



Research Article

Relationship Between Individual Factors And Work Factors With Work Stress At The Harbor Mobile Crane Operator (HMC) At PT. Pelabuhan Indonesia (Persero) Sub Regional III East Java

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ABSTRACT

The implementation of K3 cannot be separated from the existence of Occupational Diseases and Occupational Accidents. One of the jobs that are at risk of experiencing Occupational Diseases and Occupational Accidents is the Harbor Mobile Crane Operator. One of the diseases caused by work is work stress. The purpose to analyze the relationship between individual factors and work factors on the work stress of Harbor Mobile Crane operators at PT. Pelabuhan Indonesia (Persero) Sub Regional III East Java. The research methodology used is an analytical survey research with a Cross Sectional approach. The primary data was collected by taking the sample through the DASS 21 questionnaire while the secondary data through the company profile provided by the Branch Manager of PT Pelabuhan Indonesia (Persero) Sub Regional III East Java. The research sample was 26 operators which were taken from the entire population. Data analysis used chi-square test for nominal data and Spearman correlation test for ordinal data. The results showed that most of the operators experienced is normal and a small portion experienced heavy work stress. Factors related to operator work stress, namely, age, marital status, education level, work period and shift work. The results of relationship test of marital status showed a relationship with work stress and the others factor is not showing relationship with work stress. The conclusion of the study shows that there is a relationship between individual factors with operator work stress. From the results of the study, companies are advised to give a counselling session to the unmartial operators to reduce work stress operators.

Keywords: Individual factors and work factors, work stress

INTRODUCTION

Job stress can be defined as a harmful physical and emotional response that occurs when the job does not match the abilities, resources, or needs of the worker (Ashley, 2017). Work stress can lead to poor health and even injury. Many factors that cause job stress are highly dependent on the



nature and personality of a nurse. A situation that can cause stress to a worker will not necessarily cause the same thing to other workers. Differences in responses between individuals are caused by social and psychological factors that can change the impact of stressors received by the body (Awalia et al., 2021).

According to the International Labor Organization (ILO) in 2014, work-related stress is the most frequently reported health problem. As many as 50-60% of all lost workdays are attributed to work-related stress. The number of people suffering from stressful conditions caused or exacerbated by work tends to increase from year to year (Dimkatni, 2020).

Kilapong's (2021) research found that there is a significant negative relationship between work stress and employee productivity. This means that there is an opposite relationship. The higher the work stress, the lower the work productivity and vice versa if the higher the work productivity, the lower the work stress.

The initial data of research conducted at PT Pelabuhan Indonesia Sub-Regional III East Java found that it was found that 10 respondents were willing to fill out the questionnaire DASS 21. The results of the questionnaire showed that 1 out of 10 workers experienced mild stress and 8 others were normal. This is the basis for researchers to conduct further research on work stress experienced by workers at PT Pelabuhan Indonesia Sub Regional III East Java.

MATERIAL AND METHODS

The method used in the research analytic survey with Cross Sectional approach. The population in this study were all operators of harbor mobile cranes (HMC) at Jamrud Terminal totaling 26 people. The sampling technique used is the total sampling technique. The independent variables in this study are individual factors and work factors and the dependent variable in this study is work stress.

Primary data collection uses the DASS 21 questionnaire given to workers and secondary data uses a company profile provided by the branch manager of PT Pelabuhan Indonesia Sub Regional III East Java. Analysis of the data used is chi square test and Spearman correlation to determine the relationship between individual factors and work with work stress workers.

RESULTS AND DISCUSSION

The results in this study are divided into respondent characteristics, research specific data, the relationship between individual factors and work stress and the relationship between work factors and work stress.

Characteristics of Respondents

Table. 1 Characteristics of Respondents

Category	Frequency (n)	Percent (%)
Age		
17-25 years old	0	0
26-35 years old	3	11.50
36-45 years old	11	42.30
46-55 years old	12	46.20
Total	26	100.0
Marital status		
Marry	23	88.50
Not married yet	3	11.50
Total	26	100.0
Level of education		

SENIOR HIGH SCHOOL	6	23.10
College	20	76.90
Total	26	100.0
Duration of Work		
<5 years	7	26.90
5-10 years	14	53.80
11-15 years old	5	19,20
>15 years old	0	0
Total	26	100.0
Shift work		
00.00-08.00	0	0
08.00-16.00	20	76.90
16.00-00.00	6	23.10
Total	26	100.0

Table 1 shows that most operators (46.2%) are 46-55 years old, 11 people are 36-45 years old and the rest are 26-35 years old. The table shows that all Harbor Mobile Crane (HMC) operators are in their productive age (15-64 years). Frequency distribution of respondents based on marital status, from 26 respondents at PT. Pelabuhan Indonesia (Persero) Sub Regional III East Java, most of the respondents (88.5%) are married and 11.5% are unmarried. Frequency distribution of respondents based on education level, from 26 respondents at PT. Pelabuhan Indonesia (Persero) Sub Regional III East Java, most of the respondents took education at the college level and the lowest category was SMA by 23.10%.

