

Giving Socialization Ergonomic Work To Improve Knowledge On Farmer

Qomariyatus Sholihah, Aprizal Satria Hanafi, Atikah Rahayu, Fauzie Rahman, Fahrini Yulidasari

Abstract: Agricultural sector is one of the types of jobs that have a high risk to cause fatigue. Many things affect the level of fatigue on the farmers, among which is the workload. Majority causes impact of workload is the behavior of workers who less attention to ergonomic principles. The purpose of this study is to explain the influence of socialization ergonomic work to work knowledge of farmers in the Akar Bagantung Village of Banjar District South Kalimantan. This research method is done by analyzing the situation to find out the problem, then do the experiment by providing ergonomic working socialization of knowledge ergonomic work on the farmers. The population in this study is a farmer in the Akar Bagantung Village as many as 60 people as well as a sample. Wilcoxon test results show a significant difference of farmer knowledge before and after socialization activities with a p value 0.000. Before the activities knowledge average of participants was 56.50 and after the activities knowledge average increased to 75.00.

Keywords: socialization, ergonomic, knowledge, farmer

1. INTRODUCTION

Occupational Health and Safety (OHAS) is an attempt to create working conditions that are safe and comfortable, to achieve high labor productivity. Therefore, the absolute OHAS to be implemented on any type of field work. OHAS effort is expected to prevent and reduce the risk of accidents and occupational diseases. Occupational safety and health is an important aspect as supporting the well-being and increased employee productivity (1). Agricultural development is essentially processing activities of natural resources and the environment, especially land resources, water, flora, fauna and germplasm as well as the production and processing of agricultural products. Agricultural production should continue to increase, to balance the needs of the population, but unfortunately this was not matched by the condition of the human body as a farmer (2). Work performed by the human in their life should be in accordance with the condition of the body and they energy. This compliance is related to the balance between work and the condition of the human body. This balance will have a big impact on the health and human performance at work. Indonesian farmers still use traditional ways of working that is still much use of physical force, compared with the use of modern tools. Farming activities carried out for 8 hours, from 07.00 until 16.00, with a break at 12:00 until 13:00. The type of activities carried out starting from land preparation, planting, maintenance and harvesting (2). Most of the potential hazard to the farmer, namely sharp hoe components, heat, UV light and a stepping ground. In addition there is the danger of ergonomics, which caused a bending position when hoeing. According Ernawati and Tualeka (2014) design of work equipment that does not fit

can cause musculoskeletal disorders (3). Agricultural sector is one of the types of jobs that have a high risk. Extreme working conditions as well as the manner and the use of technology in managing traditional land still can affect the health and safety of farmers (4). Someone who perform the same movements continuously for a long time will feel physical fatigue. Fatigue was caused by body movements constantly and unwittingly leads to a decrease in the muscular system. Decrease in muscular system is caused by muscle tension in the muscles of the lower extremities resulting in slowness of motion, short steps, the foot can not tread powerful and more easily swayed (5). Many things that cause fatigue among farmers is the workload. The workload is how long someone doing work activities in accordance with the capability and capacity owned working without showing signs of fatigue. From the viewpoint of each workload ergonomics received by a person shall be in accordance and balanced with physical ability, cognitive ability, as well as the limitations of human beings who receive the burden (2). The majority cause of the workload is the behavior of workers who pay less attention to ergonomics (adjustment situations in the work environment). Factors to consider in planning related to human ergonomics is a physical or mental limitations possessed by humans. If these factors are ignored can have a negative impact on the health of workers (6). One of the occupational health and safety problems that are often experienced by workers is a matter of ergonomics. The application of ergonomics principle that all work activities can cause workers to experience physical and mental stress. Ergonomics strive for this pressure is still within the tolerance limits (4). The position of the body is often bent and rest periods are less likely to cause an increase in cardiac work. Beside that attitude when making plant seeds often done with no ergonomic. Farmers often do not bending the knee and often bending the body when taking plant seeds. Also sometimes the farmers take the rice plant seeds from a distance that is not affordable, causing excessive muscle work (4). Standing position that no ergonomics can lead to musculoskeletal disorders, as long standing, muscles tend to work static, causing tissue elasticity decreases and pressure increases muscle causing pain in the back. Pressure on the spinal nerves bearings resulting in spinal disc herniation can also occur. Not ergonomic posture can cause an increase in pressure on the disc, more ergonomic, the possibility of interference

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will be experienced visceral organs and spine so that the smaller the risk of low back pain is reduced (1). Someone who did less ergonomic work can suffer musculoskeletal disorders in the body, especially for those who work in agriculture. Most of the musculoskeletal disorders experienced by farmers is pain. Pain experienced by each of these farmers is subjective (5). Perceived pain can interfere with the activity of working. The pain will make Farmers movement becomes not maximum so that the productivity of work will be disrupted (5). Based on the above background, research is needed to clarify the effect of socialization ergonomic work towards a working knowledge of the farmer in the Akar Bagantung village of Banjar Regency South Kalimantan.

