

FASHARKAN SAFETY WORKING AND WELFARE ASSURANCE EFFECT TO IMPROVE THE NAVAL WARSHIPS MAINTENANCE QUALITY IN THE SECOND FLEET COMMAND

Yoyok Nurkarya¹, Rudi Hartono Siregar², Rakhmad Susilo³, Anton Nugroho⁴

^{1,2,3,4}Indonesian Naval Technology College, Bumimoro-Morokrembangan, Surabaya 60187, Indonesia
E-mail: ynksantosa@gmail.com

ABSTRACT

The Navy is one of the defence forces that carry out an important task in maintaining Indonesia's maritime security. In carrying out its main tasks, the Indonesian Navy currently has a power system, namely what we know as the Integrated Fleet Weapon System (SSAT), which consists of the Indonesian Naval warship (INDONESIAN NAVAL WARSHIP), Base, Marines, and Aircraft. These components require management for routine maintenance and repair management to maintain readiness when in use. Faced with these conditions, the Indonesian Navy has a work unit, namely the Maintenance and Repair Facility (Fasharkan). Occupational Safety and Health Insurance must be conducive to all personnel and is expected to increase, which has a direct impact on work productivity. Where it is hoped that productivity can be maintained and performance improved, to support Fasharkan in completing its main task, namely carrying out elemental improvements properly, on time, and with quality. The results of the improvement directly affect the level of feasibility and user satisfaction, namely the user unit. This study uses quantitative methods using SPSS-25 tools. This research looks at the direct influence of occupational safety and health guarantees on the quality of breeding elements. Where the results of testing this hypothesis were obtained, the calculated F value is greater than the F table so that can be seen the effect of occupational safety and health guarantees on the quality of repair of the elements of Koarmada II. Where the final value of the coefficient of determination (R²) effect was 24%.

Keywords: Occupational Safety and Health Assurance, Work Results

1. INTRODUCTION

Fasharkan is a component in the Navy that has the responsibility for maintaining and repair of the Indonesian Naval warship in the Naval Second Fleet Command. The Fasharkan Makassar is one of the Fasharkan that be supported by the ability of workshops. Where the role of each Fasharkan workshop can take a major role in the repair. Its maintenance includes mid-level maintenance, advance maintenance, and Repowering. The capabilities of the Makassar fasharkan are can carry out docking, replating, electric motor repair, radar repair, and able to carry out production work such as pricing, lathe, and welding.

Every implementation of maintenance and repair of equipment such as Indonesian Naval Warship, KAL, and other supporting equipment carried out by Fasharkan, is expected to have good and correct Occupational Safety and Health standards. So that it is hoped that the objectives of the improvement can be achieved, namely the results of the improvement have quality and quality. Occupational health and safety guarantees for every personnel are crucial because they have a direct impact on the mental, and physical health of personnel and moreover have an impact on work results.

Occupational health and safety guarantees as well as protection from the work at hand are one of the most important factors for increasing the productivity of personnel. From the Berdasa work carried out, of course, the work carried out by each workshop has risks due to the activities of work activities. So it is necessary to apply the standards of occupational safety and health guarantees properly. Based on observations and surveys, the implementation of occupational health and safety insurance in Fasharkan Makassar is still less of a concern.

Occupational Safety and Health guarantees for every personnel are important factors, to achieve work productivity. Where if the productivity of personnel is maintained, it is expected that they will then be able to maintain and improve their performance. The main task of Fasharkan Maksar is solving the problems of improving elements in a better, timely, and quality manner. So that the quality of element improvement will ultimately affect the level of feasibility and user satisfaction, in this case, the Indonesian Naval Warship and KAL crew personnel. Therefore, researchers are interested in researching Safety and Health Insuranceeffect in Fasharkan Makassar on the Quality of the Repair maintenance system. This study aims to a recommendation for

future Indonesian Navy leaders to improve the repair quality of Indonesian Naval Warship and KAL in Fasharkan Makassar.

2. LITERATURE REVIEW

2.1 Theory of Safety and Health Work

OHSAS (Occupational Health and Assessment Series) 18001 defines occupational safety and health as conditions and factors that affect or will affect the safety and health of workers (including contract workers and contractors). According to Mangkunegara Occupational safety and health is a thought and effort to ensure the integrity and perfection of both the physical and the spiritual workforce in particular, and humans in general, the work and culture to lead to a just and prosperous society. Occupational safety and health are all activities to ensure and protect occupational safety and health and occupational diseases. Law Number 14 of 1969 article 9 states that: Every worker has the right to receive protection or safety, health, decency, maintenance of work morals and treatment by human dignity and morals.

