

## Evaluation of the occupational safety and health implementation in the informal sector fishermen in South Sumatra Province

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### Abstract

**Purpose:** This study evaluates the implementation of occupational safety and health (K3) in the informal sector of fishermen in Tanjung Kurung Village, Penukal Abab Lematang Ilir (PALI) Regency, South Sumatra Province. **Methods:** This qualitative research employs a case study approach. The research was conducted in Tanjung Kurung Village, PALI Regency. Informants included 22 individuals: nine fishermen, nine fishermen's wives, the head of the PALI regency health office, the manager of the UKK post program at the Health Office, the manager of the UKK Post Program at the Abab District Health Center, and the head of Tanjung Kurung Village. Data collection involved in-depth interviews, observations, and document reviews. **Results:** Implementing K3 in the informal sector of fishermen in Tanjung Kurung Village has been inadequate. Factors influencing this include the persistence of unsafe K3 practices among fishermen, lack of support from relevant parties for K3 management, high K3 risks fishermen face, and the pre-prosperous welfare status of fishermen's families. Common accidents include boat collisions, injuries from fish spines and branches, threats from crocodiles and venomous snakes, machete injuries, and boat sinking due to overloading. Occupational diseases among fishermen include wounds on feet and hands, dermatitis, gastritis, fever, acute respiratory infections (ARI), skin fungi, allergies, and skin irritation. **Conclusion:** The proper implementation of K3 among fishermen is lacking, and occupational health programs in the informal sector are not prioritized. Consequently, related parties have made no special efforts to address occupational health issues for fishermen. Cooperation between fishermen and relevant parties is essential for improving occupational health efforts in the informal fishing sector.

**Keywords:** fishermen; fishermen's family welfare; fishermen's K3 management; fishermen's K3 risk; K3 culture

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## INTRODUCTION

Occupational safety and health, hereinafter shortened to K3, is an effort to ensure the perfection of the workforce both physically and spiritually to prevent accidents, fires, explosions, pollution, and occupational diseases through the K3 program. The proportion of workers in South Sumatra Province in the informal sector is higher than that of formal workers, which is 62.4%, including the community working in the informal sector of fishermen. Fishermen have not received adequate health services because the services provided are only general, have not been linked to risk factors in their workplaces, and service time at puskesmas, along with work time. Hence, it is difficult to get health services in health service facilities, so it is necessary to increase access to health services in the informal sector with the existence of UKK Posts [1].

One of the regencies located in South Sumatra Province, namely Penukal Abab Lematang Ilir Regency, has the condition of an area surrounded by many rivers. Hence, one of the jobs many people do is in the informal fishing sector, which is carried out traditionally. Occupational health reports routinely carried out by the Abab Health Center to the Penukal Abab Lematang Ilir Regency Health Office throughout 2020 showed that cases of occupational diseases that often occur in fishermen are wounds both on the feet, hands and head, dermatitis, gastritis, pebris, ARI, punctured by allergic fish thorns and irritation to the skin. The results of the occupational health report also show that the work health unit post-program in the informal sector is not running well, and fishermen in Tanjung Kurung Village are not registered under the auspices of BUMDES and cooperatives.

Data from the Central Statistics Agency related to indicators of the welfare of the people of PALI Regency in 2021 showed that the level of family welfare has the smallest HDI in South Sumatra Province. Traditional fishermen workers are still at the pre-prosperous level, so this will affect the implementation of occupational safety and health [2]. Based on the data that has been obtained, it is essential to conduct research on the evaluation of occupational safety and health in the informal sector in the field of fishermen in Tanjung Kurung Village, Penukal Abab Lematang Ilir Regency, South Sumatra Province in 2022.

## METHODS

The design of this study is qualitative research with a case study approach with research variables, namely K3 culture, fishermen's K3 management, fishermen's K3 risk, and the welfare of fishermen's families in Tanjung Kurung Village, Penukal Abab Lematang Ilir Regency, South Sumatra Province. Participatory observation, in-depth interviews, document reviews, and literature reviews collect information. The selection of research subjects was carried out using purposive sampling, namely 22 people consisting of nine fishermen, nine fishermen's wives, one Head of the Health Office, one UKK Post Program Manager at the Health Office Level, 1 UKK Post Program Manager at the Puskesmas Level and 1, Tanjung Kurung Village Head. Informants are welcome to fill out informed consent forms, which are then followed by interviews and observations according to the purpose of the study. This research received approval from the Ethics Commission of FK-KMK UGM on April 27, 2022, with the Number KE/FK/0517/EC/2022.