2. Research Methods

This research used experimental method with quasi-experimental study design in which research is conducted to see the effect of socialization ergonomic working against ergonomic working knowledge on farmers.

1. Briefing for 2 days with the provision of multi-disciplinary matter related to public health. Covering health and safety, ergonomics, occupational diseases, health promotion, environmental health.
2. Field observations
3. Request permission to the village to be willing to give permission activities.
4. Implementation.

Instruments in this research were a questionnaire containing material on the knowledge of ergonomics in the work. Questionnaires were administered before and after the socialization conducted to see the effect of activity.

Data collected for immediate editing of data completeness and accuracy. Further data tabulation and analyzed using the Wilcoxon test with 95% degree of confidence to see any difference or socializing influence ergonomic work towards Farmerknowledge.

3. Results And Discussion

A. Univariate Analysis

In this research, the focus of research is knowledge, academic achievement and risk factors of accidents before and after socialization of OHAS School. Overview of knowledge, academic achievement and risk factors of accidents before and after OHAS school socializations follows.

1. Knowledge

Based on the results of questionnaires from 60 respondents, the average knowledge obtained by the respondents can be seen in table1.

Table1. Average of Respondents Knowledge

		Statistics	
		Knowledge	Knowledge
N	Valid	60	60
	Missing	0	0
Mean		56.50	75.00

Based on the table above can be seen, there are differences in farmer knowledge before and after socialization. After socialization there are increased of knowledge. Before the activities knowledge average of participants was 56.50 and after the activities knowledge average increased to 75.00.

B. Bivariate Analysis

1. The difference before and after the socialization of knowledge ergonomic working at Farmers

Bivariate analysis using Wilcoxon test to know the difference of knowledge before and after socialization. Wilcoxon test results can be seen in table 2.

Table2. The difference before and after the socialization of knowledge ergonomic working at Farmers

Test Statistics ^{b,c}			
			Knowledge – Knowledge
Z			-6.765 ^a
Asymp. Sig. (2-tailed)			.000
	Sig.		.000
Monte Carlo Sig. (2-tailed)	95% Confidence Interval	Lower Bound	.000
		Upper Bound	.049
		Sig.	.000
Monte Carlo Sig. (1-tailed)	95% Confidence Interval	Lower Bound	.000
		Upper Bound	.049

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

c. Based on 60 sampled tables with starting seed 299883525.

Data analysis using Wilcoxon test. This test is used because the data is not normal. Data normality test results before and after socialization to the knowledge variable using Kolomogorov-Smirnov test with $p(0.000) > 0.05$ then concluded the data is not normally distributed. Wilcoxon test results with a 95% confidence level, to see the differences before and after the socialization of knowledge ergonomic work shows, p value = 0.000. From the p value in the Wilcoxon test results obtained H_0 decision rejected ($p < 0.05$), which means there is a significant difference before and after the socialization of knowledge ergonomic work. This is because the respondents very concerned about the material presented during the socialization, it can be seen from the enthusiastic respondents to pay attention the socialization and provide feedback in the form of a question, so that the information can be received well. Based on Ratna Wati research (2011) mentions a concern is very important in following socialization activities well and will affect the received knowledge, high attention to an information will make the information can be received well

so as to increase knowledge (7,8). In addition to the environmental conditions that support activities such as the availability of facilities and activities proper timing can improve one's knowledge (9,10). This study was similar to the results of research Cicilia et al (2012) statistical test results are obtained $p = 0.000$ (<0.05), which means there is significant influence between knowledge before and after the administration of socialization of health to elementary school students (11). It is also supported by research Widyawati (2010) statistical test results obtained $p = 0.000$ means that there is the influence of the socialization of knowledge of primary school students (12). Akhmad et al research (2013), also supports this research, statistical test results are obtained $p = 0.000$, ie personal hygiene are socializing influence on the level of knowledge of elementary school students (13). Socialization is one way to convey information quickly to many people. Socialization is a practical and simple way to convey information to others (13). Socialization involves the activity of listening, speaking and seeing what makes this method effective. Accepted knowledge can be the basis for custom development. Changes in knowledge can lead to changes in habits (14).

4. Conclusion

Based on the evaluation there is a difference in farmer knowledge before and after the socialization with p value 0,000. Before the activities knowledge average of participants was 56.50 and after the activities knowledge average increased to 75.00. Increased knowledge is expected to improve the performance of Farmers.

Acknowledgement

The authors would like to acknowledge the Public Health Study Program of Mangkurat University for its notice able help, Officials and community of Akar Bagantung Village.

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