

THE EFFECT OF MOTIVATION, WORKLOAD, AND WORK ENVIRONMENT ON EMPLOYEE PERFORMANCE THROUGH JOB SATISFACTION AS THE INTERVENING VARIABLE AT THE ENVIRONMENTAL SERVICES OFFICE OF DELI SERDANG REGENCY

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ABSTRACT

The respondents of this research consisted of 37 employees of the Environmental Services Office of Deli Serdang Regency. The variables of this study were motivation (X1), workload (X2), work environment (X3), employee performance (Z) and the intervening variable was Job Satisfaction (Y). Data were obtained through interviews by using a questionnaire. The data analysis techniques used were validity, reliability, classical assumption test (normality, multicollinearity, heteroscedasticity and linear) and hypothesis testing (path analysis technique and Sobel test). The results showed that motivation and workload had a positive and significant effect on job satisfaction; while the work environment did not have significant effect on job satisfaction. Motivation and workload had a positive and significant effect on employee performance, while the work environment did not have significant effect on employee performance. Job satisfaction had a positive and significant effect on employee performance. Motivation, workload and work environment had a positive effect on employee performance through job satisfaction for employees of the Environmental Services Office of Deli Serdang Regency.

Keywords: Motivation, Workload, Work Environment, Employee Performance, Job Satisfaction

INTRODUCTION

Government agencies and private organizations are in need of a maximum achievement related to improving work results in order to achieve organizational goals. To achieve organizational goals, one of the important elements to consider is Human Resources (HR). The success of an agency in achieving its goals is determined by the performance of employees. According to Mangkunegara (2010), performance is the result of work in quality and quantity that can be achieved by an employee in carrying out tasks in accordance with the responsibilities given.

There are many factors that affect employee performance in addition to the work environment, including workload and motivation. Excessive workload can cause an uncomfortable working atmosphere for workers. It can trigger the onset of work stress more quickly. On the other hand, a lack of workload can cause losses for the organization/agencies. According to As'ad (1995), job satisfaction is a person's feelings towards work; this means that this kind of job satisfaction concept sees job satisfaction as human interaction with the work environment.

The performance of employees at the Environmental Services Office of Deli Serdang Regency has decreased from time to time, where this can be found in the quantity of employees who are still considered insufficient to support the completion of work tasks in accordance with the time set by the Environmental Services Office of Deli Serdang Regency. In addition, the low quality of employees' work, among others, there are still some jobs that are considered less than optimal, the low productivity of innovation organizations that are hampered, and decreased morale. Some of the phenomena above describe the situation and attitude of dissatisfaction of employees at the Environmental Services Office of Deli Serdang Regency.

THEORETICAL BASIS

Employee Performance

Mangkunegara (2010) stated that performance is the result of work in quality and quantity achieved by an employee in carrying out his tasks in accordance with the responsibilities given to him. Mathis and Jackson (2002) argued that performance is basically what employees do or do not do. Employee performance is what affects how much they contribute to the organization which includes output quantity, output quality, output period, attendance at work, and cooperative attitude.

Job Satisfaction

Bangun (2012) claimed that job satisfaction is when an employee can perceive his work whether it is enjoyable or unpleasant to do from what he does according to what he expects, wants, and thinks.

Work Motivation

According to Rivai (2011), motivation is a condition that has an effect on generating, directing, and maintaining behavior related to the work environment. Meanwhile, according to Sadili (2006), motivation is a condition or energy that moves employees who are directed to achieve the company's organizational goals.

Workload

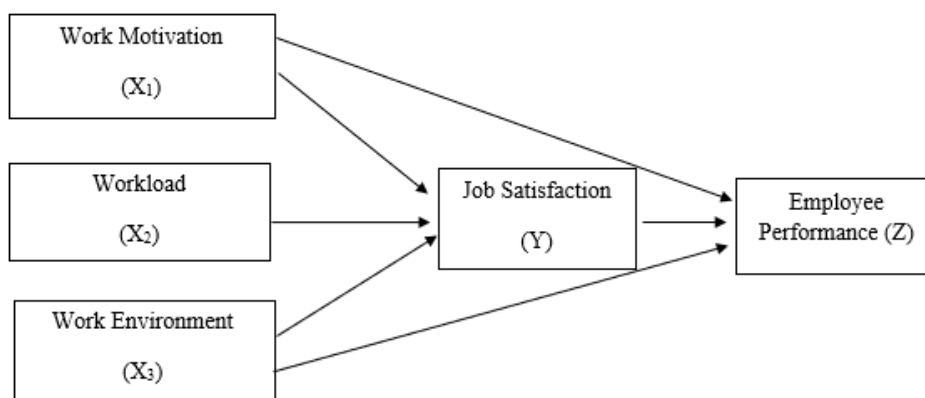
Workloads are tasks assigned to workers or employees to be completed at a certain time by using the skills and potential of the workforce Munandar (2011).