Qualitative data analysis uses a thematic approach by directly making interview transcripts, coding codes, and groups into categories to create summaries on variables, informant codes, data compression, and interpretation of the information disclosed by informants. Researchers also make participation observations and carry out a checklist of observation sheets that have been prepared. Secondary data of researchers were obtained through document reviews and literature reviews to support research results.

## RESULTS

The study's results are grouped into positive and negative. Positive means things that support the implementation of K3 in the informal sector of fishermen, and negative means things that hinder the implementation of K3 in the informal sector (Table 1). Fishermen in Tanjung Kurung Village mostly use boats that are no longer seaworthy. Observations using boat seaworthiness indicators show that no fishermen meet the seaworthiness criteria, posing a risk to their safety while working to catch fish in the river (Figure 1). The monitoring of the implementation of policies and regulations established by the relevant authorities regarding occupational health shows that fishermen do not use personal protective equipment while working, and the vast area of the river work zone makes it difficult for the Village Government to monitor the fishermen. As a result, many fishermen still use dangerous fishing gear to meet their daily needs.

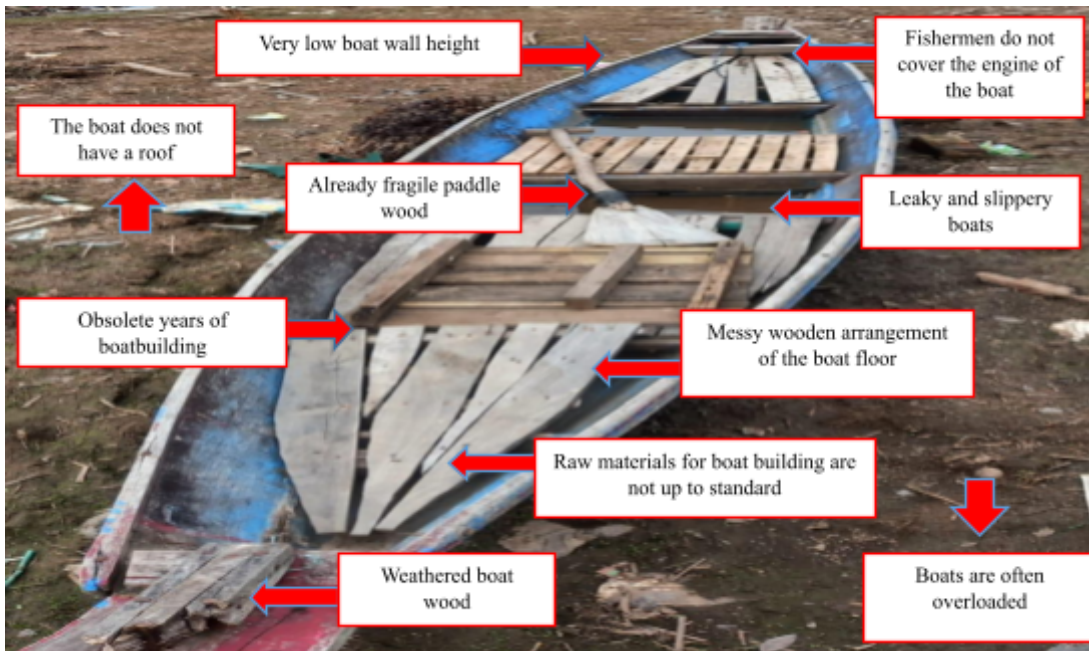


Figure 1. K3 risk photo of fishing boat feasibility

Table 1. Evaluation of the occupational safety and health implementation in the informal sector of fishermen