Mathis and Jackson define occupational safety as referring to the protection of physical well-being to prevent work-related accidents or injuries. A well-designed and managed safety program can have the advantage of reducing accidents and associated costs, such as workers' compensation and fines. According to Mangkunegara, the objectives of implementing occupational safety and health standards are:

- a. Every employee gets a guarantee of occupational safety and health both physically, socially, and psychologically.
- b. All pieces of equipment and work equipment are used as selectively as possible.
- c. All production results are maintained safely.
- d. Guarantee for the maintenance and improvement of the nutritional health of employees.
- e. Increasing enthusiasm, work compatibility, and work participation.
- f. To avoid health problems because of the environment on working conditions.
- g. Every employee feels safe and protected at work.

This work safety objective can be realized by implementing occupational safety and health aspects, namely by using personal protective equipment (PPE). This PPE is useful as a protector of a worker from the dangers of work accidents, both minor and major accidents. To provide a sense of security and to realize safety at work, of course, some standards must be followed by all components in the work environment. Because security is the initial action in work safety. The occupational safety standards of K3 are as follows:

- a. Machine protection.
- b. Checked electrical safety periodically.

- c. Security of the room, including alarm systems, fire extinguishers, adequate lighting, adequate ventilation, and special evacuation routes.
- d. Body protection that covers the whole body.

With the guarantee of occupational safety and health, it will have an impact on the motivation of employees to work as well as possible because they feel comfortable in carrying out their work without any risk. For this reason, applying this work safety and healthy standard, the PPE used must be of the work safety and health standard and national license standard. The existing occupational safety theory will be used as a guide and instrument for researchers to measure the level of occupational safety and health at the research locus, namely Fasharkan Makassar.

2.2 Research Approach

This look is a quantitative look at the use of a descriptive technique. A quantitative study is a form of study characterized by the aid of using being performed in a systematic, well-deliberate, and established manner. Quantitative studies also can be interpreted as empirical studies this is used to look at unique populations/samples with the use of studies equipment and quantitative data. A descriptive technique way that this study goals to explain/provide an explanatexplainof of the study's problem and study results. This approach additionally goals to offer an overview/ description without first making any evaluation or preferred conclusions.

2.3 Operational definition Definition

An operational definition is a definition that provides an explanation of a variable in a measurable form. This operational definition provides the information needed to measure the variables to be studied. In this study, there are two independent variables (X) and one dependent variable (Y).

2.4 Data Collection Techniques

The data series are carried out to attain the facts had to attain the dreams of the take a look at. In this take look, information series strategies had been performed via observations, interviews, and document/literature searches. Primary information from observations and interviews are pieces of information accumulated and processed by a researcher from a study's issue. The secondary information derived from books, documentaries, and literary research may be acquired circuitously from the issue.

A pattern is a fragment of the wide variety and traits of a big populace. Researchers used samples from the populace due to the fact the constrained time for the take a look at averted the researchers from inspecting all elements of the populace. What we examine from a pattern of a populace, we can follow that end to that populace. A random pattern from a population has to be without a doubt representative. In this take, look samples have

acquired the use of a probabilistic sampling technique. Probability sampling is sampling primarily based totally on the belief that each populace's gadgets are similarly probable to be sampled.

2.5 Research Framework

This research use framework designed to show how to connect the Work safety standard and Occupational Health Standard effect on quality repair in Fasharkan Makasar.

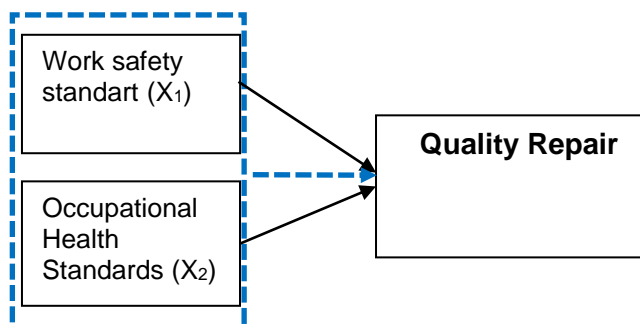


Figure 1. Research Framework

This framework leads the given route of the studies, so the studies simply make a specialty of variable reasons and one variable effect. And the give-up of the studies can display how the correlation among variables X and Y, if the correlation is excessive, this system may be advanced higher; if the result is the alternative, this system must be replaced.

