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THE JAPANESE VERSION OF THE WORKPLACE PERMA-PROFILER: A VALIDATION STUDY OF THE MEASURE FOR WELL-BEING AT WORK

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Introduction The importance of well-being of workers has recently been recognised, since well-being is protective for mortality, independent of negative factors. Although well-being at work is also discussed intensively, no multi-dimensional measure of well-being at work has been developed in a non-western country, such as Japan. The purpose of this study was to investigate the reliability and validity of the Japanese version of the Workplace PERMA-Profiler, which was developed according to a PERMA model, proposed by Seligman (2011) among Japanese workers.

Methods A baseline Internet-based survey was conducted of 310 Japanese workers and part of the respondents (100) were surveyed again at 1 month later. The Workplace PERMA-Profiler (23 items, 3 items per PERMA domain and 8 additional items) was translated according to the international guideline. Job and life satisfaction, work engagement, psychological distress, work-related psychosocial factors, and work performance were also measured for testing the convergent validity. Cronbach's alphas, Intra-class Correlation Coefficients (ICCs), the Standard Error of Measurement (SEM), and the Smallest Detectable Change (SDC) were calculated, and correlational analyses and confirmatory factor analysis were conducted.

Result A total of 310 (baseline) and 86 (follow-up) workers responded and were included for the analyses. Cronbach's alphas and ICCs for scale scores ranged from 0.75 to 0.96. the SDC of the scale ranged from 1.81 to 2.56. Moreover, the scores of the total and 5 factor scales showed moderate-to-strong correlations with job satisfaction, psychological distress, and work-related factors. A 5-factor theory-based model showed not excellent but marginal acceptable fit ($\chi^2(80) = 351.30$, CFI=0.892, TLI=0.858, RMSEA=0.105, SRMR=0.051).

Discussion The Japanese version of the Workplace PERMA-Profiler showed acceptable levels of reliability and validity. This measure could be useful to assess well-being at work and promote well-being research among Japanese workers. However, concepts and measures for well-being at work should be investigated in further studies.

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PREVALENCE OF GAMBLING IN THE WORKFORCE: A CROSS-SECTIONAL STUDY IN BRITTANY, FRANCE

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Introduction To date, very few studies about links between work and addictive disorders concern behavioural addictive disorders such as gambling. Such behaviours may be adaptive strategy for unsatisfied workers. The common physiopathology of addictive disorders allows us to hypothesise that it is possible that such troubles at work could promote gambling. Our aim was to evaluate the prevalence of gambling among workers and its links with work.

Patients and Methods We performed a descriptive cross-sectional monocentric study among all workers who consulted one physician between November 2016 and April 2017, from an occupational health service in Brittany, France. The first step was to ask whether they have gambled during the last year and if it was related to their occupation. The second step was a screening for risky gamblers (using the 'Lie or Bet' questionnaire) among these and then to assess more precisely the severity (using the *Indice Canadien du Jeu Excessif*, ICJE questionnaire).

Results Among 410 workers who consulted the physician, 138 (33.7%) reported gambling during the past year and 12 (2.9%) considered themselves their gambling experience as related to work. 36 (8.8%) workers were screened as risky gamblers. Among these, the evaluation with the ICJE questionnaire reported 9 (2.2%) workers with no risk, 14 (3.4%) with a low risk, 13 (3.2%) with a moderate risk and no excessive gamblers.

Discussion Addictive disorders at work are often reduced to the question of substance use disorders, focusing on security aspects. But vulnerability factors are similar to behavioural addictive disorders, including psychosocial risk factors at work. Moreover problem gambling can easily be hidden in a social and professional life. As problem gambling has social repercussions and could be related to work, it should be a topic of interest for occupational health practitioners.

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MENTAL STRESSES AND STRAINS IN CONSTRUCTION SECTOR EMPLOYEES

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Introduction In 2014, the mental and behavioural disorders diagnosis group accounted for 79 mill. days of incapacity to work and 43% of retirements due to partial disability (Health and Safety at Work Report 2014). In addition to individual dispositions and serious incidents, stresses in the working environment are other causes considered. Among other things, due to the acceleration of manufacturing and communication processes and increasing mobility requirements, the latter are increasing overall. The BG BAU ASD surveyed employees in the construction sector to find industry-specific approaches to preventing mental stress.

Methods In spring 2016, the BG BAU ASD surveyed 5658 employees in the construction sector nationwide on mental stresses and strains and on their own quality of life as part of routine check-ups. Participation in the survey was voluntary. As the survey was of the construction sector, men accounted for 93% of participants. Accordingly, only the results of the

5286 men are presented. External data and older internal data are also presented as a comparison.

