

OCCUPATIONAL HEALTH ANALYSIS IN MAMBAK VILLAGE, PAKIS ADJI SUB DISTRICT, JEPARA REGENCY

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Abstract

Occupational health problems are still high in Indonesia. Mambak village located in Jepara Regency is an industrial area, with most of its people working as factory workers. This study aims to see the condition of occupational health in the village of Mambak, Sub District Pakis Adji, Jepara Regency. This was a descriptive research with cross sectional study design. Data collection was obtained by survey to work places in Mambak village. Research sample was taken by total sampling method. The research questionnaire used a control sheet from Puskesmas Pakis Adji, Regency of Jepara. There were 48 workplaces located in Mambak village, 60.4% of the largest businesses are furniture. workplaces with noise hazards were 87,5% and 100% without noise control. About 45.83% had no first aid infrastructure, all workers did not use a complete Personal Protective Equipment (PPE), Ear cover, clothes, and shoes were not used. Occupational risk factors was 100%, work-related diseases was 68.75% due to eye irritation and wound. Handling first aid work accident by giving red medication and in rinse water were 50%. Occupational disease in Mambak Village is still high. Work environments are not appropriate and occupational risk factors are still high. Prevention and treatment of occupational health in Mambak village is not compatible.

Keywords: Occupational health, Occupational disease, work related disease, Personal Protective Equipment

INTRODUCTION

About 45% of the world's population and 58% of the population over 10 years of age belong to the global workforce. Global labour force growth is expected to pick up slightly, to around 1.4 per cent in 2014. The workplace is a hazardous environment. Occupational health and safety hazards are common in many economic sectors and affect large numbers of workers. Approximately 30-50% of workers report hazardous physical, chemical or biological exposures or overload of unreasonably heavy physical work or ergonomic factors that may be hazardous to health and to working capacity.¹

The need for occupational health services is particularly acute in the developing and newly industrialized countries. Three elements of occupational

health are workplaces, workforces, and workplace hazards.² By the Law of Occupational Safety, it is seen clarity on the obligations of the workplace leader and the obligations of the workers in the implementation of safety.

Occupational Health Program as part of Occupational Safety and Health is aimed to protect workers to live healthy, free from health problems, and adverse effects caused by work. It is applicable to everyone in the workplace environment.³ To improve the health of workers by prevention of occupational accidents and diseases, hazard control in the workplace, occupational health promotion, treatment and rehabilitation.⁴

Puskesmas Pakis Aji is a public health center located in Jepara regency. Jepara Regency is an industrial area producing wooden furniture. Woods contain

chemicals that can irritate the eyes, nose and throat. Occupational disease of furniture industry are shortness of breath, dryness and soreness of the throat, sneezing, tearing and conjunctivitis (inflammation of the mucous membranes of the eye).⁵

Occupational Health Program should be carried out in Puskesmas Pakis Aji because based on data of Jepara regency health profile in 2013 shows that health service coverage of informal sector workers are still lower (38.07% of all workers) than health service coverage of formal sector workers (72.65% of all workers).⁶ Occupational health services for informal workers in Pakis Aji on 2013 was 43.84% lower than occupational health services of formal workers, 71.16%.⁶ The total population in Mambak Village, Pakis Aji Sub district in June 2016 was 4,526 people and mostly worked as factory or non-factory workers (informal sector).⁷ There is no data on workers health services coverage, both informal and formal. Therefore, researcher want to know the description of

occupational health in Mambak village, Pakis Aji Puskesmas, Jepara.

RESEARCH METHODS

This study was a observational research that used cross sectional study design. The research was conducted in Mambak Village, Pakis Aji Sub district, Jepara. The population of this research were all companies in Mambak Village. Total companies in Mambak Village are 48 and all such companies were being taken as research samples.

The researcher taken data by direct observation and interview owner and worker in company. The questionnaire used was a questionnaire checklist of informal sector work instruments that have been standardized National for Puskesmas in monitoring work health efforts. The researcher used descriptive analysis to know the description of work health effort in Mambak Village, Pakis Aji Sub district, Jepara.

RESULTS

Table 1. Characteristic Of Businesses In Mambak Village, Pakis Aji Sub District, Jepara

Variable	Frequency	Percentage
Type of business		
Furniture	25	60.41%
Sawmill timber	5	10.41%
Slep Coconut and Flour	1	0.02%
Fiber glass	1	0.02%
Finishing + Furniture	7	14.58%
Dowel	2	4.17%
Snack	7	14.58%
Exposure mode		
Skin	7	14.59%
Skin + Inhalation	13	27.08%
Inhalation	28	58.33%
Working with PPE		
Yes	0	0%
No	29	60.42%
Sometimes	19	39.58%
Type of PPE		
Gloves	3	15.79%
Mask	19	100%
Shield clothing	0	0%
Shoes	0	0%
Earmuffs	0	0%
Protective glasses	4	21.05%

Risk Factor			
Physical		48	100%
Chemistry		47	97.92%
Biology		43	89.58%
Ergonomics		47	97.92%
Psychosocial		0	0%
Work accident		48	100%