2.6 Previous Research

Several journals that conducted research on the effect of occupational safety and health games have been carried out by previous researchers including:

- a. Purwanti, LD, & Musadieg, M. Al. (2017). The Effect of Occupational Safety and Health on the Quality of Work Life and Work Productivity (Study on Employees of the Operations and Maintenance Division of PT Pembangunan Jawa Bali (PJB) Paiton Generation Unit). *Journal of Business Administration*, 44(1), 118–126. Widaningrum, M. (2019). The effect of occupational safety and health on work productivity with work discipline as an intervening case study of PT. True Furniture Creation. IAIN Surakarta.
- b. Jumanto, & Nasution, AP (2017). The Influence of Occupational Safety and Health (K3), Discipline and Work Supervision on Employee Productivity in the Cutting Crimping Section At Pt. Sumitomo Wiring Systems Batam Indonesia. *Clear*, 4(2), 1–21. <http://journal.unrika.ac.id/index.php/beningjournal/article/view/726>.
- c. Keles, W, H., Kandou, G, D., Tilaar, Ch, R., 2015. Analysis of the Implementation of Patient Safety Target Standards in the Emergency Unit of Dr

RSUD. Sam Ratulangi Tondano According to Hospital Accreditation Version 2012. *Journal of FKM Sam Ratulangi University Manado*. JIKMUIs have. Vol. 5, No. 2. pp. 250-259.

d. Soputan, Gabby E, Sompie, Bonny F. & Mandagi, Robert J. (2014). Occupational Health and Safety (K3) Risk Management (Case Study on the Construction of the Eben Hazar High School Building), *Scientific Journal of Media Engineering*. Vol.4 No.4: 229-238.

3. RESULTS AND DISCUSSION

3.1 Research Hypothesis

The hypothesis carried out by the researcher is an initial or temporary assumption of the relationship between variables, which must be proven true (Robert, 2021). The hypotheses in this study are as follows:

H1: The work safety guarantee of Fasharkan Makassar influences the quality of repairs of the Koarmada II elements.

H2: The occupational health of Fasharkan Makassar has a direct effect on the quality of repair of the elements of Koarmada II.

H3: Guarantee of Occupational Health and Safety Standards of Fasharkan Makassar affect the quality of improvement of the elements of Koarmada II.

3.2 Population and Sample

One thing that is fundamental in this is the concern in quantitative research in particular the population and sample. Successful and good research is research that obtains acceptable data. The population variables and sample variables are important because the data collection method is random, so that is why the sample used as a data source must be representative. By investigating the sample, conclusions can be drawn in the form of generalizations, which are considered to also apply to the entire population and sample. In determining the number of samples to be taken, the researcher will use or refer to the Slovin formula which is quite simple, namely

$$n = \frac{N}{1 + Ne^2} \dots\dots\dots 1)$$

Where :

n = number of samples

N = total population

e = percentage of slack in accuracy due to sampling error (5%) so that $arens = \frac{64}{1 + 64(0,05)^2}$

$$n = \frac{64}{1 + 0,16}$$

$$= \frac{64}{1,16}$$

$$n = 55,172 \approx 55$$

Based on the results of the Slovin formula above, with a population of 64 people, the research sample was 55,172 and was rounded up to 55 respondents.

3.3 Variable Validity test Work Safety Instrument (X1)

Validity Test Used to measure the validity or validity of a questionnaire data. The questionnaire will be said to be valid if the statement on the questionnaire can and can reveal something that will be measured by the questionnaire. To interpret the results of the validity test, the criteria used are.

- a. If the calculated r -value $>$ from the r table value, then the questionnaire item is declared valid and can be used.
- b. If the value of $r_{count} <$ from the r table value, the questionnaire item is declared invalid and cannot be used.
- c. r value_{table} can be seen at $\alpha=5\%$ and $df=n-2$.

After obtaining the value of r through the SPSS version 25 program, the next step is to compare the significance value obtained from calculations using the SPSS version 25 program against the person correlation significance value. A statement is considered valid if the value of sig. the personal correlation of each statement item is less than 0.05.