Variable	Positive	Negative
<b>K3 Culture</b>		
<b>K3 knowledge</b>	<ol style="list-style-type: none"> <li>1. Some fishermen have a simple knowledge of K3</li> <li>2. Fishermen know examples of work accidents while working</li> <li>3. Some fishermen know of dangerous conditions while working</li> <li>4. Fishermen know the Village Regulations on fishing and the prohibition of fisheries</li> </ol>	<ol style="list-style-type: none"> <li>1. Some fishermen have no K3 knowledge</li> <li>2. Related parties have not conducted K3 counseling for fishermen</li> <li>3. Some fishermen argue there are no dangerous conditions at work because of the shallow river water</li> <li>4. Fishermen don't care about K3</li> </ol>
<b>Work motivation</b>	<ol style="list-style-type: none"> <li>1. Fishermen as the main livelihood</li> <li>2. Fishermen's income to meet daily needs</li> <li>3. The family gives morale</li> <li>4. Wife prepares the necessary equipment before work</li> </ol>	<ol style="list-style-type: none"> <li>1. There has been no support from the Village Government</li> <li>2. Fishermen overtime work</li> <li>3. There is no place to collect fish catches, so prices are unstable, which decreases the motivation of fishermen's work</li> </ol>
<b>K3 behavior</b>	<ol style="list-style-type: none"> <li>1. Fishermen have breakfast before working</li> <li>2. Fishermen are careful while working</li> <li>3. Some fishermen comply with the village regulations</li> </ol>	<ol style="list-style-type: none"> <li>1. Fishermen violate the Village regulations on fishing and the prohibition of fisheries</li> <li>2. Fishermen rush while driving a boat</li> <li>3. Fishermen consider crocodiles to be their ancestors</li> <li>4. Fishermen racing in the river</li> <li>5. Fishermen go fishing using dangerous fishing gear</li> <li>6. Diving into the river without PPE</li> <li>7. Stay up until the early hours of the morning</li> </ol>
<b>Fishermen's K3 Management</b>		
<b>Planning</b>	<ol style="list-style-type: none"> <li>1. PUSTU and POSKESDES are close to fishing settlements</li> <li>2. Establishment of Tanjung Kurung Village Government Number: 01/PERDES/TK-A/2016 concerning fishing and prohibition of fisheries</li> <li>3. Involving fishermen in the formation of Village regulations</li> <li>4. Tanjung Kurung Village already has PUSTU and POSKESDES health services</li> </ol>	<ol style="list-style-type: none"> <li>1. UKK POS specifically for fishermen has not yet been formed</li> <li>2. There have been no special occupational health efforts for fishermen</li> <li>3. Fishermen are not members of the auspices of BUMDES</li> <li>4. No fishermen's cooperatives have yet been formed</li> <li>5. Selling fish around so that prices are unstable</li> <li>6. There is no good communication between the government and fishermen</li> <li>7. Fishermen have a system of indebtedness to shops, so it is difficult in the form of cooperatives</li> </ol>
<b>Organizing</b>	The Village Government socializes village regulations every 1 year	<ol style="list-style-type: none"> <li>1. Officers are unaware of fishermen's working groups</li> <li>2. The Village Government finds it difficult to organize fishermen because it has erratic working hours</li> <li>3. Related parties have never been directly involved in monitoring fishermen's work activities</li> <li>4. The health services provided are general</li> </ol>