Table 2. Physical Risk Of Business Noise Of Mambak Village, Pakis Aji Sub District, Jepara

		Frequency	Percentage
There is a noisy source found in the workplace	Yes	42	87.5%
	No	6	12.5%
	Total	48	100%
There is noise measurement	Yes	0	0%
	No	48	100%
	Total	48	100%
There is noise control	Yes	0	0%
	No	48	100%
	Total	48	100%
Some workers wear APT (Ear Protective Tool). If so, specify the type	Yes	0	0%
	No	48	100%
	Total	48	100%
There is a <i>barrier</i> against the noise source	Yes	0	0%
	No	48	100%
	Total	48	100%
There is a <i>hearing conservation program</i>	Yes	0	0%
	No	48	100%
	Total	48	100%
Workers have difficulty in doing work	Yes	0	0%
	No	48	100%
	Total	48	100%

Table 3. Occupational Diseases At Mambak Village, Pakis Aji Sub District, Jepara

Occupational illness	Frequency	Percentage
Eye irritation + wounds from sharp objects	34	68.75%
Injuries due to sharp, blunt, and eye irritation	2	4.17%
Sharps wounds	12	25%
Skin Irritation	1	2.08%
Total	48	100%

Table 4. First-Aid Accidents At Mambak Village, Pakis Aji Sub District, Jepara

Accident	First aid accident	Frequency	Percentage
	Given plaster, rinsed	8	16.67%
	Given a red medicine, rinsed water	24	50%
	Given clay dust	1	2.08%
	Blessed red	10	20.83
	Rinsed water	1	2.08%
	Oil ax, rinsed water	2	4.17
	Given plaster	1	2.08%
	Given Tiner, rinsed water	1	2.08%
	Given the sap of the plant "iodine life", was given a plaster	1	2.08%
	Total	48	100%

The company under study are 48 companies, which location in the village Mambak. The largest business type in Mambak village are 25 furniture (60.41%). the way of exposure to the body is through inhalation as much as 28 (58.33%).29 (60.42 %) worker not use Personal Protective Equipment /PPE when they working. Type of PPE that they used is mask 19 (100%).

The risk factor that affected is physical (100%), chemistry (97.92%), biology (89.58 %), ergonomics (97.92 %) and work accident (100 %). There are 42 (87.5%) found a noisy in the workplace and in the work place doesnt have noise measurement, noise control, barrier against noise source, hearing conservation program, and all the worker doesnt wear PPE (ear Protective Equipment). All of worker said they did not have difficulty in doing work. Occupational disease is eye irritation and wounds form sharp objects as many as 34 business (68,75%). First aid when there is accident to the worker in business is, rinsed water, and given povidone iodine as many as 24 business (50%).

DISCUSSION

The largest business type in Mambak village is furniture bussiness using wood.Woods contain chemicals that can irritate the eyes, nose and throat, causing shortness of breath, dryness and soreness of the throat, sneezing, tearing and conjunctivitis (inflammation of the mucous membranes of the eye).⁵ While the incident in the mambak workers exposed to eye irritation and exposed

to sharp objects. This happens because of the lack of use of PPE on workers and as previous articles say that wood contains ingredients that can irritate the eyes.

The work environment contributes to employee health. A sick environment can threaten health through biological and psychological pathways. Biologically, indoor air pollutants and toxins may cause illness. According to the study done on manufacturing industries in Mambak, Jepara, it was found that only some industries have an occupational health and safety management system, out of which only a few industries are strongly implementing, maintaining and following the occupational health and safety management system.⁸⁻¹⁰

The manufacture workers in Mambak, Jepara are still contact with hazardous material. With regards to hazardous working environment and controls of industrial hazards, some participating enterprises still need to improve their working conditions.^{11,12} The use of PPE are lack among workers in Mambak, Jepara. Workers in a wide range of industries are required to wear PPE to reduce or prevent exposures to hazardous chemicals, fire, particulates, or other health risks. Environmental/engineering controls should be utilized wherever possible to control exposures, with PPE used as a supplement or alternative when environmental/engineering controls are not sufficient or feasible.¹³

Based on the findings of the study, occupational diseases and illnesses exist in Mambak, Jepara mostly because of eye irritation and wounds from sharp objects. Another study showed that most frequent

health complaints of wood dust exposure were itching eyes, redness of the eyes, nasal blockage and runny nose. The sources of industrial diseases and illnesses are potentially because of the industrial workers are not even fully aware of the health hazards surrounding their work.^{13,14}

First aid in an accident in mambak is still not appropriate. Workers still provide improper handling when exposed to injuries, such as giving tiner, or clay dust. Only 50% use povidone iodine and rinsed with water. The study showed that there is a need in implementing and maintaining a good health safety and management system to ensure health and safety to the workers and to improve the safety standards in the manufacturing sectors in Mambak, Jepara.

ACKNOWLEDGEMENT

The authors are grateful to the people in Mambak village who have worked well together in the implementation of research activities. Puskesmas Mlonggo in Jepara and P2UKM (Educational Development of Health Efforts) team mates in Jepara who have assisted in providing guidance and support during this research activities.

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