The results of the calculation of the validity of the Fasharkan Makassar work safety instrument using the SPSS version 25 program, namely for the value of r table with 55 respondents, the value is 0.266, so the results of the validity test can be shown in Table 1 below:

Table 1. Work Safety Instrument Validity Test Results

Questions	r count	r table	Validity
1	2	3	4
X1.1	0.399	0.266	Valid
X1.2	0.177	0.266	Invalid
X1.3	0.308	0.266	Valid
X1.4	0.293	0.266	Valid
X1.5	0.487	0.266	Valid
X1.6	0.446	0.266	Valid
X1.7	0.581	0.266	Valid
X1.8	0.561	0.266	Valid
X1.9	0.445	0.266	Valid
X1.10	0.431	0.266	Valid
X1.11	0.268	0.266	Valid
X1.12	0.048	0.266	Invalid
X1.13	0.485	0.266	Valid

In the table above, can be concluded that the statement questionnaire of the Fasharkan work safety guarantee variable is declared invalid in questionnaires no. 2 and no. 12. So it cannot be used for measuring the relationship between variables

(details can be seen in the appendix). This condition occurs when the respondent does not answer by paying close attention to the statement given so that the answer from the respondent results in the validity test result is invalid.

3.4 Variable Validity Instrument Quality improvement Fasharkan Makassar (Y)

The results of the calculation of the validity of the Fasharkan Makassar improvement quality instrument using the SPSS version 25 program can be displayed in Table 2. below:

Table 2. Validity test Variable Y

Question	r count	r table	Validity
1	2	3	4
Y.1	0.662	0.266	Valid
Y.2	0.877	0.266	Valid
Y.3	0.858	0.266	Valid
Y.4	0.704	0.266	Valid
Y.5	0.719	0.266	Valid
Y.6	0.858	0.266	Valid
Y.7	0.643	0.266	Valid
Y.8	0.480	0.266	Valid
Y.9	0.663	0.266	Valid
Y.10	0.733	0.266	Valid

From the table above, it can be concluded that the 10 statements of the variable quality improvement of Fasharkan Makassar are declared valid entirely. So that all statements can be used to measure the relationship between variables.

3.5 Reliability test

Furthermore, testing the data collection tool is testing the reliability of the instrument. A measurement instrument is said to be reliable if the measurement is consistent and accurate. So the instrument reliability test is carried out to know the consistency of the instrument as a measuring instrument so that the results of a measurement can be trusted. The reliability test in this study used the Cronbach Alpha formula. The variable is declared reliable if each question gives a Cronbach Alpha value >0.60 . The results of the reliability testing of each variable can be shown in Table 3 as follows:

Table 3. Reliability Test Results

Reliability Statistics X1	
Cronbach's Alpha	N of Items
0.601	8

Reliability Statistics X2	
Cronbach's Alpha	N of Items
0.739	10

Reliability Statistics Y	
Cronbach's Alpha	N of Items
0.889	10

Based on the table above, it can be concluded that all research variables have Cronbach Alpha > 0.60 so it can be stated that all measuring concepts of each variable from the questionnaire are reliable.

3.6 Normality test

A normality test is used for a series of data to determine whether the data is normally distributed or not. If the data is normally distributed, then the parametric statistical test can be used. Meanwhile, if the data is not normally distributed, then the non-parametric statistical test is used. The normal data distribution test was carried out with the one sample Kolmogorov-Smirnov Test, with the following conditions:

- If Asymp. Sig < 0.05, then the regression model is not normally distributed.
- If Asymp. Sig > 0.05, then the regression model is normally distributed.

Table 4. Normality Result

1)		Unstandardized Residual
N		55
Normal Parameters, b	mean	0.0000000
	Std. Deviation	4.12156085

Most Extreme Differences	Absolute	0.068
	Positive	0.064
	negative	-0.068
Test Statistics		0.068
asyp. Sig. (2-tailed)		,200c,d
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Another way to detect data normality is by looking at the distribution of data (points) on the diagonal axis of the Normal Probability Plot graph. A model is said to meet the assumption of normality if the data spread around the diagonal line and follows the direction of the line.

3.7 Multicollinearity Test

This test is used to determine whether the regression model found a correlation between independent variables. If there is a correlation, it is called a multicollinearity (Multiko) problem. Symptoms of multicollinearity can be seen from the value of the Variance Inflation Factor (VIF) and tolerance of each independent variable to the dependent variable. Guidelines for assessing an independent variable that does not occur multicollinearity is when the VIF value is not more than 10 and the tolerance value is close to one. The test results can be seen in Table 4.10 as follows

Table 5. Multicollinearity Test

Coefficient								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Err	Beta			Tolerance	VIFnts
1	(Constant)	16.009	6,016		2,661	0.010		
	Safety	0.324	0.220	0.244	1,468	0.148	0.531	1,883
	Health	0.326	0.187	0.289	1,744	0.087	0.531	1,883
a. Dependent Variable: Quality								

Based on the statistical table above, the independent variables have a VIF number of 1.883 less than 10 with a tolerance value close to 1. Thus, it can be concluded that there is no multicollinearity between variables in the regression model.