Work Environment

Nitisebito (2000) explained the notion of the work environment as everything that is around workers that can affect individuals in carrying out assigned tasks.

Conceptual Framework

The conceptual framework explains theoretically the link between the variables that will be studied. This conceptual framework is obtained from a synthesis of various variables that can be used to formulate hypotheses. Based on the explanation of the theoretical basis above, a conceptual framework can be developed as follows:



HYPOTHESIS

The hypotheses of this research are as follows:

1. H1: Motivation has a positive effect on job satisfaction.
2. H2: Workload has a positive effect on job satisfaction.
3. H3: Work environment has a positive effect on job satisfaction.
4. H4: Motivation has a positive effect on employee performance.
5. H5: Workload has a positive effect on employee performance.
6. H6: Work environment has a positive effect on employee performance.
7. H7: Job satisfaction has a positive effect on employee performance.
8. H8: Motivation has a positive effect on Employee Performance through Job Satisfaction as an Intervening Variable
9. H9: Workload has a positive effect on Employee Performance through Job Satisfaction as an Intervening Variable
10. H10: Work environment has a positive effect on employee performance through Job Satisfaction as an intervention variable

RESEARCH METHODS

This study uses associative quantitative research, which is more based on data that can be calculated to produce an assessment (Sugiyono, 2014). Associative research is a study to examine the relation/effect of independent variables on the dependent variable.

The sampling technique used in this study is total sampling. According to Sugiyono, total sampling technique is a sampling technique where the number of samples is the same as the population. The reason for taking total sampling is because the population is less than 100. Thus, the number of samples that will be used in this study are 37 Civil Servant employees of the Environmental Services Office of Deli Serdang Regency.

This study uses 3 (three) independent variables, namely: the first independent variable is Motivation (X1), the second independent variable is Workload (X2) and the third independent variable is the Work Environment (X3) and the dependent variable is Employee Performance (Z) and the intervening variable is Job Satisfaction (Y).

The data collection was carried out by using a prepared questionnaire. The questionnaire used in this study contained two main parts. The first part is about social profile and respondent identification, containing respondent data related to the respondent's identity and social conditions such as: age, position, latest education, and years of work. Meanwhile, the second part is based on the theoretical concept previously stated, concerning work motivation, workload, and work environment on employee performance through job satisfaction.

The data analysis technique in this study was compiled by using descriptive analysis. Descriptive analysis is an analytical method in which the data that has been obtained, compiled, grouped, analyzed, then interpreted objectively to obtain an overview of the problems faced. This data analysis technique will be carried out by using the SPSS version 25.00 program

RESEARCH RESULT

Validity Test

The results of the data validity test in this study are:

Variable	Statement Item	r count	r table	Remarks
Motivation (X ₁)	1	0.775	0.3246	Valid
	2	0.782		Valid
	3	0.770		Valid
	4	0.772		Valid
	5	0.789		Valid
	6	0.811		Valid
	7	0.758		Valid
	8	0.797		Valid
	9	0.769		Valid
Workload (X ₂)	1	0.737	0.3246	Valid
	2	0.758		Valid
	3	0.708		Valid
	4	0.701		Valid
	5	0.779		Valid
	6	0.716		Valid
	7	0.756		Valid
	8	0.725		Valid
	9	0.763		Valid
Work Environment (X ₃)	1	0.738	0.3246	Valid
	2	0.727		Valid
	3	0.706		Valid
	4	0.693		Valid
	5	0.712		Valid
	6	0.692		Valid
	7	0.727		Valid
	8	0.725		Valid
	9	0.711		Valid
	10	0.735		Valid
	11	0.765		Valid
Employee Performance (Z)	1	0.728	0.3246	Valid
	2	0.737		Valid
	3	0.685		Valid
	4	0.693		Valid
	5	0.665		Valid
	6	0.709		Valid
	7	0.704		Valid
	8	0.680		Valid
	9	0.680		Valid
	10	0.679		Valid
	11	0.673		Valid
	12	0.686		Valid
Job Satisfaction (Y)	1	0.740	0.3246	Valid
	2	0.698		Valid
	3	0.667		Valid
	4	0.680		Valid
	5	0.651		Valid
	6	0.669		Valid
	7	0.694		Valid
	8	0.673		Valid
	9	0.683		Valid

