

THE EFFECT OF CHILD WORK BEHAVIOR ON HEMOGLOBIN LEVELS

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ABSTRACT: THE EFFECT OF CHILD WORK BEHAVIOR ON HEMOGLOBIN LEVELS

Intoduction: he relationship between the work behavior of crew members on hemoglobin levels, with unhealthy work behavior variables, so that it can cause a decrease or increase in workers' hemoglobin levels. The research was carried out at the Nusantara Port of Parepare KM. Queen Soya.

Objectives: From this research formulate a problem to see the relationship between variables on the work behavior of crew members

Method: Data processing using Chi square test. The research method used is ex post facto, used to examine the relationship between two or more variables, where the independent variable has occurred previously through the treatment of other parties. Based on the data collection method, this research is an observational study, because the data were obtained through observation and interviews, and the research object was not treated during the study.

Results: The results of the study of $P < 0.05$ was 0.36

Conclusion: indicating that there was no significant effect on Hb levels.

Keywords: Blood, Hemoglobin, workers

INTRODUCTION

Blood consists of two components, namely a liquid component called blood plasma and a solid component called blood cells. Blood cells consist of three types, namely erythrocytes, platelets and leukocytes. Hemoglobin is a tetrametric protein of erythrocytes that binds to non-protein molecules, namely iron porphyrin compounds, also known as heme. Hemoglobin has two transport functions which are indispensable in the human body. Hb levels can increase and decrease which can be caused by several factors, one of which is work behavior within the scope of the ship. Work behavior that becomes the variable of this research is consumption of alcoholic beverages,

workload, amount of sleep time, and smoking behavior (Casquero, H., Bona-Casas, C., & Gomez, H. 2017).

Physical activity carried out by humans will affect the level or decrease in hemoglobin levels in the blood. Physical activity is also divided into three categories, namely light physical activity, moderate physical activity, and heavy physical activity. This, if intense can affect hemoglobin levels (Nader, E., Skinner, S., Romana, M., Fort, R., Lemonne, N., Guillot, N., ... & Connes, P. 2019).

From several studies, the journal raised the title of hemoglobin related to behavior such as smoking, the effect of hemoglobin levels on physical activity, the effect of changes in hemoglobin on smoking

behavior, and the effect of changes in hemoglobin on sleep deprivation behavior. that can occur due to work activities that must be carried out. In this study, the authors raised the same theme but with a different sample of respondents, namely Kappa's subordinates (ABK) (Choi, D. W., Jeon, J., Lee, S. A., Han, K. T., Park, E. C., & Jang, S. I. 2018).

METHODS

The research method used is ex post facto. Based on the method

of data collection, this research is an observational study, because the data were obtained through observation and interviews, and the research object was not treated during the study. In terms of time, this research design is included in a cross sectional study because interviews and observations of the variables were carried out simultaneously in a certain period of time. The formula used is the chi square test.

$$\chi^2 = \frac{(O-E)^2}{E}$$

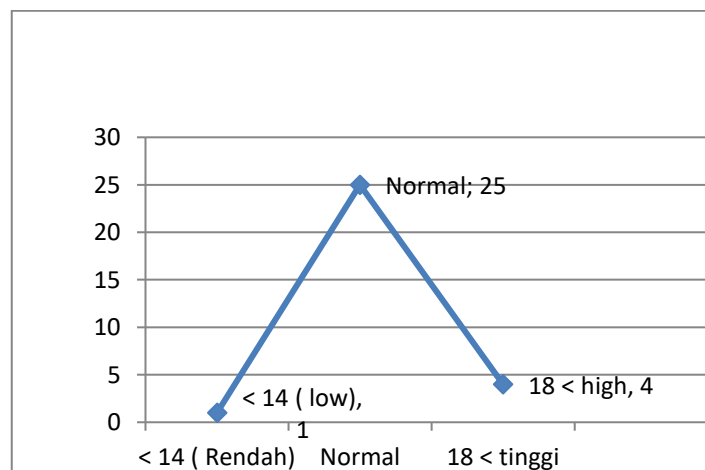
RESULTS AND DISCUSSION

Distribution of respondents based on hemoglobin levels

The distribution of respondents based on hemoglobin

levels on the crew of KM Queen Soya Pelabuhan Nusantara Parepare City can be seen in:

