Poster Presentation

Psychosocial

0430

FEMALE WORKERS SUFFERED HIGHER PSYCHOLOGICAL SYMPTOMS AFTER OCCUPATIONAL INJURIES THAN MALE WORKERS

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10.1136/oemed-2017-104636.355

Introduction This study aimed to examine the prevalence rates of psychological symptoms and risk factors between female and male workers at 12 months after their sustaining occupational injury. Demographic and injury-related risk factors for psychological symptoms were evaluated.

Methods Our study candidates were injured workers in Taiwan who were hospitalised for 3 days or longer and received hospitalisation benefits from the Labour Insurance program. A self-reported questionnaire including the Brief Symptom Rating Scale was sent to workers at 12 months after injury.

Results A total of 1233 workers (response rate 28.0%) completed the questionnaire, including 356 women and 877 men. A higher percentage (30.1%) of women had elevated BSRS-5 score of 6 or higher than men (22.5%). The risk factors for elevated psychological symptom scores for female workers were lower education level (odds ratio, OR=1.8, 95% confidence interval, CI=1.1–3.0), main income contributor of the household (OR=1.8, CI=1.1–3.0), severely affected physical appearance due to injury (OR=2.8, CI=1.3–5.9), and having adverse life event after injury (OR=2.0, CI=1.1–3.6) after mutual adjustment. Whereas the risk factors for elevated psychological symptom scores for female workers were loss of consciousness after the injury (OR=2.0, CI=1.3–3.1), severely affected physical appearance due to injury (OR=3.7, CI=2.3–6.0), having adverse life event after injury (OR=2.5, CI=1.6–3.8), not return-to-work (OR=3.2, CI=2.0–5.1), and reduced salary as compared to that before injury (OR=2.4, CI=1.3–4.1).

Conclusions After occupational injury, women suffered from higher rate of psychological symptoms. Risk factors were different between men and women who sustained occupational injuries.

Poster Presentation

Methodology

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HOW CAN WE AVOID RE-IDENTIFICATION RISK IN BIG-DATA ANALYSIS? PROPOSITION OF A NEW STRATEGY OF GEOGRAPHICAL SUBDIVISIONS USING GIS TOOLS

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10.1136/oemed-2017-104636.356

In order to look for relevant signals for detection of emerging occupational diseases among agricultural workers, we developed a data-mining approach applied on health-insurance data (see C. Maugard communication). Applied on the databases of the French dedicated social security system (MSA), this approach first aims to look for associations between chronic diseases and occupational activities (recorded as activity sector codes in the MSA contributors database).

To avoid re-identification, workers location has not been provided, although it is recognised as closely related to cultural practices. Therefore, it was not possible to directly estimate individuals involvement in specific cultures (through existing parcel register and agricultural census for instance) and finally use cultures x pesticides to estimate pesticides exposures.

To deal with this issue, we used an innovative approach to cut off the national territory into "meshes", to obtain a geographical variable accurate enough to assess cultures types while respecting a sufficient number of agricultural workers per meshes to avoid re-identification. This approach consists of an iterative process dividing each geographical unit into 4 parts while respecting a minimum threshold of workers in each mesh. The process continues until each mesh contains a homogeneous number of individuals. Taking into account the prevalence of the chronic diseases of interest, and typology of cultures, we defined a minimum number of individuals per mesh (n=1500). This methodological development allows us to get indirect information about location by MSA at a level interesting to identify cultures (proxy for pesticides use), but restricting the possibilities of individuals re-identification.