To compare the value of rcount with rtable, it uses degree of freedom (df) = n – 2, (df) = 37 – 2, (df) = 35. With a value of (df) = 35 and a significance value of 5% or 0.05, the rtable number is 0.3246. From the table above, it can be seen that all statement items for each variable have an rcount value greater than rtable, so all statement items are considered being valid.

Reliability Test

Reliability is a tool to measure a questionnaire which is an indicator of a variable or construct. A questionnaire can be regarded to be reliable if someone's answer to the statement is consistent or stable from time to time. Reliability measurement was carried out

by using the Cronbach Alpha (α) statistic test. A construct or variable is regarded to be reliable if it gives a Cronbach Alpha value > 0.70 . The results of reliability testing in this study are:

Variable	Cronbach Alpha	Remarks
Motivation (X_1)	0.800	Reliable
Workload (X_2)	0.762	Reliable
Work Environment (X_3)	0.741	Reliable
Employee Performance (Z)	0.713	Reliable
Job Satisfaction (Y)	0.710	Reliable

From all the variable tests, the Cronbach Alpha value was obtained > 0.70 . Thus, it can be concluded that all variables used in this research are reliable.

Path Analysis

Path analysis was used to test the contribution indicated by the path coefficient on each path diagram of the causal relation between variables X_1 , X_2 and X_3 to Y . Correlation and regression analysis is the basis for calculating path coefficients.

Based on the results of the regression model test 1 and 2, it can be described the value of the coefficient of direct effect of each variable as follows:

Figure 1. Sub-Structure I

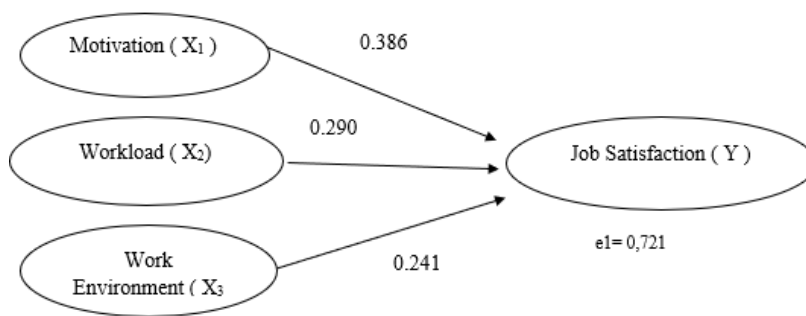
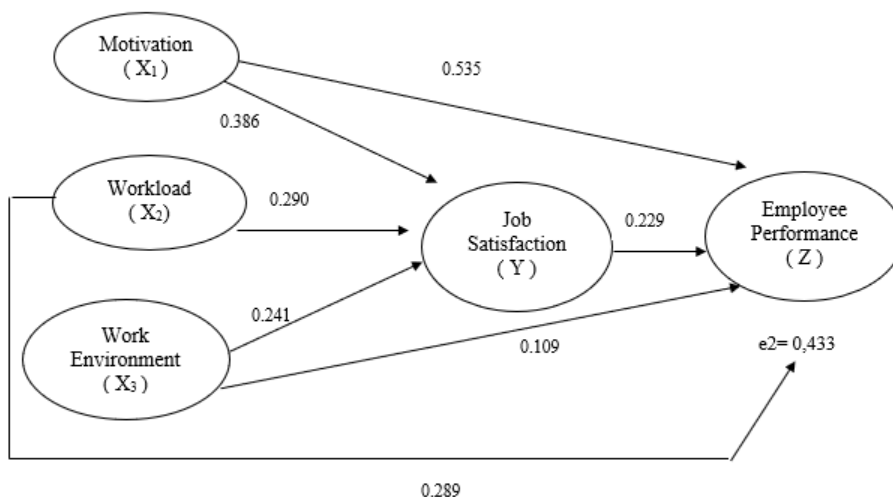