		5. The labor resources of the Village apparatus are still minimal
<b>Mobilization</b>	<ol style="list-style-type: none"> <li>1. Training on making fresh fish</li> <li>2. Training on making salai fish</li> </ol>	<ol style="list-style-type: none"> <li>1. No transfer of work duties to new occupational health program holders</li> <li>2. Lack of support from superiors for occupational health programs</li> <li>3. Multiple-task occupational health program holders result in a dual workload</li> <li>4. Fishermen's working hours are erratic</li> <li>5. Voluntary cadres without pay made fishermen object to joining</li> <li>6. Tanjung Kurung Village Government has not provided boat repair assistance to fishermen</li> <li>7. Occupational health programs are not included in the priority of health problems, so there is no budget</li> </ol>
<b>Controlling</b>	There is a recording and reporting of accidents and occupational diseases	<ol style="list-style-type: none"> <li>1. Fishermen do not use PPE while working</li> <li>2. Fishermen do not have PPE</li> <li>3. Related parties have not provided PPE assistance</li> <li>4. Fishermen think PPE is necessary because they are good at swimming</li> <li>5. Based on Permenkes No. 100 of 2015 concerning integrated UKK Posts in Tanjung Kurung Village, it has still not been achieved</li> <li>6. Tanjung Kurung Village is a huge river area, making it difficult to control the implementation of village regulations</li> <li>7. Many reports of fishermen using dangerous tools</li> <li>8. Related parties do not control the feasibility of fishing boats</li> <li>9. Fishing boats fall into the category of unfit (red)</li> </ol>
<b>Risks of K3 Fishermen</b>		
<b>Social environment</b>	<ol style="list-style-type: none"> <li>1. The dry season becomes a harvest day</li> <li>2. The auction of river mortar ponds is carried out at the village hall to foster the togetherness of fishermen</li> <li>3. 50% system for fishermen who pick up fish in the auction river</li> <li>4. Free (wild) fishermen can explore many river places</li> </ol>	<ol style="list-style-type: none"> <li>1. Project of making embung on the village river</li> <li>2. Fish are difficult to get into the village river</li> <li>3. Numerous mounds of dirt make collisions between fishing boats</li> <li>4. Overtime fishermen work</li> <li>5. The nature of fishermen's individualism is still high, making it difficult to form a fishermen's union</li> <li>6. Bumper harvest makes fishermen work overtime</li> <li>7. The bumper harvest makes the fish prone to being stolen, so that fishermen are on guard until overtime work and lack of sleep</li> <li>8. The government set a benchmark for high river prices so that fishermen who could not afford to buy the river took fish on the outskirts of many tree branches</li> <li>9. River water deepens</li> <li>10. Harming the river environment</li> </ol>
<b>Human error</b>	<ol style="list-style-type: none"> <li>1. Fishermen check boats regularly before leaving for the river</li> <li>2. Fishermen make repairs to leaking boats</li> <li>3. Fishermen are already good at swimming</li> </ol>	<ol style="list-style-type: none"> <li>1. Fishermen fish using dangerous tools</li> <li>2. Fishermen consider collisions and sinking ships as a matter of course</li> <li>3. Fishermen do not use PPE</li> </ol>
<b>Unsafe actions and conditions</b>	<ol style="list-style-type: none"> <li>1. Fishermen clear the path of the road from tree branches</li> <li>2. Fishermen have a cottage by the river as a resting place</li> </ol>	<ol style="list-style-type: none"> <li>1. When it rains and hurts, fishermen keep sailing</li> <li>2. Biological hazards such as crocodiles and snakes</li> <li>3. The river carries on twigs and trees</li> <li>4. Using sharp objects such as machetes to clean twigs</li> <li>5. High tide and swift river currents</li> <li>6. Fishing huts based on the Directorate of Kesja-or in 2019 are included in the category of unfit</li> <li>7. Diving into the river without PPE</li> <li>8. Already fragile cottage floors</li> <li>9. Fishermen are not equipped with safety tools</li> </ol>
<b>Accident</b>	-	<ol style="list-style-type: none"> <li>1. Boat collision</li> <li>2. Exposed to fish patil</li> <li>3. Pierced by fish thorns</li> <li>4. Hit by a sharp machete</li> <li>5. Sinking boat</li> <li>6. Puskesmas officers are in duplicate duties, so that K3 reporting of the PALI Regency is the lowest in South Sumatra Province</li> <li>7. Reports are suspected of being just manipulations without going directly to the field</li> <li>8. Difficulty in preventing work accidents among fishermen</li> </ol>
<b>Injuries</b>	-	<ol style="list-style-type: none"> <li>1. The loss of fish caught by the fish because they entered the river when the boat sank</li> </ol>