3.8 Regression Test

Based on the results of data processing using the SPSS version 25 program, the variables of occupational safety and health of Fasharkan

Makassar simultaneously have a positive and significant influence on the maintenance improvement quality in the Indonesian Navy second fleet Command as shown in table 6.

In table 6 shows that occupational safety and occupational health have almost the same is true for the quality of improvement variable, only that health is more dominant than other independent variables in influencing the quality of repair of the elements of the koarmada II.

Table 6. Simultaneous Influence Regression Coefficient Variables X1 and X2 to Variable Y

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16.009	6,016		2,661	0.010
	Occupational Health	0.326	0.187	0.289	1,744	0.087
	Work safety	0.324	0.220	0.244	1,468	0.148

a. Dependent Variable: Quality

3.9 F-Test

From the processing results SPSS version, 25 data shows the results of the significant value of the Anova test for the independent variables in the linear regression equation showing a significance value of $0.001 < 0.05$, so that simultaneously the independent variables have a fluctuating and simultaneous influence which has a linear impact on the quality of repair of the Koarmada elements. II. can be seen in the table below:

Table 7. ANOVA Table

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Reg	289,124	2	144.562	8.195	,001b
	Residual	917,312	52	17,641		
	Total	1206.436	54			

a. Dependent Variable: Quality

b. Predictors: (Constant), Occupational Safety, Occupational Health

So that the output can be known above it is known that the value of $F_{count} = 8.195$ with a significance level of $0.001 < 0.05$, then the regression model can be used to predict the variables of occupational safety (X1) and occupational health (X2) or it can also be interpreted that there is an influence of the safety variable (X1) and occupational health (X2) on the Y variable. Further testing was carried out with SPSS version 25 data processing to determine whether the X2 variable had a significant effect on the Y variable.

3.10 Correlation Test

Based on the data and its processing, the data generated with SPSS version 25 shows that

occupational safety and health guarantees have a positive influence on the quality of repairs. Simultaneously, the variables of occupational safety and health, Fasharkan Makassar, were able to predict a positive and significant effect on 0.05. The correlation value of 0.490 indicates that there is a relationship between the occupational safety and health of Fasharkan Makassar and the quality of improvement of the elements of the Koarmada II. How strong the effect is can be explained through the table below:

Table 8. Variables X on Y . variable

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,490a	0.240	0.210	4,200

a. Predictors: (Constant), Occupational Safety, Occupational Health

From the table, it can be concluded that the value of the correlation or relationship (R) is 0.490. From the output, the coefficient of determination (R square) is 0.240, which implies that the effect of the independent variable (occupational safety and health) on the dependent variable (quality of repair) is 24%. The relationship between variables is weak because the value of the R-square approaches 0.

3.11 Regression Test

Based on the results of data processing using the SPSS version 25 program, the variables of occupational safety and health of Fasharkan Makassar simultaneously have a positive and significant influence on the quality of improvement of the Koarmada II elements as shown in the table below:

Table 9. Regression Coefficient of Simultaneous Effect of Variable X

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16.009	6,016		2,661	0.010
	Occupational Health	0.326	0.187	0.289	1,744	0.087
	Work safety	0.324	0.220	0.244	1,468	0.148
a. Dependent Variable: Quality						

From the table above, it shows that occupational health has a more dominant influence than other independent variables in influencing the quality of repair of the elements of the Second fleet command.

Based on the results of statistical testing, the results of the calculation of the regression coefficients obtained a regression equation, namely $Y = 16.009 + 0.324 (X1) + 0.326 (X2) + e$. From the regression equation, it can be seen the direction of the relationship resulting from the independent variable to the dependent variable, assuming the other variables are constant, namely:

a. The regression constant has a positive value of 16.009, which means that if the occupational safety and health of Fasharkan Makassar is 0, then the quality of repair of the Koarmada II element is 16.009.

b. The regression coefficient of the X1 variable has a positive value of 0.324, which means that if the other independent variables have a fixed value and the work safety of Fasharkan Makassar has increased by one level, the value of the Y variable will increase by 0.324. The positive coefficient means that there is a positive relationship between X1 and Y, the more X1 increases, the higher the Y value, and vice versa.

c. The regression coefficient of the X2 variable has a positive value of 0.326, which means that if the other independent variables have a fixed value and the occupational health of Fasharkan Makassar has increased by one level, the value of the Y variable will increase by 0.326. The coefficient is positive, meaning that there is a positive relationship between X2 and Y, the higher X2, the higher the value of Y, and vice versa.

