

Systematic Review: Overview of Occupational Safety and Health on Fishermen

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BACKGROUND INFORMATION

A fisherman is one of the occupations with a high risk of health problems. Working as a fisherman can cause occupational accidents because this profession has some characteristics known as 3D, namely Dangerous, Dirty, and Difficult. Besides those three job characteristics, the size for fishing vessel is dominated by relatively small fishing vessel (boats) and they usually sail on the area with big waves with unpredictable weather/climate; these factors cause a high rate of accidents in fishermen (Imron, Nurkayah, and Purwangka, 2017).

According to a study conducted on fishermen in Hative Besar village, the complaints usually felt by fishermen are back pain and headache due to a long duration needed for sailing and insufficient time for taking a rest; therefore, they cannot focus on their job, and it triggers minor accidents, such as being slipped, being infected with poisonous fish, the accidents hat can cause death and the one that can lead to big damage, such a sunken fishing vessel (Ngidiho and Mahmud, 2018).

The analysis from the Census of Fatal Occupational Injuries (CFOI) conducted by the Bureau of Labor Statistics (BLS) mentioned that the risk of occupational accidents in fishermen was 20–30 times higher than other types of occupation. The general factor is work equipment, namely most fishing boats are not equipped with personal protective equipment; low education level is also the factor increasing the risk because of poor knowledge and disdainful attitudes (Salsabila, 2020).

PROJECT OBJECTIVES

This study is a literature review conducted to explore the occupational safety and health of fishermen and the causes and health problems experienced by fishermen.

MATERIALS AND METHODS

The literature search was conducted in February 2021. The researcher collected the data source using several databases, namely Google Cendekia, Science Direct, ProQuest, PubMed, and BMC, by linking the main terms, namely fisheries “AND” fishermen “AND” occupational “AND” safety “AND” health. The researcher gave some limitations in searching for relevant journals, namely published from 2016 to 2021 to collect updated valid sources and kept up-to-date.

The inclusion criteria included in the selection phase in this literature review were that the journals should be related to health and safety in fishermen and give information about occupational safety and health in fishermen, and the journals should be a complete text available in English or Indonesian. Meanwhile, the exclusion criterion in the selection phase in this literature review was the article of literature review. The variables in this study were occupational incidents, health problems, the factors of occupational incidents, and the factors of health problems in fishermen.



