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Work-Related Disease (WRD)

Siti Aisyah Umayyah[1]
Sriwijaya University, Indonesia
e-mail: sitiaisyahjambi0@gmail.com

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ABSTRACT

Occupational Safety and Health (OSH) is a joint effort between employers and employees to increase productivity by creating a safe and healthy work environment. The importance of OSH as part of decent work is also understood through the concept of epidemiology, which considers the interaction between host, agent, and environment in the workplace. In this context, this paper formulates several questions related to occupational diseases (OD), their causes, the spectrum of OD, and methods for early detection of OD. This paper aims to understand the concept of OD, examine the causes and risks of OD, understand the spectrum of diseases related to OD, and identify methods for early detection of OD. The benefits include a source of information and insight for readers about the concept of OWD, reading material and references for students and the community, and a source of knowledge in the field of OSH in the workplace. Thus, this paper is expected to contribute to increasing understanding and awareness of the importance of OSH in creating a safe and healthy work environment.
Keywords: *occupational diseases, occupational safety and health, work environment.*

INTRODUCTION

Occupational Safety and Health is a collaborative effort, mutual understanding, and participation between employers and employees within a company to carry out shared duties and responsibilities in the areas of safety, health, and security at work in order to increase productivity. Through the implementation of OSH, it is hoped that a safe and healthy workplace will be created, encompassing employees, customers, and visitors to a work location, thereby reducing or eliminating workplace accidents and work-related illnesses. The implementation of OSH is based on Government Regulation No. 50 of 2012 concerning the Implementation of the Occupational Safety and Health Management System, and OHSAS 18001, the international standard for the implementation of the OSH Management System.

The mortality rate due to workplace accidents and occupational diseases is quite high. According to data from the International Labor Organization, every year around 380,000 workers, or 13.7% of 2.78 million workers, die as a result of accidents at work or occupational diseases. In addition, more than 374 million

people suffer injuries, wounds, or illness every year as a result of accidents involving workers (ILO, 2018).

Based on accident data from the Social Security Administration Agency (BPJS) for employment, in Indonesia the number of work accidents reported increased in 2017 to 123,041 cases, while throughout 2018 it reached 173,105 cases. Each year, BPJS handles an average of 130,000 work-related accident cases, ranging from minor cases to fatal accidents (BPJS, 2018).

Occupational safety and health are important components of decent work. Physical conditions and mental demands in the workplace greatly determine the condition of workers. Work accidents cause great human, social, and economic losses, as do occupational diseases and diseases caused by work relationships. Thus, through the concept of epidemiology, we can understand how host-agent-environment contributes to the workplace environment.

METHODOLOGY

This study uses a descriptive qualitative research method. According to Sukmadinata (2016), this study aims to provide an overview and describe phenomena that occur both naturally and as a result of human engineering, with a focus on the characteristics, quality, and interrelationships between activities. The data source used in this study is secondary data. According to Creswell (2016), qualitative research is a type of research that explores and understands the meanings of a number of individuals or groups of people originating from social issues. Secondary data in this study was obtained from reference books, journal documents, online news, archives, and other literature reviews. The data collection method in this study was carried out through analysis, describing and explaining the conditions of the data in the field based on the research problem being studied.

RESULTS AND DISCUSSION

A. Occupational Diseases

Occupational diseases are part of health problems related to a person's work and are influenced by various factors in their environment. Occupational diseases, better known as occupational illnesses, are diseases caused by work factors or acquired while performing work. The work environment is a very influential factor and plays a role in causing occupational diseases. Occupational diseases (PAK) and work accidents (KK) among the Indonesian population have not been properly recorded. As contributing factors, these often occur due to a lack of awareness among workers and inadequate worker quality and skills. Many workers underestimate work risks, so they do not use safety equipment even though it is available.

B. Factors Causing Occupational Diseases

Work is a necessity for humans to earn an income to meet their daily needs. In the workplace, there are potential hazards that can cause health problems for workers. Potential hazards or exposure to workers can come from the work environment, work methods, and tools used at work. Health

problems for workers are also closely related to the amount of time spent in exposure; the longer the exposure, the greater the risk of health problems for workers.

Occupational diseases are illnesses caused by work and/or the work environment. Occupational diseases are diagnosed and determined through seven diagnostic steps, which include determining the clinical diagnosis, identifying the exposure experienced by workers in the workplace, determining the relationship between exposure and clinical diagnosis, the extent of exposure, whether there are individual factors at play, ensuring that there are no other influencing factors outside of the main occupation, and finally, determining the occupational diagnosis.

Occupational diseases are classified into five categories: physical causes (including noise, vibration, ionizing radiation, non-ionizing radiation, air pressure, extreme temperatures), chemical causes (including various chemicals), biological causes (including bacteria, viruses, fungi, parasites, etc.), ergonomic causes (including awkward positions, repetitive movements, etc.), and psychosocial causes (including excessive workload, monotonous work, work stress, etc.). Specific occupational diagnoses for certain jobs can be made by general practitioners, and various occupational diseases can be diagnosed by occupational specialists as referrals at advanced referral health facilities (FKRTL), namely hospitals. This is outlined in the Consensus on the Management of Work-Related Diseases in Indonesia, developed in collaboration with multiple medical disciplines and professions.