Figure 2. Sub-Structure II



Direct Effect

The direct effect between the independent variable (X), the intervening variable (Y), and the dependent variable (Z) in this study can be seen in the following explanation:

- 1) The direct effect of motivation variable and job satisfaction variable ($X_1 \rightarrow Y$) is 0.386.
- 2) The direct effect of workload variable and job satisfaction variable ($X_2 \rightarrow Y$) is 0.290
- 3) The direct effect of work environment variable and job satisfaction variable ($X_3 \rightarrow Y$) is 0.241
- 4) The direct effect of motivation variable and employee performance variable ($X_1 \rightarrow Z$) is 0,535.
- 5) The direct effect of workload variable and employee performance variable ($X_2 \rightarrow Z$) is 0.289.
- 6) The direct effect of work environment variable and employee performance variable ($X_3 \rightarrow Z$) is 0.109.
- 7) The direct effect of job satisfaction variable and employee performance variable ($Y \rightarrow Z$) is 0.229

Indirect Effect

The indirect effect among the independent variable (X), the intervening variable (Y), and the dependent variable (Z) in this study can be explained as follows:

- 1) The indirect effect of motivation variable on employee performance variable through job satisfaction variable ($X_1 \rightarrow Y \rightarrow Z$). X_1 through Y on Z = $0.386 \times 0.229 = 0.088$
- 2) The indirect effect of the workload variable on the employee performance variable through the Job Satisfaction variable ($X_2 \rightarrow Y \rightarrow Z$). X_2 through Y on Z = $0.290 \times 0.229 = 0.066$
- 3) The indirect effect of work environment variable on employee performance effect through the variable job satisfaction ($X_3 \rightarrow Y \rightarrow Z$). X_3 through Y on Z = $0.241 \times 0.229 = 0.055$

Total Effect

The total effect is the number of direct effect added with the number of indirect effect. The following is a table of total effect values in this study.

Value of Total Effect			
Effect of Variables in Path Analysis	Direct Effect	Indirect Effect	Total Effect
$X_1 \rightarrow Z$	0,386	$Y = 0,386 \times 0,229 = 0,088.$	0,474
$X_2 \rightarrow Z$	0,290	$Y = 0,290 \times 0,229 = 0,066$	0,356
$X_3 \rightarrow Z$	0,241	$Y = 0,241 \times 0,229 = 0,055$	0,296

The First Regression Equation Test

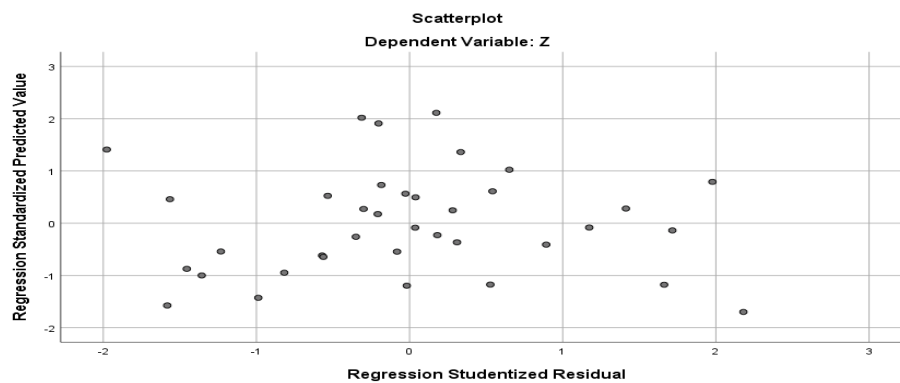
1. Normality Test

The First Regression Normality Test Results		
One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		37
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	1.78753402
Most Extreme Differences	Absolute	.101
	Positive	.101
	Negative	-.068
Test Statistic		.054
Asymp. Sig. (2-tailed)		.200 ^{c,d}
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

2. Multicollinearity Test

The First Regression Model Multicollinearity Test Results			
Coefficients ^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Motivation (X_1)	0.627	1.595
	Workload (X_2)	0.946	1.057
	Work Environment (X_3)	0.638	1.567
a. Dependent Variable: Job Satisfaction (Y)			

3. Heteroscedasticity Test



By using a scatter plot, it can be seen if the points are spread above and below the zero point and do not form a certain pattern, so it can be concluded that there is no heteroscedasticity problem in the regression model.