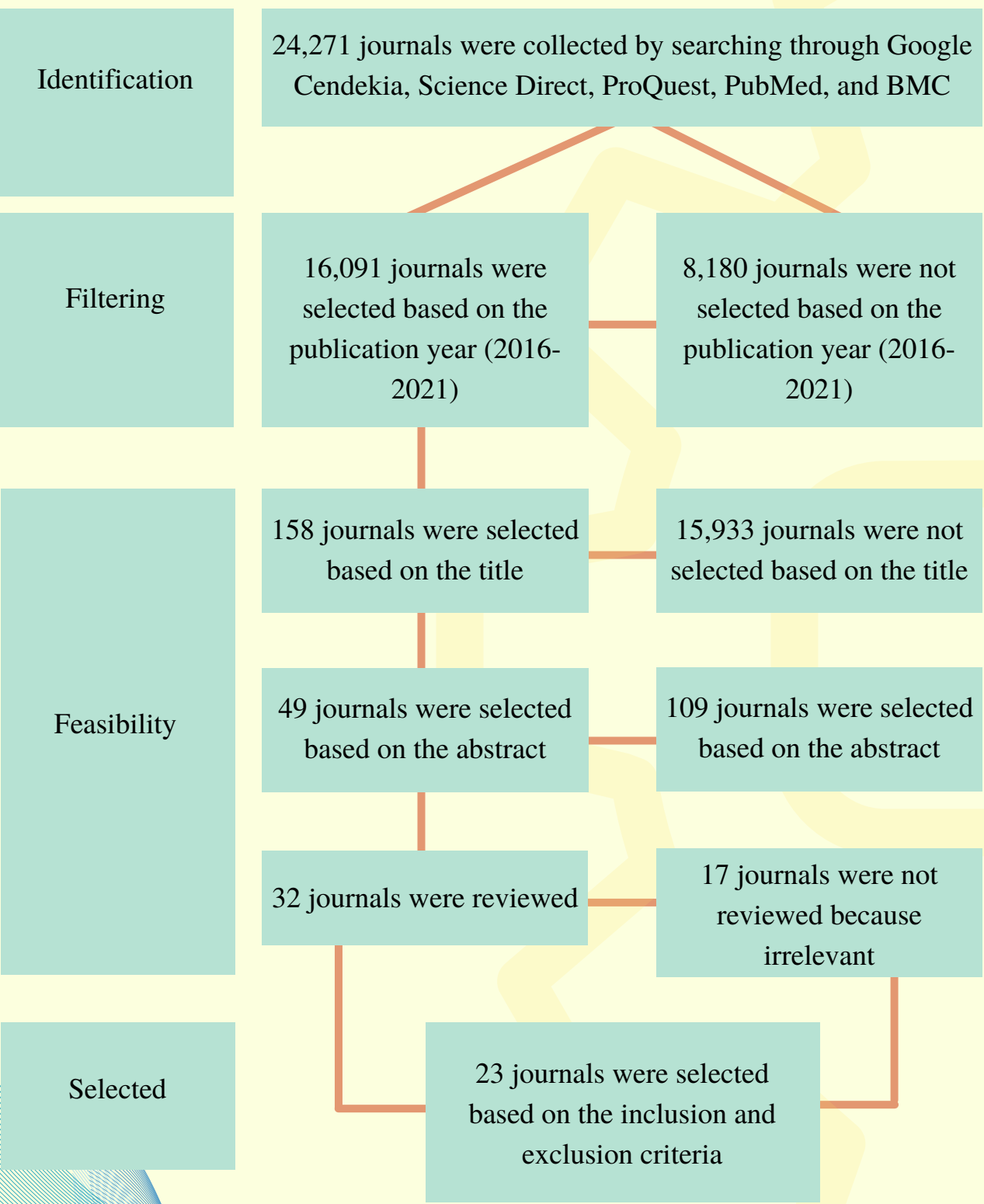


Figure 1. PRISMA Flow Diagram for the Literature Review

RESULT

Factors causing occupational accidents were from the fishermen themselves and the external factors of the fishermen. The high workload, poor concentration, and lack of experience are the fishermen's internal factors that can cause occupational accidents (Pillai et al., 2019). Fatigue, the decreased alertness, lack of skills and knowledge, low awareness of dangers can cause occupational accidents (Asumeng and Folitse, 2019). Fishermen will even be ready for receiving more financial matters even though they have a higher risk of accidents (Marvasti, 2017). The fishermen's external factors are broken or insufficient equipment and facilities, improper personal protective equipment, and natural factors (Asumeng and Folitse, 2019; Marvasti, 2017).

Fishermen also have both physical and mental health problems besides occupational accidents. Physical problems faced by the fishermen were musculoskeletal disorders (MSDs), skin disorders, allergy, respiratory disorders, hearing loss, fatigue, fever, diarrhea, hepatitis, and cardiovascular diseases (Lovreglio et al., 2018; Noman et al., 2020; Frantzeskou, Jensen and Linos, 2016; Pocock et al., 2018). Meanwhile, mental health problems faced by the fishermen were work stress, depression, Post Traumatic Stress Disorder (PTSD), anxiety disorder, Mental Health Disorder (MHD), hurting oneself, suicide attempts, and having abstract thoughts about ending his life (Souza and Ak, 2017; Pocock et al., 2018).

The factors causing musculoskeletal disorders faced by the fishermen were employment period, age, types of occupation, abnormal Body Mass Index (BMI), monotonous jobs, and workload (Fulmer et al., 2017; Dienye et al., 2016; Sandsund et al., 2019; Berg-Beckhoff, Østergaard and Jepsen, 2016). The factors causing skin disorders suffered by the fishermen are due to fungal, bacterial, and viral infections and contact with mud, animals, and marine plants (Laraqui et al., 2018; Lovreglio et al., 2018).

Some fishermen also experienced fatigue because of the employment period, the pulse rate is above the normal range, and sunlight exposure (Thamrin et al., 2019). Hearing loss was caused by the fishermen's employment period (Levin et al., 2016). Cardiovascular diseases suffered by the fishermen were significantly caused by sex, employment period, diet, and depression (Frantzeskou, Jensen, and Linos, 2016). Besides physical health problems, the fishermen also suffered from mental health problems caused by conflict while working, a poor relationship with co-workers, a non-supportive work environment, and some fishermen had many roles (Souza and Ak, 2017).

CONCLUSION

Occupational accidents experienced by fishermen can cause one or more injuries. The most frequent factor causing occupational accidents is the internal factor of the fishermen, such as low awareness of dangers and the importance of personal protective equipment, and the fishermen work in a bad condition. The health problems suffered by them are physical and mental health problems. The physical health problems are mostly affected by the employment period. Meanwhile, mental health problems are affected by the conflict with the job or with oneself.