Unlike general disease diagnosis, occupational disease diagnosis has medical, community, and legal aspects. Thus, the purpose of occupational diagnosis is to provide a basis for disease management in the workplace, limit disability and prevent death, protect other workers, and fulfill workers' rights. Work is a necessity for humans to earn an income to meet their daily needs. In the workplace, there are potential hazards that can cause health problems for workers. Potential hazards or exposures to workers can come from the work environment, work methods, and tools used at work. Health problems for workers are also closely related to the amount of time spent in exposure; the longer the exposure, the greater the risk of health problems for workers.

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Occupational Disease (PAK) is a disease caused by work or the work environment that results in partial or total disability. Partial disability is the permanent loss or dysfunction of part of a worker's body. Total disability is the permanent inability of a worker to work at all. Work-Related Diseases are

diseases that are triggered, facilitated, or aggravated by work. These diseases are indirectly caused by work and are usually caused by various factors, including (Nasrul, 2022):

1. Physical Factors
    a. Noise
    b. High temperature
    c. Radiation
    d. Electromagnetic
    e. High air pressure
    f. Vibration
2. Chemical Factors
    a. Origin, raw materials, additives
    b. Form, type of substance
    c. Method of entry into the body
    d. Entry can be acute or chronic
    e. Effects on the body
3. Biological factors, which can originate from viruses, bacteria, parasites, fungi, insects, wild animals, and others.
4. Physiology
    a. The causes are incorrect work methods, work positions, work tools, work environments, and incorrect construction
    b. Effects on the body include physical fatigue, muscle pain, bone deformities, changes in shape, and dislocations.
5. Psychological factors (work environment and stress). Causes include a monotonous and uncomfortable work environment. Poor work relationships, low wages, isolation, or work that does not match one's talents can lead to stress.

C. Spectrum of Occupational Diseases

The spectrum of occupational diseases covers a wide range of conditions caused by the work environment. This can include heat-related illnesses and heat stroke, as well as other work-related health issues.

According to the International Labor Organization (ILO), more than 2.3 million people die each year from work-related accidents and illnesses, with more than 6,000 deaths per day. It is estimated that approximately 340 million work accidents and 160 million work-related illnesses occur each year. Work-related illnesses can be caused by various factors, including the nature of the work and the work environment. For example, in the agricultural sector, which contributes significantly to Indonesia's economy and employs about one-third of the national workforce, workers may be exposed to hazards that can cause work-related illnesses. These illnesses can be caused by physical factors such as heat stress or psychological factors such as work-related stress. Early identification and prompt treatment are essential in preventing the development of work-related illnesses. Management strategies may include relocating affected individuals to a cooler environment, changing the position of certain body parts, and providing adequate fluid resuscitation.

Therefore, it is important to address the various risk factors and potential health consequences associated with different occupations to ensure the well-being of workers. The search results provide information on the various manifestations and impacts of occupational diseases, particularly those related to heat exposure and other work-related health issues. However, the results do not provide a comprehensive list of specific occupational diseases. If you require more detailed information on specific occupational diseases, it is recommended that you refer to medical or occupational health resources.

D. Early Detection of Occupational Diseases

Early detection of occupational diseases is an important aspect of maintaining worker health. Occupational diseases can arise from various factors, such as work processes, work tools, work environments, and materials used in the workplace. According to Widyanti (2023), the occupational disease diagnosis process involves seven important steps that serve as guidelines for determining and understanding the relationship between work and the diseases experienced.

1. The first step is to determine the clinical diagnosis through anamnesis, physical examination, and supporting tests. Anamnesis includes a history of complaints, family medical history, and reproductive history in women. Physical examination is performed through inspection, palpation, percussion, and auscultation, while supporting examinations involve laboratory tests and special examinations such as spirometry, audiometry, and X-rays.
2. The second step is to determine exposure, which involves risk factors in the work environment. These factors can be physical, chemical, biological, ergonomic, and psychosocial.
3. The third step is to determine the relationship between exposure and disease, supported by evidence-based methods.
4. The fourth step is to determine the extent of exposure, both quantitatively through environmental measurement data and work history, and qualitatively by observing how workers perform their tasks.
5. The fifth step is to determine individual factors, such as genetic factors or deficiencies in the use of Personal Protective Equipment (PPE).
6. The sixth step is to determine other factors outside of work that may affect health, such as exposure in other places and lifestyle.
7. The seventh step is to determine the diagnosis of OSH, which requires evidence that at least one occupational factor plays a role as the cause of the disease.

Occupational health does not only focus on clinical diagnosis and treatment, but also includes hazard recognition, risk assessment, and interventions to eliminate or minimize risks. The scope of prevention of work-related illnesses

has been expanded to include six methods: placing workers in jobs/positions that are appropriate for their health status and work capacity, implementing workplace health promotion programs or PKDTK, improving

the work environment, improving workers' tasks, developing and organizing work and work culture, and conducting worker health surveillance. Early diagnosis can begin with the "Fit to Work" program and conducting occupational health surveillance (Kurniawidjadja et al., 2019).

CONCLUSION

Occupational Disease (PAK) is a disease caused by work or the work environment that results in partial or total disability. Occupational diseases are diseases caused by work factors or acquired while performing work. The causes of occupational diseases are grouped into five categories: physical, chemical, biological, ergonomic, and psychosocial causes. The ODD diagnosis process involves seven steps that serve as guidelines in determining the relationship between work and the disease experienced by determining the clinical diagnosis, determining exposure, determining the relationship between exposure and disease, determining the extent of exposure, determining individual contributing factors, determining other factors outside of work, and determining the ODD diagnosis that requires evidence.

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