The frequency distribution of respondents in table 5.4 shows the distribution information according to years of service. Harbor Mobile Crane (HMC) operators mostly have a service period of 5-10 years as many as 14 people, and as many as 7 people (26.9%) have a service period of < 5 years. Distribution of respondents by work shift. Harbor Mobile Crane (HMC) operators mostly work on shifts from 08:00 to 16:00 as many as 20 people with a percentage rate (76.9%).

Research Specific Data

Table 2. Frequency Distribution of Respondents Based on Work Stress

Category Job Stress	Frequency (n)	Percent (%)
Normal	25	96.15
Mild Stress	1	34.60
Total	26	100.0

Table 2 shows the frequency distribution of respondents based on work stress, from 26 respondents at PT. Pelabuhan Indonesia (Persero) Sub Regional III East Java, almost all respondents do not suffer from stress (normal) and some of the rest experience mild stress by 3.85%.

Relationship Between Individual Factors And Work Stress

Table 3. Age Relationship with Work Stress

No	Individual Factors (Age)	Work stress					
		Normal		Mild Stress		N	%
n	%	n	%				
1	31-35 years old	3	11.50	1	0	4	15.35

2	36-40 years old	10	38,50	0	0	10	38,50
3	>41 years old	12	46.15	0	0	12	46.15
Total		25	96.15	1	3.85	26	100.0
Correlation coefficient: -0.320, p value: 0.057 > 0.05							

Table 3 shows the test results of this study indicate that there is no relationship between age and work stress. The direction of the relationship between age and work stress is negative. The age range in this study was found to be in the productive age. The older the worker, the lower the work stress felt by the operator. Increasing age indicates increasing interests, the older the age the more dependents they have, namely family matters, especially children and wives.

This research is in line with the research conducted Najimi et al (2012) which shows that the frequency of nurses who are at risk of experiencing work stress is greater in the younger age group, namely aged 25-29 years. The study stated that the lowest work stress was felt at the age of > 35 years. These results are associated with greater consistency and better skills as a result of longer work experience.

The results of this study are also in line with research conducted by Ibrahim et al with the target of factory workers 2 shows that respondents who experience the most stress are under the age of 40 years. This shows that workers aged under 40 years experience more work stress than workers aged over 40 years. Workers who are in the age group of the old category or above 40 years can be said to have more ability to control stress (Ibrahim et al., 2016).

Table 4. Relationship between marital status and work stress

No	Individual Factors (Marriage Status)	Work stress					
		Normal		Mild Stress		N	%
		N	%	n	%		
1	Not married yet	23	88.45	0	0	23	88.45
2	Marry	2	7.70	1	3.85	3	11.55
Total		25	96.15	1	3.85	26	100.0
Chi-square test: P- Value 0.005<0.05, Phi: -0.554							

Table 4 shows the results research that almost all respondents (88.5%) are married. Based on the test results, it was found that there was a relationship between marital status and work stress. Workers tend to experience stress at the time of marriage, and tend to be more relaxed when not married. Post-marriage life has an impact on a person's psychology.

Someone who is married will tend to have good life satisfaction and will affect the quality of life. This is because after marriage there will be a division of roles with a partner, homework tends to decrease along with cooperation with a partner. So that the focus on work as a professional nurse will be maximized (Hardani, 2016).

Table 5. Relationship between Education Level and Work Stress

Individual Factor Relationship		Work stress					
		Normal		Mild Stress		N	%
		n	%	n	%		
Education Levl	Senior Highschool	8	30.7	1	3.85	9	34.55

College	17	65.45	0	0	17	65.45
Total	25	96.15	1	3.85	26	100.0
Chi-Square P Value Test: 0.000 < 0.05						

Table 5 showed that most of the respondents (76.9%) were university graduates. Based on the results of statistical tests, it shows that there is no relationship between the level of education and one's work stress. The level of education affects a person's work stress level. This is because the knowledge insight possessed by workers with higher education levels is wider, theoretically, they can overcome problems in the workplace faster. In addition, this is because knowledge insight will increase along with the increase in the level of education.

