

RELATIONSHIP OF NUTRITIONAL STATUS, NUTRITIONAL INTAKE AND HISTORY OF DISEASE WITH WORK FATIGUE IN INFORMAL SECTOR RICE FARMERS IN TEUPIN PANAH VILLAGE, ACEH BARAT REGENCY

Dharma Andika Yudha¹, Fitriani²

^{1,2}Public Health Study Program, Faculty of Public Health, Teuku Umar University, Indonesia.

^{1,2} Jl. Alue Peunyareng, Ujong Tanoh Darat, Kec. Meureubo, Kabupaten Aceh Barat, Aceh 23681

E-mail: : ¹yudhadharmaandika@gmail.com, ²fitriani@utu.ac.id

ABSTRACT

This study aims to determine the relationship between nutritional status, nutritional intake and history of disease with work fatigue in informal sector farm workers. The type of research used is analytic observation using the Cross Sectional research method. Time and location This research was carried out in Gampong Teupin Panah, Kaway XVI District, Aceh Barat Regency, Aceh in 2022. It was carried out in January - May 2022, Total population of 30 rice farmer workers . Based on the results of this study, the history of illness in the informal sector farm workers of Gampong Teupin Panah is not related to work fatigue because this may be due to other factors, namely the health condition and nutritional status of farm workers at the time of the study. Even though the rice farmer workers have a history of disease, the disease may have been experienced for quite a long time and at the time of the research their health condition was in good condition and their nutritional status was adequate. The calories needed to work are still balanced with the work done so that even though the rice farmer workers have a history of illness, it does not affect their work ability. The conclusion of this study is that work fatigue in informal sector rice farmer workers has high work fatigue by 80% or 24 of 30 respondents experience high work fatigue. The calories needed to work are still balanced with the work done so that even though the rice farmer workers have a history of illness, it does not affect their work ability. The conclusion of this study is that work fatigue in informal sector rice farmer workers has high work fatigue by 80% or 24 of 30 respondents experience high work fatigue. The calories needed to work are still balanced with the work done so that even though the rice farmer workers have a history of illness, it does not affect their work ability. The conclusion of this study is that work fatigue in informal sector rice farmer workers has high work fatigue by 80% or 24 of 30 respondents experience high work fatigue.

Keywords: *relationship, nutritional status, nutritional intake and disease history, rice farmer workers, fatigue*

1. INTRODUCTION

Indonesia's industry is growing very rapidly both in the formal and informal sectors, along with the increasing number of working people, now reaching 111.3 million people. The informal sector absorbs 76.69 million workers. The informal sector according to the Central Bureau of Statistics is a non-directory company (PND) and household (RT) with a workforce of less than 20 people. The informal sector has special characteristics, including self-employment, family business, irregular working hours and salaries, work is often done at home, no government assistance and often not a legal entity. There are groups of informal workers who are organized and some are not.¹

Business success in the informal sector is also supported by occupational health which seeks to overcome health problems resulting from work, thereby increasing welfare and productivity. In accordance with the work safety law No.1 of 1970 which states that every worker has the right to protection for his safety in doing work for the welfare of life and increasing production and work productivity.¹

Worker productivity is closely related to the nutritional status of workers, adequacy and a balanced distribution of calories while working and doing a good job. A person with poor nutritional status may not be able to work with maximum results because work performance is influenced by a

RELATIONSHIP OF NUTRITIONAL STATUS, NUTRITIONAL INTAKE AND HISTORY OF DISEASE WITH WORK FATIGUE IN INFORMAL SECTOR RICE FARMERS IN TEUPIN PANAH VILLAGE, ACEH BARAT REGENCY

Dharma Andika Yudha, Fitriani

person's health status. Healthy workers will work more diligently, productively and thoroughly so that they can prevent work accidents that may occur while working².

Nutrition for workers has an important role, both for welfare and in order to increase discipline and productivity. Therefore, workers need to get adequate nutritional intake in accordance with the type or workload they do. Lack of nutritional value in the food consumed by workers on a daily basis will have bad effects on the body, such as: decreased body defense against disease, lack of physical ability, decreased body weight, thin body, pale face, lack of enthusiasm, lack of motivation, sluggish reaction and apathy and so on. In such circumstances, it cannot be expected to achieve optimal work efficiency and productivity³.

