Introduction Mental illnesses are common among general population. They are responsible for decreased quality of life, work absenteeism, premature deaths and increasing costs for health systems. Mental diseases can be caused or aggravated by occupational factors and might increase the risk of accidents in the mining industry, if they are not properly detected and treated. The aim of this study was to estimate the association between distress and psychosocial risk at work in a mining company in Valparaiso region, Chile.

Methods A cross-sectional study was conducted during 2014–2015 in Andina Division, located in Los Andes, Chile. 343 mining workers were invited to participate (response rate 99.7%), classified according to work-tasks into operative (n=253) and administrative workers (n=79). The adapted survey of Working Conditions and Health in Latin America, GHQ-12 (Goldberg’s health questionnaire) of mental symptoms and ISTAS-21 questionnaire of psychosocial risk were applied. The main outcome was distress (GHQ-12 ≥5). Descriptive, bivariate (chi² test) and logistic regression (multivariate) analyses controlling for potential confounding factors were performed.

Results Prevalence of distress was 23.6%. Sensitivity analysis (GHQ-12 ≥7) showed a prevalence of potential mental illness of 8.6%. No differences were observed between workers from main company and subcontractors or between operative and administrative workers. Not being able to concentrate (43%), feeling under stress (43%) and losing much sleep (35%) were the most frequently reported. In bivariate analysis, a statistically significant association was found between the presence of distress and high strain jobs (27.5%; p=0.02). No statistically significant association was found between low job security or type of job and distress. In logistic regression analysis, workers in high strain jobs (OR:2.02; 95% CI: 1.10 to 3.71) were at increased odds of distress, compared to low strain jobs.

Discussion High strain jobs might be related to distress in Chilean miners. The causes declared for distress could increase the risk of accidents in mining industry.
Reward could damage health with stress repercussions. A high level of organisational justice has been linked to better mental health (Elovainio, et al., 2002). Results agree with Rodriguez-Martinez (2011) and Rodriguez-Bracho (2013), regarding exposure to emotional demands, predictability and leadership quality. Avendaño, et al (2009) found that relationships quality with superiors is important to face daily stressors. This may indicate that company leaders lack of teams’ surveillance, with insufficient information to carry out the work expressed by Predictability. However, Colleagues/Superiors Social support, Clarity/Conflict roles and group feeling, were in favourable conditions. Factors as work compensation, social capital, emotional demands, leadership and predictability, were with greater consequences in mental health and employers must use important resources to manage daily stressors.

Introduction

Due to the consequences of globalisation and digitalization on working conditions, psychological risk factors at work rise in importance. Prevention strategies for designing working conditions that maintain mental health and work functioning are needed. Only few companies worldwide have implemented psychological risk management regularly. One reason might be the lack of suitable measurement tools. Although, many researchers developed reliable assessment instruments for psychosocial stress at work, most of them fail in helping redesigning working conditions on the technical or organisational level. With the help of existing measurements mainly personal prevention actions are possible. Therefore an instrument is needed that measures the objective work factor and not the subjective stress of the employees.

The aim of this investigation is to develop and validate a practical online assessment of psychological risk at work according to scientific standards.

Methods

From November 2015 to March 2016, psychological work factors that have impact on mental health were determined by means of literature searches, workshops and telephone interviews with experts. An online assessment was developed between April 2016 and September 2016. From October 2016 to March 2017 risk analyses were carried out by experts and employees on the basis of 10 pilot companies (about 2900 respondents).

Results

The online assessment provides statements on the work content, work organisation, social relations and the work environment. With 48 items, psychological work factors with regard to the task (not the person) are recorded with value-neutral formulations. The response scale is a 4-step frequency scale. First analyses prove the objectivity, reliability and validity of the instrument.

Conclusion

The online assessment contains psychological work factors that can be generalised to any work tasks. It might be used across all sectors. The instrument measures psychological risk at work economically and largely independent of the individual response.