

# Mine Workers' Psychology

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**Abstract.** The roster work system, which has day and night working hours for mine workers, can cause occupational stress. This study aims to examine the quality of working life and occupational stress. This is an observational research with cross sectional design. The samples were 107 workers based on probability by using simple random technique. The data instrument was a Likert scale, while the data analysis was used Pearson and linear regression. The average working life quality score was 61,71 covering aspects of job restructuring, reward system, labor force participation and occupational environment. The average occupational stress score was 55,48 which included biological stress, psychological stress and social stress. The test results show the effect ( $p = 0.012$ ) with a correlation of -0,245 that the quality of work life is good, so occupational stress will decrease. It is expected that the work system of preventive assessment of worker health will be improved so that work productivity can be high.

**Keywords :** *psychology, working quality, occupational stress*

## 1. INTRODUCTION

Indonesian mining provides a high product sale value with the support of a large workforce and related sectors. The large number of workers is due to mining which is the job market with the highest wages, namely the average labor wage is close to 5 million. Mining in production mostly uses roster shifts. Roster shifts can adversely affect workers' health if not managed properly, because they have day and night working hours and use off days to work [1].

Mine workers have a safe work environment with good standard work procedures. This condition does not guarantee that work productivity will remain good if the quality of work life is neglected. A good quality of work life in the company makes workers comfortable and will increase productivity. The quality of work life is related to ethics in an institution [2]. Job satisfaction, job involvement and job security are 70% related to the quality of work life [3], while the indicators include job restructuring, labor force participation, reward system and occupational environment [4].

Occupational stress on mine workers can occur due to roster shifts. Nurses who use roster shifts have a mild stress prevalence of 57% [5]. Occupational stress includes biological, psychological and social stress. The objective of this study is to analyze the quality of work life and occupational stress.

## 2. METHODS

### 2.1. Research Design

This is an observational study with a cross sectional approach. The population was construction workers in the mining area with a sample of 107 people and taken by using random sampling.

### 2.2. Statistical Analysis

The data was obtained through a questionnaire instrument with a Likert scale. The work life quality questionnaire included job restructuring, labor force participation, reward system and occupational environment. Meanwhile, the occupational stress questionnaire included biological stress, physical stress and social stress. The data was analyzed by using Pearson test and linear regression.

## 3. RESULT

The relationship between work quality and occupational stress is described in the indicators. Table 1 shows a correlation between job restructuring and psychological stress of -0,200 with a P value of 0,039, while biological stress and social stress have an insignificant correlation. The occupational environment also has a correlation with biological stress of -0,236 ( $P = 0.014$ ) and psychological stress of -0,355 ( $P = 0.001$ ).

The results of the linear regression of work life and occupational stress (table 2) show a regression coefficient of 0,535 and a regression determination of 5%.

**TABLE 1.** The relationship between quality of working life and occupational stress

Variable		r	P value
Job Restructuring	Biological Stress	-0.081	0.404
	Psychological Stress	-0.200	0.039*
	Social Stress	-0.129	0.185
Reward System	Biological Stress	-0.098	0.314
	Psychological Stress	-0.163	0.093
	Social Stress	-0.066	0.500
Labor Force Participation	Biological Stress	-0.094	0.337
	Psychological Stress	-0.180	0.064
	Social Stress	-0.167	0.085
Occupational Environment	Biological Stress	-0.236	0.014*
	Psychological Stress	-0.355	0.001*
	Social Stress	-0.155	0.112

**TABLE 2.** The result of linear regression between working life and occupational stress

Regression Coefficient (B)	-0.535
Standard Error	0.210
Correlation (Beta)	-0.242
T Test	-2.554
P Value	0.012
F (simultan) Value	0.012
R.A. Square	0.050

#### 4. DISCUSSION

The correlation between job restructuring and psychological stress is very low, namely 0.2, with the interpretation that the better the job restructuring, the psychological stress can be reduced. Effective work organization by minimizing interventions can reduce occupational stress [6]. Employment opportunities to develop themselves through training, innovation or direction before work can create a happy atmosphere [4]. The occupational environment has a low correlation with biological stress and psychological stress, namely 0,24 and 0,35, with a significance <0,005. The interpretation of a good or comfortable occupational environment can reduce biological or

psychological stress. A occupational environment that provides a sense of security, cleanliness, health and guarantees work safety and a supportive situation can create a good quality of work life.

Work quality life has an influence on work stress by 0,54 with a determination value of 5%, thus it indicates that occupational stress 95% is determined by other factors. Factors that influence occupational stress include fatigue, organizational management, career development, working hours and shifts, social and personal relationships, equipment and individual abilities.

#### 5. CONCLUSION

The quality of work life affects occupational stress. The quality of work life is good, so occupational stress will be reduced. It is expected that the working system of preventive assessment of workers' health will be increased so that work productivity will be high.

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