Nutritional problems that are in abnormal conditions, whether they are excess or less when they reach adulthood or at the age of over 18 years are a problem that needs attention, because it can trigger the risk of disease and can cause a person to feel tired quickly, as well as health status can affect work fatigue that can be seen from the history of the illness. A person who feels his body is in an unhealthy state will experience fatigue more quickly as a result of certain diseases that are felt or experienced⁴.

The initial data found were complaints about fatigue, namely a feeling of heaviness in the head experienced by Farm Workers in Teupin Panah Village, Kaway XVI District, Kab. West Aceh. Based on the description above, the researchers are interested in knowing the relationship between nutritional status, nutritional intake and disease history with work fatigue in informal sector farm workers.

2. IMPLEMENTATION METHOD

The type of research used is analytic observation using the Cross-Sectional research method. Cross Sectional is research to study the dynamics of correlation between risk factors and effects, by approach, observation or data collection all at once (point time approach).⁵ Time and location This research was conducted in Teupin Panah Village, Kaway XVI District, Aceh Barat Regency, Aceh in 2022. It was conducted in January – May 2022, with a population of 30 rice farmer workers. The instrument in this study used a 24-hour food recall questionnaire to determine nutritional intake, to measure the nutritional status of workers using a bathroom scale and microtoise. After that, determine the nutritional status of each respondent based on BMI with the formula: BB/TB^2 , a questionnaire measuring feelings of work fatigue (KAUPK2) to determine the level of work fatigue, to determine the relationship between nutritional status and work fatigue, nutrient intake with work fatigue, disease history with work fatigue by using Chi Square test and Fisher Probability Exact Test as an alternative test.

3. RESULTS AND DISCUSSION

3.1. RESULTS

1. Univariate Analysis

Nutritional status

Table 1. Frequency Distribution of Respondents Based on the Nutritional Status of Workers

No	Nutritional status	Frequency	Percentage
1	NORMAL_THINK	10	33.3%
2	FAT	11	36.7%
3	OBESITY LEVEL 1	8	26.7%
4	OBESITY LEVEL 2	1	3.3%
	Total	30	100%

Based on table 1. It can be seen that 11 out of 30 respondents tend to be more likely to have obese nutritional status with a percentage of 36.7%.

Nutrient Intake

Table 2. Frequency Distribution of Respondents Based on Nutrient Intake

No	Nutritional status	Frequency	Percentage
1	NOT ENOUGH	14	46.7%
2	GOOD	16	53.3%
	Total	30	100%

Based on table 2. It can be seen that from 16 out of 30 respondents already have good nutritional intake with a percentage of 53.3% and those who have less nutrient intake 14 of 30 respondents with a percentage of 46.7%.

Illness History

Table 3. Frequency Distribution of Respondents Based on Disease History

No	Nutritional status	Frequency	Percentage
1	YES	16	53.3%
2	NO	14	46.7%
	Total	30	100%

Based on table 3. It can be seen that 16 of 30 respondents had a history of disease with a percentage of 53.3% and 14 of 30 respondents did not have a history of disease with a percentage of 46.7%.

Work Fatigue

Work Fatigue

Table 4. Frequency Distribution of Respondents Based on Work Fatigue

No	Nutritional status	Frequency	Percentage
1	LOW	6	20.0%
2	TALL	24	80.0%
	Total	30	100%

Based on table 4. It can be seen that 24 out of 30 respondents experienced high work fatigue as much as 80% and 6 out of 30 respondents experienced low work fatigue as much as 20%.