4. Linearity Test

Linearity Test Results of Job Satisfaction and Motivation:

			Sum of Squares	df	Mean Square	F	Sig.
Job Satisfaction (Y) * Motivation (X ₁)	Between Groups	(Combined)	107.495	10	10.749	2.468	.031
		Linearity	78.373	1	78.373	17.991	.000
		Deviation from Linearity	29.122	9	3.236	.743	.667
	Within Groups		113.262	26	4.356		
Total		220.757	36				

Linearity Test Results of Job Satisfaction and Workload:

			Sum of Squares	df	Mean Square	F	Sig.
Job Satisfaction (Y) * Workload (X ₂)	Between Groups	(Combined)	77.723	13	5.979	.961	.513
		Linearity	39.085	1	39.085	6.285	.020
		Deviation from Linearity	38.638	12	3.220	.518	.882
	Within Groups		143.033	23	6.219		
Total		220.757	36				

Linearity Test Results of Job Satisfaction and Work Environment:

			Sum of Squares	df	Mean Square	F	Sig.
Job Satisfaction (Y) * Work Environment (X ₂)	Between Groups	(Combined)	117.290	13	9.022	2.006	.070
		Linearity	60.906	1	60.906	13.539	.001
		Deviation from Linearity	56.384	12	4.699	1.044	.445
	Within Groups		103.467	23	4.499		
Total		220.757	36				

The Second Regression Equation Test

1. Normality Test

The Second Regression Normality Test Results

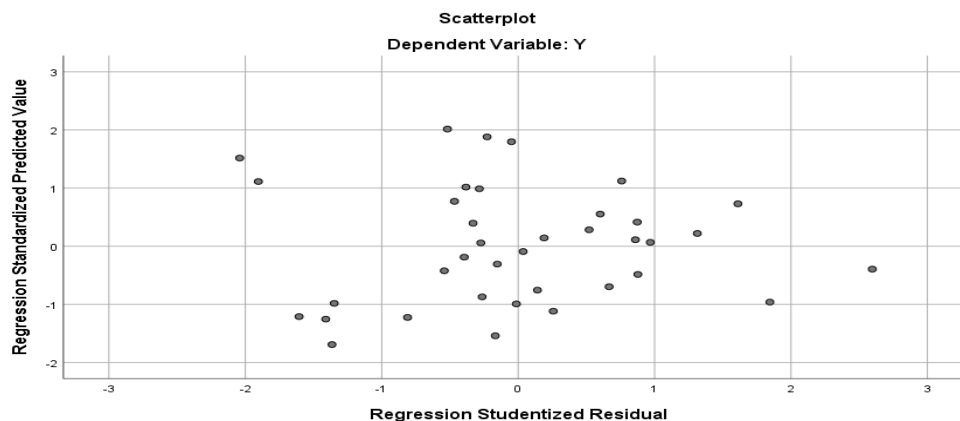
One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		37
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	1.55957851
Most Extreme Differences	Absolute	.099
	Positive	.080
	Negative	-.099
Test Statistic		.099
Asymp. Sig. (2-tailed)		.200 ^{c,d}
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

2. Multicollinearity Test

The Second Regression Model Multicollinearity Test Results

Coefficients ^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	Motivation (X ₁)	0.531	1.882
	Workload (X ₂)	0.821	1.219
	Work Environment (X ₃)	0.596	1.678
a. Dependent Variable: Employee Performance (Z)			

3. Heteroscedasticity Test



By using a scatter plot, it can be seen if the points are spread above and below the zero point and do not form a certain pattern, so it can be concluded that there is no heteroscedasticity problem in the regression model.