Diagram 1 the percentage of hemoglobin levels of crew members

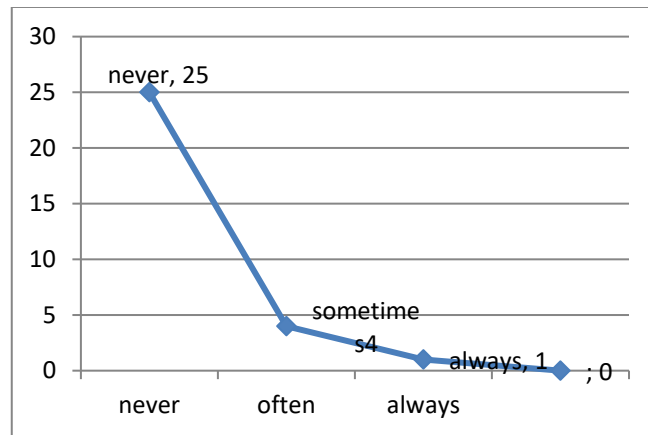


Distribution of respondents based on alcohol consumption behavior

The distribution of respondents based on the level of

consumption of alcoholic beverages on the crew of the KM Queen Soya Port of Nusantara Parepare City can be seen in:

Diagram 2, percentage of respondents' frequency of alcohol consumption

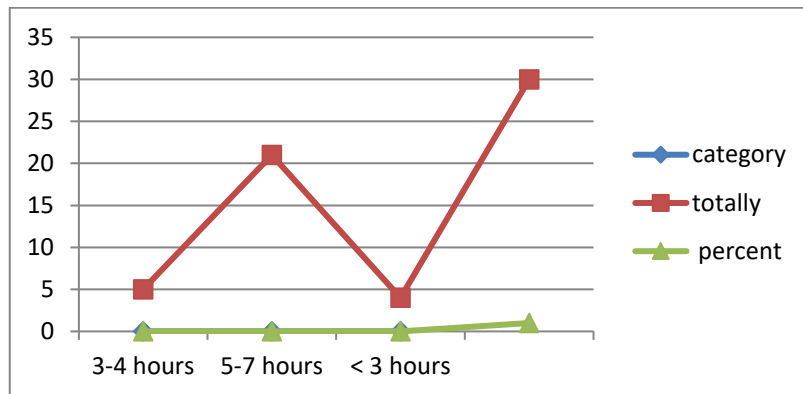


Distribution of respondents to hours of sleep

The distribution of respondents based on sleeping time

on the crew of the ship KM Queen Soya Pelabuhan Nusantara Parepare City can be seen at:

Diagram 3, the percentage of the crew's sleep frequency

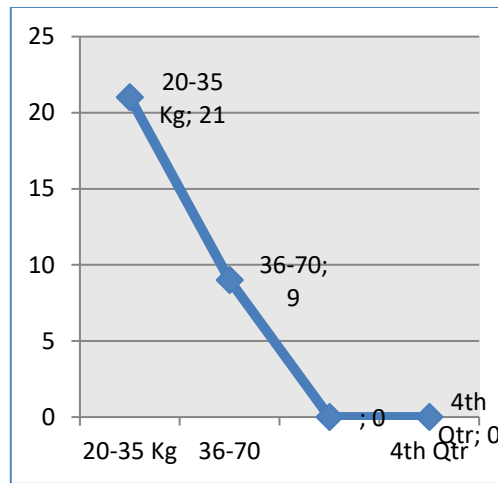


Distribution of respondents to work activities (workload)