		<ol style="list-style-type: none"> <li>2. Fishing boat damaged</li> <li>3. Fingers become swollen and fester</li> <li>4. Disability</li> </ol>
<b><i>Welfare of Fishermen's Families</i></b>		
<b>Economic well-being</b>	Dead fish can be created	<ol style="list-style-type: none"> <li>1. Revenus erratiques du poisson</li> <li>2. Fishermen's residences based on the Directorate of Kesja-or in 2019 are included in the category of unfit</li> <li>3. Earnings per day &lt; 100 thousand</li> <li>4. It is difficult to meet daily needs</li> <li>5. Fishermen do not have latrines, so they depend on the river</li> <li>6. The main water sources of the river</li> </ol>
<b>Social welfare</b>		
<b>1. Education Level</b>	<ol style="list-style-type: none"> <li>1. Access to education is easy to reach for elementary and junior high schools</li> <li>2. There are efforts to provide scholarships to fishermen's children</li> </ol>	<ol style="list-style-type: none"> <li>1. The majority of education levels do not finish elementary school</li> <li>2. Low K3 knowledge</li> <li>3. Many children are still in school</li> <li>4. High school-level education is difficult to reach because you have to leave the village</li> <li>5. Fishermen argue that the operational costs of children's education are expensive</li> <li>6. Scholarships awarded are uneven</li> </ol>
<b>2. Work</b>	<ol style="list-style-type: none"> <li>1. Already experienced working as a fisherman for 10-40 years</li> <li>2. Catching fish using traditional tools</li> <li>3. Have the support of the family</li> </ol>	Ignoring PPE because you are experienced in fishing
<b>3. Number of Family Members</b>	Children as encouragement for work	<ol style="list-style-type: none"> <li>1. Fishermen have many children, 4-5 people, so they work hard to meet their daily needs.</li> <li>2. Fishermen have children with special needs</li> <li>3. There has been no effort to assist the Government for the children who have special needs</li> </ol>
<b>Physical well-being</b>	<ol style="list-style-type: none"> <li>1. Fishermen always have breakfast every morning</li> <li>2. Fishermen bring food supplies</li> <li>3. Fishermen bring medicines</li> <li>4. The Health Office conducts important counseling on breakfast before work</li> <li>5. Puskesmas distributes vitamins to fishermen at PUSTU and POSKESDES</li> <li>6. Can access free health services at PUSTU, POSKESDES, and Puskesmas by bringing KK and KTP</li> </ol>	<ol style="list-style-type: none"> <li>1. The food menu brought by fishermen is small and almost rotten fish that do not sell well</li> <li>2. Fishermen are too lazy to take vitamins in health care because they interfere with working hours</li> <li>3. Fishermen are accustomed to using analgesic stall drugs brands B, P, and BL</li> <li>4. Fishermen are used to injecting B vitamins in Village Midwives</li> <li>5. BPJS cards have not been given evenly</li> <li>6. On holidays and red dates, fishermen must pay for access to health services at PUSTU</li> <li>7. Fishermen become accustomed to injecting B vitamins</li> <li>8. Fishermen increase the dose of analgesic drugs without a prescription</li> <li>9. Fishermen neglect the fulfillment of family nutrition</li> </ol>
<b>Psychological well-being</b>	<ol style="list-style-type: none"> <li>1. Fishermen do a do'a together with their wives before leaving for the river</li> <li>2. Fishermen rest at the cottage to avoid excessive workload</li> </ol>	<ol style="list-style-type: none"> <li>1. Work stress is difficult to detect because fishermen do not report to health workers</li> <li>2. The Village Government has not provided assistance related to work stress for fishermen</li> </ol>

## DISCUSSION

### K3 culture

#### *K3 knowledge*

Knowledge of occupational safety and health is essential, and it can be influenced by fishermen's low level of education [3]. Fishermen face dangerous conditions, namely erratic weather, and potential dangers can also occur when lifting fishing gear, which is carried out by diving into the river [4].

#### *Work motivation*

The work motivation of fishermen continues to increase because they want to provide a decent livelihood for the family so that work motivation has a positive effect on performance [5], as well as children

and wives so that they can eat every day, educate children and can pay rent for the house so that they can survive [6]. Fishermen always look forward to direct support from the Government so that the fish catches obtained by fishermen can be directly sold at a stable price [7].

#### *K3 behavior*

The behavior of K3 fishermen in following and complying with regulations that have been made by the Tanjung Kurung Village Government Number: 01/PERDES/TK-A/2016 concerning fishing and prohibition of fisheries, but there are still many fishermen who violate regulations using explosives with potassium nitrate (KNO<sub>3</sub>) raw materials causing death in target and non-target fish, disruption of river ecosystems to reduce biodiversity and fish habitat in

rivers [8]. Fishermen also use toxins made from potassium cyanide to cause the death of fish fry [9].