In accordance with research conducted by Irkhami (2015) on work stress on divers, it shows that the relationship between education level and work stress is low and the higher the education, the lower the work stress level. The similarity of this research with other studies may be due to the fact that increasing the knowledge and skills of workers in the packer section is not obtained from formal education but through experience and training in using production machines every day.

Relationship Between Work Factors And Work Stress

Table. 6 Relationship between work period and work stress

No	Employment Factors (Terms of Service)	Work stress					
		Normal		Mild Stress		N	%
		n	%	n	%		
1	<5 years	6	23.07	1	3.85	7	25.92
2	5-10 years	14	34.65	0	0	14	53.85
3	>10 years	5	23.10	0	0	5	19.23
Total		25	65.45	1	3.85	26	100.0
Correlation coefficient -0.280, p value 0.244>0.05							

The results showed that most of the respondents (53.8%) had a working period of 5-10 years. Based on the results of statistical tests, it was found that there was no relationship between work period and one's work stress. The direction of the relationship towards the negative value means. This means that the longer a person works, the easier and more professional it will be to respond to problems in the workplace. On the other hand, work stress will increase. During the working period, a person is still relatively early (fresh graduate) or has just had work experience.

The results of this study are in line with research conducted by Holy on crane operators where the correlation coefficient value is -0.102, meaning that the relationship between tenure and work stress is very low and the direction of the correlation is negative (-) which means the opposite direction, namely the longer the tenure, the lower the work stress on the respondent.(9). Manabung et al (2019) in his research stated that the period of work had a fairly close relationship with work stress. There are more workers with 5-15 years of service and experiencing moderate work stress, in contrast to workers who have more than 15 years of service, there are only 4 respondents who experience moderate work stress.

This is possible because a longer working period has understood and understands more about their job duties, has gained more experience and is more resilient in dealing with the pressures found at work. In contrast to the recent tenure, this may be because the workforce still lacks experience in dealing with, overcoming and resolving problems encountered in the workplace so that it can lead to work-related stress.

Table. 7 Relationship between Shift Work and Work Stress

No	Job Factor (Work Shift)	Work stress					
		Normal		Mild Stress		N	%
		n	%	n	%		
1	00.00-08.00	0	0	0	0	0	0
2	08.00-16.00	20	76.92	0	0	20	76.92
3	16.00-00.00	5	19.23	1	3.85	6	23.08
Total		17	96.15	1	3.85	26	100.0

Chi Square P-Value Test: 0.063 > 0.05, Phi: 0.365

Table 7 shows the results of the respondent relationship test based on the work shift variable and work stress. The test results get a phi value of 0.365, based on the phi value, work shifts have a weak relationship with work stress, the direction of the relationship is positive, which means that the night shift work, the work stress increases. This research is in line with research conducted by Rhamdani and Wartono in this study it was proven that work shifts were associated with work stress on nurses ($p=0.035$). As many as 82% of nurses who work shifts experience work stress. The nurses at the Asy-Syifa Hospital, West Sumbawa who underwent work shifts experienced an irregular lifestyle compared to those who did not work shifts (Rhamdani, 2019). The results of this study are the same as the research Konoralma et al (2013) which shows that the morning shift will be fresher because they have had sufficient rest the night before and the number of nurses on duty on the morning shift is more so that the workload is evenly distributed.

CONCLUSION AND SUGGESTION

The results of research conducted at PT Pelabuhan Indonesia (Persero) Sub Regional III East Java can be concluded:

There is a relationship between marital status and work stress with a significance value. There is a very strong relationship between tenure and work stress with a correlation coefficient of -0.779, indicating a negative direction which means that the longer the tenure, the lower the level of work stress on the harbor mobile crane operator. There is a very strong relationship between work shifts and work stress which means that the more night shifts work, the more work stress will be on the harbor mobile crane. There is a strong relationship between age and work stress which means that increasing age will increase work stress on harbor mobile crane. There is a relationship between the level of education and work stress.

It is hoped that with this research, PT. Pelabuhan Indonesia Sub Regional III East Java can implement K3 programs to reduce work stress by increasing knowledge about individual factors and work factors that affect work stress.

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