The distribution of respondents based on work activities

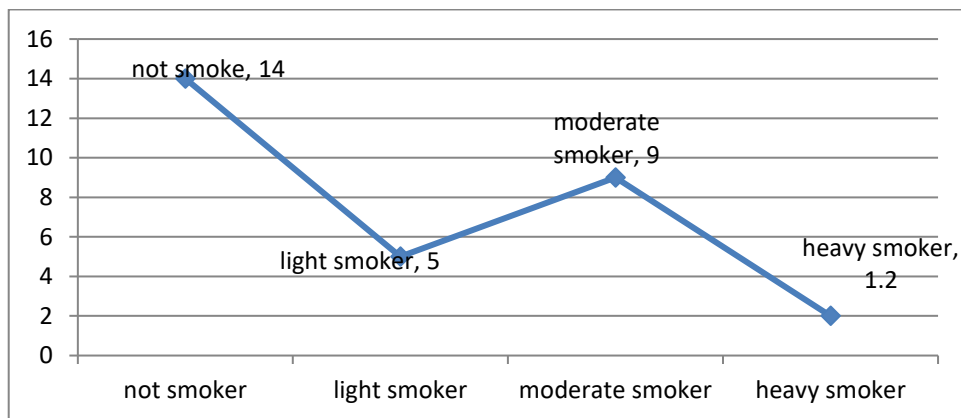
(workload) on the crew of the KM Queen Soya Port of Nusantara Parepare City can be seen at:

Diagram 4, percentage of workload activity frequency



Distribution of respondents on smoking behavior

Diagram 5, the percentage of my frequency of smoking on the crew



Mean of recapitulation four variable research

Age	Hb	Alcohol Consumption	Time of sleep (hour)	Smoker status	Work load
20	13,9 (low)	-	<3	light	Medium
22	13,5 (low)	-	5-7	-	Light
38	18,3 (high)	-	5-7	-	Light
25	18,2 (high)	Always	3-4	light	Medium
30	20,1 (high)	Often	<3	-	Medium
20	20,1 (high)	-	5-7	-	Light

CONCLUSION

Based on the discussion shows the statistical test using the chi square test formula with a value of $p < 0.05$ which is used in statistics shows a value of 0.36 . with this it can be concluded that there is no significant effect between smoking behavior and the effect of changes in Hb levels. Based on the results of research, theory and related research, researchers assume that this is due to many other factors that can affect hemoglobin levels to decrease, to normal and also to increase, be it work units, work activities, or food or nutrition intake.

Thank You

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REFERENCES

- Ningsih, S. E. W. (2019). Analysis of Hb Padar in Field Project Workers, 101-109.
- Amelia, R. (2016). The Relationship between Smoking Degrees Based on the Gunadi Index, VI (2016, July-December). Overview of hemoglobin levels in construction workers, volume 4.3
- Casquero, H., Bona-Casas, C., & Gomez, H. (2017). NURBS-based numerical proxies for red blood cells and circulating tumor cells in microscale blood flow. *Computer Methods in Applied Mechanics and Engineering*, 316, 646-667.
- Choi, D. W., Jeon, J., Lee, S. A., Han, K. T., Park, E. C., & Jang, S. I. (2018). Association between smoking behavior patterns and glycated hemoglobin levels in a general population. *International journal of environmental research and public health*, 15(10), 2260.
- Kukuh, P. P. M. A. (2017). Correlation of Changes in VO2Max Value, Erythrocytes, Hemoglobin and Hematocrit, 161-170.
- Nader, E., Skinner, S., Romana, M., Fort, R., Lemonne, N., Guillot, N., ... & Connes, P. (2019). Blood rheology: key parameters, impact on blood flow, role in sickle cell disease and effects of exercise. *Frontiers in physiology*, 10, 1329.
- Petronela R., Mawo, S. D. (2015). Relationship of Sleep Quality With Hemoglobin Levels, 258-163.
- Rizkiawati, A. (2012). Factors Associated with Hemoglobin Levels, 663-669.
- Valerie, I. R., Gunadi. (2016). Overview of Hemoglobin Levels in construction workers. Vol.4 , no 2.
- Topaz, K. T. (2015). Alcohol and its effects on health vol.4, no 8
- Herni, L. U. (2018). Several Risk Factors for Hypertension in Sailors (Children of the Ship) vol.8, no 1.
- Hasanuddin Piri Kita. (2014). The Effect of Smoking Habits and Alcohol Consumption on the Incidence of Hypertension. Vol.5,No.5