Results 56% of the men were under 45 years old and 44% were between 45 and 65 years old. Sufficient numbers of employees from the building construction, civil engineering and interior construction sectors took part in the survey. Approx. 30% have management responsibilities. Of the 16 stresses participants were asked about, the most common by order of occurrence: intense concentration, tension (52%), high responsibility (56%) and time or deadline pressure, rushing (61%). 28% described their overall health as excellent or very good, with a significant age discrepancy (≤ 24 : 54%; ≥ 55 : 9%). 19%/14% reported that they accomplished less at work or in everyday tasks due to their physical or mental health.

Discussion The results show that in addition to familiar physical stresses like dust, noise and lifting and carrying heavy loads, construction work also involves mental strains that are not sufficiently recognised. Accordingly, this is not sufficiently prioritised in prevention measures in practice, also due to the complexity of the subject matter. The results offer sector-specific arguments and will help provide focused advice to employees and entrepreneurs by company doctors.

762 MENTAL HEALTH MORBIDITY AMONG MEDICAL AND SURGICAL ONCOLOGY RESIDENTS

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Introduction Oncology clinicians represent stressful occupational category and suffer mental health morbidity. They are exposed to the clinical stressors and emotional demands related to care of cancer patients and their families, and feel worried about their career future. The present study was conducted to assess some aspects of mental health among medical and surgical oncology residents.

Methods This survey was conducted to assess some mental health aspects among residents, who have at least 1 year of work experience at both medical and surgical oncology departments. All participants were asked to complete a questionnaire. The questionnaire was based on items that included General Health Questionnaire (GHQ-12) to assess psychological distress; Symptom Checklist for Depression (SCD) to measure depression; and questions about demographic and occupational data. Logistic regression was used to assess the association between potential predictor variables of GHQ and SCD, results were considered statistically significant when p-value less than 0.05

Results Thirty seven physicians responded (response rate 91.3%). Levels of psychological distress and depression were measured by GHQ and SCD. Eleven physicians (29.7%, 95% CI: 17.3–45.7) scored >3 on GHQ indicating psychological distress, and 37.8% (95% CI: 24.1 to 53.9) scored ≥ 1.5 on SCD indicative of depression. Suicidal thoughts were reported by 3 residents. The effect of occupational stress was the main predictor of both psychological distress and depression.

Conclusion Stress needs to be managed among physicians in such specialties to have a satisfactory professional life and high job productivity.

767 HEALTHY ENTERPRISE STANDARD (HES) EVALUATION: ANALYSING EFFECTS AND COST-BENEFIT RESULTS WITH A QUALITATIVE EVALUATION OF IMPLEMENTATION PROCESS

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Introduction The *Healthy Enterprise Standard (HES)* is related to a certification program in Québec (Canada) and targets four areas: *Lifestyle, Work-life balance, Workplace environment and Management practices*. The aim of this study was to open the black box of intervention and analyse the implementation process in order to interpret effects of HES on health and workplace risk factors, and cost-benefit results from the employer's perspective.

Methods We used a before-after design for a two-case analysis with a mixed-method approach. In two organisations from different sectors, quantitative data were collected with a questionnaire among all active workers before the standard's implementation (T1 organisation A=186, organisation B=1081) and 25–31 months after (T2 A=190, B=975). Psychosocial work factors (demand-control-support and effort-reward imbalance validated scales), psychological distress (validated Kessler-6), and work-related musculoskeletal problems (WMSR, 4 items from the Nordic Questionnaire) were measured as well as intervention exposure. Intervention costs data, presenteeism and absences data were collected. Qualitative data through interviews and focus groups in both organisations were recorded, transcribed and coded in order to perform thematic analysis a posteriori.

Results The prevalence of psychosocial work factors (low social support, low reward) at T2 was lower amongst participants exposed to intervention in the *Management practices* area in both organisations. WMSR was lower for those exposed to the *Workplace environment* area in B. The average cost per worker per year was very similar for A and B whereas distribution of cost categories differed. The net benefit was highly positive in B and negative in A. Implementation analysis showed that each area of HES was associated to different types of facilitators and obstacles. Cyclical factors, communication and management involvement differed between A and B.

Discussion These results show that the implementation process analysis provides interesting insights into understanding effect and cost-benefit results and improving OSH interventions.

770 A COMPARATIVE EUROPEAN ANALYSIS OF THE LINK BETWEEN WORK STRESSORS AND WORKER OUTCOMES

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Introduction Given the changing nature of employment, including the long term shift from manufacturing and agriculture to the service sector, an increasing proportion of the