4. Linearity Test

Linearity Test Results of Employee Performance and Motivationi:

		Sum of Squares	df	Mean Square	F	Sig.	
Employee Performance (Z) * Motivation (X ₁)	Between Groups	(Combined)	333.180	10	33.318	6.483	.000
		Linearity	299.883	1	299.883	58.347	.000
		Deviation from Linearity	33.297	9	3.700	.720	.687
	Within Groups		133.631	26	5.140		
Total		466.811	36				

Linearity Test Results of Employee Performance and Workload:

			Sum of Squares	df	Mean Square	F	Sig.
Employee Performance (Z) * Workload (X ₂)	Between Groups	(Combined)	218.944	13	16.842	1.563	.169
		Linearity	128.596	1	128.596	11.933	.002
		Deviation from Linearity	90.348	12	7.529	.699	.737
	Within Groups		247.867	23	10.777		
	Total		466.811	36			

Linearity Test Results of Employee Performance and Work Environment:

			Sum of Squares	df	Mean Square	F	Sig.
Employee Performance (Z) * Work Environment (X ₃)	Between Groups	(Combined)	248.144	13	19.088	2.008	.070
		Linearity	169.320	1	169.320	17.810	.000
		Deviation from Linearity	78.825	12	6.569	.691	.744
	Within Groups		218.667	23	9.507		
	Total		466.811	36			

Sobel Test

- 1) Based on these calculations, it can be concluded that the value of tcount is greater than the value of ttable, which is $19.56 > 1.689$. This shows that there is an effect of job satisfaction variable in mediating the effect of motivation (X₁) on employee performance (Y), so it can be concluded that work motivation has a positive effect on employee performance through job satisfaction.
- 2) Based on the calculation, it can be concluded that the value of tcount is greater than the value of ttable, which is $28.69 > 1.689$. This reveals that workload (X₂) on employee performance (Z) through the job satisfaction (Y) variable has a positive and significant effect.
- 3) Based on these calculations, it can be concluded that the value of tcount is greater than the value of ttable, namely $13.09 > 1.689$. This shows that the work environment (X₃) on employee performance (Z) through the job satisfaction (Y) variable has a positive and significant effect.

Summary of Hypothesis Test Results

Hypothesis	Research Hypothesis	Sig. Value	Remarks
dH1	There is a Positive Effect of Motivation on Job Satisfaction	0,021	Accepted
H2	There is a Positive Effect of Workload on Job Satisfaction	0,031	Accepted
H3	There is a Positive Effect of Work Environment on Job Satisfaction	0,135	Rejected
H4	There is a Positive Effect of Motivation on Employee Performance	0,000	Accepted
H5	There is a Positive Effect of Workload on Employee Performance	0,002	Accepted
H6	There is a Positive Effect of Work Environment on Employee Performance	0,282	Rejected
H7	There is a Positive Effect of Job Satisfaction on Employee Performance	0,038	Accepted
H8	There is a Positive Effect of Motivation on Employee Performance through Job Satisfaction as an Intervening Variable	0,0045	Accepted

H9	There is a Positive Effect of Workload on Employee Performance through Job Satisfaction as an Intervening Variable	0,0023	Accepted
H10	There is a Positive Effect of Work Environment on Employee Performance through Job Satisfaction as an Intervening Variable	0,0042	Accepted

CONCLUSION

Based on the analysis results that have been carried out through the stages of data collection, data processing, and data analysis regarding the effect of motivation, workload and work environment on employee performance through job satisfaction as an intervening variable, the following is the conclusion made:

