden of asbestos-related diseases was high in women. The few cases of silicosis in women are an alert to high silica dust exposures. The study highlights the importance of autopsies for disease diagnosis, and education of women on mining and environmental OLD-related risks and their right to access statutory compensation.

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**POWERFUL WOMEN’S HANDS**


**Introduction** In 2016 a research on musculoskeletal disorders and gender was completed, especially on the capacity of women to perform repetitive tasks involving a prehensile effort of less than 15 n or manual loads of less than 50 g per repetition, in relation to male workers.

**Methods** The sample was formed by 150 women and 150 men from three industrial plants located in Valencia (Venezuela), Santa Cruz (Venezuela) and Tijuana (Mexico) in fan, snacks and hydraulic connections manufacturing sectors. The study correlated three variables: job risks (biomechanics: repetition and postures, psychosocial: quantitative psychological requirements), health valuation and average labour productivity.

**Results** Women had a lower biomechanical involvement in upper limbs in the presence of a similar exposure to male, effort of less than 15 n or manual loads of less than 50 g per repetition, in relation to male workers. Women had a lower biomechanical involvement in upper limbs in the presence of a similar exposure to male, effort of less than 15 n or manual loads of less than 50 g per repetition, in relation to male workers.

**Conclusion** The study does not show a greater biomechanical resistance of the female articular systems in relation to the masculine ones, but it does suggest a greater ‘muscular intelligence’, which acts as a protective factor and enhances productivity. From a macroergonomic point of view, the female population was more resilient, which allows maximising the learning curve, increasing labour availability and minimising turnover. These protective factors can be incorporated as part of a plan for the prevention of the ergonomic and psychosocial risks from which both genders can benefit.

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**INTEGRATED HEALTH-BASED RISK ASSESSMENT FRAMEWORK FOR SINGAPORE’S WORKPLACES**

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**Introduction** Despite significant global improvement in occupational health and safety over the past few decades, workplace deaths and injuries are still occurring. At the same time, many countries are experiencing an increasing prevalence of chronic diseases due to ageing population and lifestyle factors. Currently, risk assessment does not commonly take into account employees’ personal health risks. Our paper aims to review the association between chronic diseases and risk of workplace injuries, and recommend a health-based risk assessment.