3.2. Bivariate Analysis

Relationship between Nutritional Status and Work Fatigue

Table 5. Relationship between Nutritional Status and Work Fatigue

No	Nutritional status	Work Fatigue		Total	P-Value
		Low	Tall		
1.	NORMAL_THINK	2	8	10	0.941
	PERCENTAGE	2.0%	8.0%	10.0%	
2	FAT	2	9	11	
	PERCENTAGE	2.2%	8.8 %	11.0%	
3	OBESITY LEVEL 1	2	6	8	
	PERCENTAGE	1.6%	6.4%	8.0%	
4	OBESITY LEVEL 2	0	1	1	
	PERCENTAGE	0.2%	0.8%	1.0%	

RELATIONSHIP OF NUTRITIONAL STATUS, NUTRITIONAL INTAKE AND HISTORY OF DISEASE WITH WORK FATIGUE IN INFORMAL SECTOR RICE FARMERS IN TEUPIN PANAH VILLAGE, ACEH BARAT REGENCY

Dharma Andika Yudha, Fitriani

Based on table 5. The relationship between nutritional status and work fatigue in informal sector farm workers in Teupin Panah Village which involved 30 farm workers, can be seen statistically using the chi square test, the results are $p = 0.941$ ($p > 0.05$). It can be stated that there is no significant relationship between nutritional status and work fatigue in informal sector farm workers in Teupin Panah Village.

Table 6. Relationship of Nutrient Intake with Work Fatigue

No	Nutrient Intake	Work Fatigue		Total	P-Value
		Low	Tall		
1.	NOT ENOUGH	3	11	14	0,855
	PERCENTAGE	2.8%	11.2%	14.0%	
2	ENOUGH	3	13	16	
	PERCENTAGE	3.2%	12.8%	12.8%	

Based on table 6. The relationship between nutrition intake and work fatigue in informal sector farm workers in Teupin Panah Village which involved 30 farm workers, can be seen statistically using the chi square test, the results are $p = 0.855$ ($p > 0.05$). It can be stated that there is no significant relationship between nutrient intake and work fatigue in informal sector farm workers in Teupin Panah Village.

Table 7. The Relationship between Disease History and Work Fatigue

No	Illness History	Work Fatigue		Total	P-Value
		Low	Tall		
1.	YES	4	12	16	0.464
	PERCENTAGE	3.2%	12.8%	14.0%	
2	NO	2	12	14	
	PERCENTAGE	2.8%	11.2%	14.2%	

Based on table 7. The relationship between disease history and work fatigue in informal sector farm workers in Teupin Panah Village which involved 30 farm workers, it can be seen statistically using the chi square test, the results of $p = 0.464$ ($p > 0.05$) can be stated that there is no There is a significant relationship between the history of illness and work fatigue in informal sector farm workers in Teupin Panah Village.

4.DISCUSSION

In this study, the characteristics of the respondents studied were nutritional status, nutrient intake, history of illness and work fatigue. Nutritional status was obtained from measurements using a bathroom scale and microtoise. After that, determine the nutritional status of each respondent based on BMI with the formula: BB/TB^2 , measurement of nutrients using a 24-hour food recall survey which is compared with the nutritional needs of farm workers according to gender and age, to measure disease history and work fatigue using a questionnaire.

Based on table 1 states that 36.7% of respondents or 11 of 30 respondents have a nutritional status of fat. Nutritional status is a condition caused by a balance between nutrient intake from food and the nutritional needs needed for the body's metabolism. Nutritional status is influenced by two factors, namely food consumption and health levels, especially the presence of infectious diseases, these two factors are direct causes⁶

Table 2 states the nutritional intake of respondents, namely 16 of 30 respondents or 53.3% consuming good or sufficient intake of nutrients. Fulfillment of nutritional adequacy in the workplace

is the application of occupational safety and health requirements aimed at improving the health of workers. The nutritional health of workers is the most important factor for workers to carry out public activities or work. This can greatly affect a person's ability to perform a task.

Table 3 states that the respondent's disease history is 16 of 30 respondents who have a history of disease or 53.3% who have a history of disease. The history of illnesses experienced by the informal sector farm workers of Gampong Teupin Panah are high blood pressure, low blood pressure and asthma.

Table 4 states that 80% or 24 of the 30 respondents experienced work fatigue. General fatigue is usually characterized by reduced willingness to work caused by the intensity and duration of physical work, environmental conditions, mental causes, health status and nutritional conditions. Nutritional status is very helpful for workers in carrying out their work. Sufficient nutritional needs will produce energy so that the workforce will not lack energy which can cause fatigue⁷.