### **Fishermen's K3 management**

#### *Planning*

Planning in the health efforts of Tanjung Kurung Village has met the requirements for establishing an integrated UKK Post for fishermen's informal sector workers. Planning related to the policy of making regulations of the Tanjung Kurung Village Government Number 01/ PERDES/TK-A/2016 concerning fishing and prohibition of fisheries aims to protect the fish ecosystem in the river. Fishermen in Tanjung Kurung Village have not been included in the auspices of BUMDES and cooperatives, so it is crucial to have community initiatives and cooperation with the village government [10].

#### *Organizing*

Organizing by going directly to the field to monitor fishermen's work activities to find out the health complaints experienced by fishermen [11], the organization has not gone well, causing health services to be centralized at PUSTU and POSKESDES so that fishermen have not received adequate health services because they are not by the health problems experienced by fishermen [12]. The Village Government has difficulty organizing fishermen related to the implementation of regulations because the area of rivers and swamps is so large that it cannot be monitored regularly, and human resources in the village government environment are still minimal, causing the organization of fishermen to be carried out optimally [13].

#### *Mobilization*

Mobilizing health efforts to fishermen is difficult because there is no delegation of duties for holders of new occupational health programs, which affects officers' performance [14]. Occupational health programs have not received support from work superiors, even though work superiors are essential in providing the resources needed [15]. Place work duties according to educational background so that employees understand the work duties to be carried out [16]. The performance of puskesmas officers becomes ineffective because multiple positions make officers experience fatigue [17]. Another factor that is difficult to address in occupational health is fishermen who have uncertain working hours, and fishermen looking for fish are not focused on 1 point, making it difficult for Puskesmas officers to conduct counseling and assistance.

#### *Controlling*

The Abab Subdistrict Health Center does not control the work of fishermen related to the use of PPE while working; an effort that can be made to increase the application of K3 is the provision of PPE assistance by related parties [12]. Control related to occupational health policies and programs for fishermen in Tanjung Kurung Village based on Permenkes Number 100 of 2015 concerning integrated UKK Posts on the level of implementation of UKK Posts that have been determined through direct discussions with Puskesmas Staff in Tanjung Kurung Village concluded that they are still in the process of preparing to the primary level. Boat observations to all respondents as many as nine fishermen based on indicators modified by researchers from the Government Regulation of the Republic of Indonesia Number 27 of 2021 concerning the implementation of the marine and fisheries sector as well as the results of research that has been carried out by Ully, et.al fishing boats are included in the category of unfit (red flag).

### **Risks of K3 Fishermen**

#### *Social environment*

Social conflicts can increase the risk of K3 for fishermen because the Bung development project, with river dredging, makes the river deeper by about 8 meters. This makes it difficult for fishermen to catch fish, so they always work overtime. The government and related parties are critical in driving traditional fishermen's economies through BUMDES and unique fishermen's cooperatives [18].

#### *Human error*

Human Error Fishermen routinely check leaking boats before leaving for the river, but often commit violations. Most fishermen are good at swimming, so they ignore using PPE. Regular assistance is vital to increase fishermen's understanding of using PPE in work [19].

#### *Unsafe actions and conditions*

Unsafe actions fishermen take while working are to sail during rainy weather and force themselves to keep sailing in a state of illness, and fishermen often rush when driving a boat [20]. Unsafe conditions for fishermen when in the river from biological hazards, namely the large number of crocodile and snake beasts, researchers made observations of fishermen's workplaces based on technical guidelines for the implementation of occupational health unit posts for fishermen from the Directorate of Occupational Health and Sports, Directorate General of Public Health,

Ministry of Health of the Republic of Indonesia in 2019, which is not good.

#### *Accident*

Work accidents in fishermen that come from biological hazards, such as poisonous snakes that enter the body, will merge with blood so that it can attack brain function by inhibiting the respiratory tract. Damaging erythrocytes that make people affected by snake bites become convulsive, lose consciousness, and die [21]. Physical hazards come from boat engines with noise of 97.8 dB and excessive working hours exceeding the exposure limit of the noise threshold per day, hurting fishermen's hearing [4]. The physical danger to fishermen comes from exposure to sunlight, causing fishermen to be exposed to UV A and UV B sunlight, which can damage skin health, so that fishermen feel a burning sensation and trigger eye disorders such as cataracts and the potential for skin cancer [22]. Fishermen also have a risk when closing cages, which are carried out by diving directly into the river at a depth of 8 meters, without using personal protective equipment and ordinary clothes. Whose diving is carried out for about 5 minutes can cause hypothermia in fishermen [23]. Fishermen who work in the waters have the potential to get bites from mosquitoes that pose a risk of malaria and dengue fever in fishermen [24]. The dangers of ergonomics are very identical to occur in traditional fishermen because in doing their work everything is done manually with repetitive movements and non-ergonomic work positions such as bending can cause fatigue in the muscles, pain in the back and low back pain [25].

