Introduction mining workers are known to be exposed to ergonomic and psychosocial risks, which are related to musculoskeletal disorders. The aim of this study was to determine the prevalence of work disabling low-back pain during the last year among Chilean copper miners, and its relation to ergonomic and psychosocial factors.

Methods a cross-sectional study was conducted during year 2014 in Los Andes, Chile, with 343 miners (response rate 99.7%), classified according to tasks into operative (n=253) and administrative workers (n=79). The adapted survey of Working Conditions and Health in Latin America, Nordic questionnaire of musculoskeletal pain and ISTAS-21 questionnaire of psychosocial risk were applied. The main outcome was disabling neck and/or back pain in the last 12 months (pain that did not allow performing work normally). Descriptive, bivariate (chi² test) and logistic regression (multivariate) analyses controlling for potential confounding factors were performed.

Results from all male workers considered, 94% had complete secondary/higher education. Prevalence of disabling neck and/or back pain in the last year was significantly higher in operative than administrative workers (14.9%; p=0.01), and no difference was observed between workers from the main company and subcontractors. In bivariate analysis, a statistically significant association was found between the presence of pain and medium/lower job security (17.8%; p=0.04) and high strain jobs (29.3%; p<0.001). No statistically significant association was found between high ergonomic risk and musculoskeletal pain. In logistic regression analysis, workers in high strain jobs (OR 3.13; 95% CI: 1.20 to 8.18) were at increased odds of disabling back pain, compared to low strain jobs.

Discussion high strain jobs might be related to disabling back pain in Chilean miners. Psychosocial factors could have even a greater importance than ergonomic factors in the development of musculoskeletal pain in Chilean miners. Psychosocial risks surveillance could be as important as ergonomic factors in the prevention of disabling musculoskeletal pain.