Based on the results of the research on the relationship between nutritional status and work fatigue statistically which has been described in table 5, it shows that there is no relationship between nutritional status and work fatigue, this study is not in line with research conducted by Natizatun that there is a relationship between nutritional status and fatigue in workers. This is in line with Triyunita's research which states that Normal nutritional status is very helpful for workers in carrying out their work. Sufficient nutritional needs will produce energy so that the workforce will not lack energy which can cause fatigue. If the calorie intake does not match their needs, the workforce will feel tired faster, compared to workers with adequate nutritional intake. In this study, the nutritional status of the respondents tended to be normal, therefore there was no relationship between nutritional status and work fatigue⁸. The results of the study show that more workers have normal nutritional status, which means workers have good nutritional status so that workers have good immunity, so one way to maintain it is to maintain an ideal or normal body weight.⁹

Table 6 states that there is no significant relationship between nutritional intake and work fatigue. This research is also in line with Triyunita's research which states that if the calorie intake or nutrient intake is not in accordance with their needs, the workforce will feel tired faster, compared to workers with adequate intake.⁸. The results of this study stated that farm workers in the informal sector of Gampong Teupin Panah consumed adequate nutrient intake with a percentage of 53.3% or 16 of 30 respondents consumed adequate or good nutritional intake so that there was no relationship between nutrient intake and work fatigue.

The history of illness in this study has no relationship with work fatigue as described in table 7. This is not in line with the theory presented that physiological and psychological fatigue can occur when the body is sick or someone has a complaint about a certain disease. The worse the health condition of a worker, the faster fatigue will arise¹⁰.

History of illness in informal sector farm workers at Gampong Teupin Panah is not related to work fatigue because this may be due to other factors, namely the health condition and nutritional status of farm workers at the time of the study. Even though the rice farmer workers have a history of disease, the disease may have been experienced for quite a long time and at the time of the research their health condition was in good condition and their nutritional status was adequate. The calories needed to work are still balanced with the work done so that even though the rice farmer workers have a history of illness, it does not affect their work ability¹¹.

5. CONCLUSION

The conclusion explains what is expected in the Introduction section, as well as conclusions from the Results and Discussion *section*. Conclusions can also be added to the development plan for the implementation of future service.

RELATIONSHIP OF NUTRITIONAL STATUS, NUTRITIONAL INTAKE AND HISTORY OF DISEASE WITH WORK FATIGUE IN INFORMAL SECTOR RICE FARMERS IN TEUPIN PANAH VILLAGE, ACEH BARAT REGENCY

Dharma Andika Yudha, Fitriani

REFERENCES

- Gerson, RF (2004). *Measuring Customer Satisfaction*. Jakarta: PPM.
- Haefner, JE, Deli-Gray, Z., & Rosenbloom, A. (2011), "The importance of brand liking and brand trust in consumer decision making: Insights from Bulgarian and Hungarian consumers during the global economic crisis", *Managing Global Transitions: International Research Journal*, Vol. 9 No.3, pp.249-273.
- Hafeez, S., & Hasnu, S. (2010), "Customer satisfaction for cellular phone in Pakistan: A case study of Mobilink", *Business and Economics Research Journal*, Vol.1 No. (3), pp. 35-44.
- Hafeez, S. and Muhammad, B. (2012), "The Impact of Service Quality, Customer Satisfaction and Loyalty Programs on Customer's Loyalty: Evidence from Banking Sector of Pakistan", *International Journal of Business and Social Science*, Vol.3 No. 16, pp. 200-209.
- Heriyadi, Listiana, E. and Lay, YN (2018). *An Analysis of the Influence of Service Quality, Personal Selling and Complaint Handling and Trust on Customer Retention (Survey of Bank Harda International Savings Customers, Pontianak Branch)*. Volume 7 Number 2.
- Kotler.P. (2008). *Marketing Principles 2*. Twelfth Edition. Jakarta: Erlangga.