1. Motivation has a positive and significant effect on job satisfaction for employees of the Environmental Services Office of Deli Serdang Regency, this shows that the employees of the Environmental Services Office of Deli Serdang Regency really need good motivation, especially regarding employee responsibilities in carrying out tasks with clear targets and the necessities of life and work needs. The better the motivation given will greatly affect job satisfaction.
2. The workload has a positive and significant effect on job satisfaction for the employees of the Environmental Services Office of Deli Serdang Regency, this shows that the employees of the Environmental Services Office of Deli Serdang Regency really need a workload that is in accordance with their responsibilities in accordance with the time load, the mental effort load and psychological stress load given by the Environmental Services Office of Deli Serdang Regency. The better the provision of workloads to employees will greatly affect job satisfaction.
3. The work environment does not have effect and is not significant on job satisfaction for employees of the Environmental Services Office of Deli Serdang Regency, this shows that the work environment must be paid more attention, because if the work environment is not good, it can affect the work activities of employees and can cause employees to be less enthusiastic in doing their work so that it can lead to decreased employee job satisfaction.
4. Motivation has a positive and significant effect on employee performance at the Environmental Services Office of Deli Serdang Regency, this shows that the employees of the Environmental Services Office of Deli Serdang Regency really need good motivation, especially regarding employee responsibilities in carrying out tasks with clear targets and the necessities of life and work needs. The better the motivation given will greatly affect employee performance.
5. Workload has a positive and significant effect on employee performance at the Environmental Services Office of Deli Serdang Regency, this shows that the employees of the Environmental Services Office of Deli Serdang Regency really need a good workload, especially regarding their responsibilities. The better the workload given will greatly affect employee performance.
6. The work environment does not have effect and is not significant on the performance of employees at the Environmental Services Office of Deli Serdang Regency, this shows that the work environment must be paid more attention to properly and conducive so that employee performance increases and vice versa.
7. Job satisfaction has a positive and significant effect on the performance of employees of the Environmental Services Office of Deli Serdang Regency, this shows that employee performance is regarded to be good if the job satisfaction perceived by employees is also getting better. In other words, good employee performance can be influenced by job satisfaction on employees. Thus, job satisfaction in a company is needed to boost employee performance.
8. Motivation has a positive effect on employee performance through job satisfaction for employees of the Environmental Services Office of Deli Serdang Regency, this shows that job satisfaction is able to mediate the effect of motivation on employee performance, employees have also realized what their duties and responsibilities are so that they perform well good as well.
9. Workload has a positive effect on employee performance through job satisfaction for employees of the Environmental Services Office of Deli Serdang Regency, this shows that job satisfaction is able to mediate the effect of workload on employee performance, employees have also realized that giving a good workload at work will be easy in order to achieve employee performance.
10. The work environment has a positive effect on employee performance through job satisfaction on the employees of the Environmental Services Office of Deli Serdang Regency, this shows that job satisfaction is able to mediate the effect of the work environment on employee performance, employees have also realized that providing a good and conducive work environment is able to increase enthusiasm in carrying out work so that employee performance increases.

SUGGESTIONS

1. To improve employee performance, it can be done by providing motivation for employees to increase enthusiasm and be creative at work. It is expected that the relevant agency, namely the Environmental Services Office of Deli Serdang Regency, will provide learning opportunities for employees with good work performance so that employees are encouraged to provide optimal performance in order to achieve organizational goals.
2. It is expected that the relevant agency, namely the Environmental Services Office of Deli Serdang Regency, can provide an appropriate workload by adjusting to the specified working time, so that the tasks carried out can be completed on time and the results and work can be carried out optimally.

3. The Environmental Services Office of Deli Serdang Regency is expected to be able to improve the work environment properly, such as adding a soundproof room that can help employees prevent noise so that the work environment becomes comfortable.

REFERENCES

- A.A. Anwar Prabu Mangkunegara, (2010). *Evaluasi Kinerja Sumber Daya Manusia*. Bandung: Refika Aditama
- As'ad, Mohamad. (1995). *Psikologi Industri*. Yogyakarta: Liberty.
- Bangun, Wilson. (2012). *Manajemen Sumber Daya Manusia*. Jakarta: Erlangga
- Jackson. H. John, Mathis.L.Robert dan. (2002). *Manajemen Sumber Daya Manusia*. Jakarta: UI Press
- Munandar, A. S. (2011). *Stres dan Keselamatan Kerja Psikologi Industri dan Organisasi*. Jakarta: Penerbit Universitas Indonesia
- Nitisemito, Alex S. (2000). *Manajemen Personalialia: Manajemen Sumber Daya Manusia*. Jakarta: Ghalia Indonesia
- Rivai, Veithzal. (2011). *Manajemen Sumber Daya Manusia untuk Perusahaan: dari Teori ke Praktik*. Jakarta: Raja Grafindo Persada
- Sadili, Samsudin. (2006). *Manajemen Sumber Daya Manusia*. Bandung: Pustaka Setia

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