4. CONCLUSIONS

Based on the results of the discussion, several conclusions can be drawn to answer the problem formulation. It can be concluded that:

a. Occupational safety assurance has an influence on the quality of repair of the elements of the Koarmada II, this can be seen through the value

of the F test results, namely the calculated F value is 12.854 with F table = 3.175. Then the calculated F value > F table = 12.854 > 3.175, so the hypothesis "There is an influence between Fasharkan Makassar's work safety on the quality of repair of elements, is declared acceptable. This shows that the quality improvement of the Koarmada II elements carried out by Fasharkan Makassar personnel can be formed through the provision of good work safety standards to Fasharkan Makassar personnel. Quantity

b. Occupational health has an influence on the quality of repair of the elements of Koarmada II, this can be seen through the value of the F test results, namely calculated F value is 13,931 with F table = 3,175. Then the calculated F value > F table = 13,931 > 3,175, so the hypothesis "There is an influence between Fasharkan Makassar's occupational health on the quality of repair of elements, is declared acceptable. This shows that the quality improvement of the Koarmada II elements carried out by Fasharkan Makassar personnel can be formed through the provision of good occupational health to Fasharkan Makassar personnel.

c. Occupational safety and health simultaneously (together) have an effect on the quality of repair of the elements of Koarmada II, this can be seen through the value of the F test results, namely the calculated F value is 8.195 with F table = 3.175. Then the calculated F value > F table = 8.195 > 3.175, so the hypothesis "There is a simultaneous effect between Occupational safety and health Fasharkan Makassar on the quality of improvement of the elements of Second fleet command", is declared acceptable. This shows that the quality of the improvement of the elements of the Second fleet command carried out by Fasharkan Makassar personnel can be formed through the provision of good occupational safety and health standards to Fasharkan Makassar personnel.

d. The research found new things and the prospect of findings (novelty) that is different from previous studies, namely the dependent variable of occupational safety and health so far has an effect on

personnel work accidents, personnel performance, and personnel work motivation. While this study can find the effect of occupational safety and health variables on the quality of repairs even though the relationship is weak based on the results of calculations using SPSS 25 tools which can be seen in the R-square value of the dependent variable on the independent variable.

ACKNOWLEDGEMENT

The authors greatly acknowledge the support from Indonesia Naval Technology College STTAL Surabaya Indonesia for providing the necessary resources to carry out this research work. The authors are also grateful to the anonymous reviewers and journal editorial board for their many insightful comments, which have significantly improved this article.

REFERENCES

- Gallo, L. G., Allee, L. L., & Gibson, D. M. (1996). Insecticidal effectiveness of *Mammea Americana* (Guttiferae) extracts on larvae of *Diabrotica virgifera* (Coleoptera: Chrysomelidae) and *Trichoplusia Ni* (Lepidoptera: Noctuidae). *Economic Botany*, 50(2), 236-242.
- Mathis, R. L., Jackson, J. H., Valentine, S. R., & Meglich, P. (2016). *Human resource management*. Cengage Learning.
- Rakam, R., Sigit, P., & Nugroho, A. (2022). THE EFFECT OF EDUCATION, COURSES AND TRAINING ON THE PROFESSIONALISM OF NAVAL OFFICERS. *JOURNAL ASRO*, 13(1), 23-28.
- Reana, A. (2022). PENGARUH MANPOWER PLANNING TERHADAP KUALITAS SDM PENDIDIKAN EKONOMI DALAM MENGHADAPI ACFTA. *JuPEKO*, 174.
- Robert, C. (2021). Statistics and Analysis of Scientific Data (Second Edition). In *Chance* (Vol. 34, Issue 1). <https://doi.org/10.1080/09332480.2021.1885943>
- Wardiana, A., Wiratama, E., & Nugroho, A. (2022). THE EFFECT OF TRAINING AND PRACTICE OF AAL CADETS IN KAL CADET TO SUPPORT SHIP CONTROL SKILLS IN INDONESIAN NAVAL WARSHIP. *JOURNAL ASRO*, 13(1), 12-22.
- Wu, D., & Li, Z. (2019). Work safety success theory based on dynamic safety entropy model. *Safety Science*, 113(December 2018), 438-444. <https://doi.org/10.1016/j.ssci.2018.12.022>