

## ABSTRACT

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Study Program: Public Health

Title : *Factors Associated with Complaints of Musculoskeletal Disorder (MSDs) on PT Sanding Sumber Anugrah Pipe Fitter Workers in the PT SPV Purwakarta Project in 2020*

*Complaints in the musculoskeletal system are complaints on parts of the skeletal muscle that receive statistical loads repeatedly and for a long time, complaints in joints, ligaments and tendons ranging from very mild to very painful complaints. Based on the results of a preliminary study on Pipe Fitter workers at PT Sanding Sumber Anugrah PT SPV Purwakarta Project, the results obtained from the NBM questionnaire show that out of 18 out of 20 workers (90%) have complaints of MSDs. This research used a quantitative approach with cross sectional design and total sampling technique with a sample size of 50 respondents. This study used univariate, bivariate and multivariate analysis using the chi-square test, fisher exact test, and multiple logistic regression test. This research was conducted in April – August 2020. The highest proportion of univariate results was found at age  $\geq 30$  years (70%), smoking habit (82%), risk of odd work posture (80%), duration of work  $\geq 2$  hours / day (84%), risk of workload (60%), and tenure  $< 5$  years (56%). The bivariate results show that there is a significant relationship between age ( $P$ -value = 0.011,  $PR = 1,837$ ), odd work posture ( $P$ -value = 0,000,  $PR = 9,000$ ), duration work ( $P$ -value = 0.002,  $PR = 3.333$ ), and workload ( $P$ -value = 0.030,  $PR = 1.576$ ) with complaints of musculoskeletal disorders (MSDs) on Pipe Fitter workers at PT Sanding Sumber Anugrah PT SPV Purwakarta Project in 2020. The multivariate results show that odd work posture is the most dominant variable affecting MSDs complaints. Based on this, the researchers suggest creating a muscle stretching program every 1-2 hours for 5 minutes, evaluating the open recruitment system for pipe fitter workers aged  $\geq 30$  years, the existence of shifting time, and rehabilitation of workers who experience complaints of MSDs.*

**Key words:** *complaints of musculoskeletal disorders (MSDs), ergonomics, pipe fitter, odd work postures, multivariate.*

*6 Chapters, 134 pages, 15 pictures, 33 table lists, 17 appendices.*

*Reference: 78 (1998-2020)*