#### *Injuries*

Work accidents adversely affect the fisherman's economy because the sinking of the boat causes the fish catch to be wasted. Work accidents also cause fishermen to suffer injuries, disabilities, and deaths. Another impact of damage to the ship so that fishermen will lose work time, affecting the health of fishermen from the data that the Puskesmas often report to the Health Office is the occurrence of wounds both on the feet, hands and head, dermatitis, gastritis, pebris, ISPA, punctured allergic fish thorns and irritation on the skin.

### **Welfare of fishermen's families**

#### *Economic well-being*

The level of economic welfare of fishermen in Tanjung Kurung Village is included in the category that is still low because the income earned by fishermen is uncertain. Economic welfare in fishermen is related to introspection of occupational health in fishermen's

residences, based on technical guidelines for the implementation of occupational health effort posts (POS UKK) for fishermen from the Directorate of Occupational Health and Sports, Directorate General of Public Health, Ministry of Health of the Republic of Indonesia in 2019 is included in the category of not good.

#### *Social welfare*

Most of the education fishermen receive is up to the elementary school (SD) level; many fishermen still have children who are still in school, so fishermen work overtime. Access to education in Tanjung Kurung Village for the elementary school (SD) and junior high school (SMP) levels is easy. However, it is still tricky for the high school (SMA) level because you have to leave the village at a distance of 9 km. The government has tried to provide scholarships to fishermen's children, but only at the college level of education.

#### *Work*

The majority of 70% of the people in Tanjung Kurung Village work as fishermen, with an average length of work of 10-40 years. Fishermen's wives fully support their work by helping their husbands sell fish catches using motorbikes to villages and village families and helping fishermen work when the harvest season arrives. Fishermen in Tanjung Kurung Village, 90%, have a fairly large number of family members, namely 4-5 children in 1 house, with family members who are many fishermen who work as much as possible to find fish to meet their daily needs.

#### *Physical well-being*

Related parties counseled fishermen about the importance of breakfast before going to work. Still, the majority of fishermen are rarely consumed fresh fish to meet the nutritional needs of their families because they prioritize economic welfare [26], the types of fish obtained by river fishermen in Tanjung Kurung Village have a fairly good nutritional value based on the 2017 Indonesian Food Composition Table such as Catfish, Snakehead fish, Baung fish, tilapia and Mujair fish [27]. Access to health services fishermen prefer to seek independent treatment using analgesic type stall drugs with brands B, P, BL when feeling headaches, muscle pain and toothache which serves to manipulate pain with side effects, namely stomach and intestinal disorders, hypersensitivity reactions, kidney damage and can cause liver damage when used in routine and continuous doses [28]. Fishermen also prefer to seek direct treatment from Village Midwives because Village Midwives can inject B vitamins to patients to reduce pain because it has an antiseptic effect [29]. Village Midwives who provide health services to patients who

are not within their competence will endanger the health of fishermen [30].

#### *Psychological well-being*

Before work, Fishermen always pray with their wives for safety at work and get a lot of fish catches, which is a form of family support to improve fishermen's psychological health when going to work. Fishermen often work overtime until early morning to relieve stress and workload. Fishermen usually take breaks after work by sitting and chatting with their neighbors. The Abab Subdistrict Health Center has not tried to prevent or recover from work stress. The workload felt by fishermen can only be detected if the fisherman comes directly to the Puskesmas. The Tanjung Kurung Village Government admits that the Village Government has made no effort to manage work stress among fishermen.

## CONCLUSION

Fishermen have not implemented K3 properly due to unsafe K3 cultural factors, fishermen's K3 management not running well, high risk of K3 for fishermen, and low family welfare. It is essential to cooperate with fishermen and related parties in occupational health efforts in the informal sector of the fishing industry.

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