

Occupational Fatality, Injury, Illness, and Work-related Abuses of Indonesian Immigrant Workers in Taiwan 2013-2014

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Abstract

Fisheries worker is constantly mentioned as one of the most dangerous occupations in the world. The purpose of this study was to analyze the pattern of 50 cases of Indonesian fishing immigrant workers in Taiwan from 2013 to 2014 using a cross-sectional study. The cases consisted of occupational injury, illness, fatality, and work-related abuses which were coded up to four causes for each case. In addition, the outcome of each case was also analyzed. The results indicated that 44 cases were coded to one cause, four cases were coded to two causes, one case was coded to three causes, and one case was coded to 4 causes. This research contributes to the determination of important characteristics in the statistics which may be used for prevention measures, especially for fisheries immigrant workers. A constructive dialogue between Taiwan Fisheries Bureau, Taiwan Ministry of Labor, agencies or broker, and Indonesian Economic and Trade Office to Taipei (IETO) is very important to prevent future occupational injury, illness, fatality, and work-related abuses.

Keywords

Immigrant Workers; Fishing Accidents; Fishing Fatalities; Occupational Injury; Physical Abuse.

1. Introduction

Fisheries worker is widely known as one of the most dangerous occupations. Every year, The International Labour Organisation (ILO, 2019) estimates that 7% of 24,000 fatalities occur in the fishing worker. In addition, approximately 24 million fisheries workers suffer a nonfatal injury each year (CDC, 2019). It is the result of placing a hazardous workplace on a moving, oscillating, and inherently unstable working space to the vagaries of the sea, where hazardous tasks under fatigue condition are conducted in slippery, uneven, cramped, with operations involving heavy fishing gears (McGuinness et al., 2013a; McGuinness et al., 2013b). The physical risks faced by fishermen are further complicated by a high degree of financial uncertainty in the occupation (Davis, 2012). Therefore, fisheries workers have been major concerns of numerous institutions, governments, and non-governmental organizations (Perez-Labajos, 2012).

Despite the availability of many studies regarding occupational fatality and occupational injury of fisheries workers, little literature discusses occupational illness and other related abuses simultaneously. O'Connor & O'Connor (2006) coded 74 fatalities from Australia Boating Injuries Database over 1992-1998. Similarly, McGuinness et al., (2011) analyzed the circumstances of the 281 fatalities reported to the Norwegian authorities from the Norwegian fishing fleet over the period 1990-2011. Regarding the occupational injuries, McGuinness et al., (2013) also analyzed the injuries in the commercial fishing fleet of Norway 2000-2011. Finally, Hetherington (2006) reviewed the literature on safety in three key areas: common themes of accidents, the influence of human error, and interventions to make shipping safer. Comprehensive analysis regarding occupational injury, illness, fatality, and work-related abuses is required for prevention measures of immigrant fisheries workers.

The purpose of this study was to analyze the pattern of 50 cases of Indonesian fishing immigrant workers in Taiwan from 2013 to 2014 using a cross-sectional study. The cases consisted of occupational injury, illness, fatality, and work-related abuses which were coded up to four causes for each case. In addition, the outcome of each case was also analyzed. This research contributes to the determination of important characteristics in the statistics (Lin et al., 2018; Lin & Prasetyo, 2019; Lin et al., 2019a; Lin et al., 2019b; Martinez et al., 2019; Miraja et al., 2019; Prasetyo, 2019; Prasetyo et al., 2014; Prasetyo et al., 2019; Torres et al., 2019) which may be used for prevention measures, especially for fisheries immigrant workers.

2. Methodology

The current study analyzed 50 case reports of problems on Indonesian migrant workers occurring during 2014 and 2015. All reports were obtained from the Indonesian Economic and Trade Office to Taipei (IETO) through <https://simpati.kdei-taipei.org/> (Sistem Informasi Penanganan Masalah TKI). Table 1 shows the definition of each cause of Indonesian immigrant fisheries workers in Taiwan. The cases consist of occupational injury, illness, fatality, and work-related abuses which were coded up to four causes for each case. For the outcome, Table 2 shows the definition of each outcome of Indonesian immigrant fisheries workers in Taiwan. Finally, Figure 1 shows the age distribution of the victims.

Table 1. Cause of fisheries cases.

Cause	Definition
Non-payment or delayed payment of wages (By employer or agency)	Fisheries workers are paid only a fraction of what other workers in comparable sectors receive, often without any traceable payments into bank accounts, or with salaries paid in kind (ILO, 2008).
Physical, psychological and sexual abuse (By employer or agency)	Any action, incident or behavior that departs from reasonable conduct in which a person is assaulted, threatened, harmed, injured in the course of, or as a result of, his or her work. It can take the form of murders, assaults, rape, sexual harassment, threats, bullying, mobbing and verbal abuse (Statistical report of the Decent Work Decade 2006-15; Inclusive Labour Markets, Labour Relations and Working Conditions Branch).
Excessive and undefined working hours	The employer employed a worker for long working hours (up to 15 – 18 hours) and did not provide regular holidays and a few days off for workers (ILO, 2008).
Occupational illness	The worker concerned is suffering from an infection or illness of any kind which has no effect on the task for which the worker has been recruited in an unacceptable form of discrimination (ILO, 2008).
Occupational injury	The accident happened in the working environment and while the worker is doing a job.
Occupational fatality	Fatality which happened at the working environment and while the worker is doing a job.
Food and accommodation problems	The employer should provide appropriate food (minimal 3 times/day). It includes a holiday or sick without any payment. Moreover, the employer also should provide sufficient accommodation for the worker.
Other accidents	This cause includes accident which is not related to an occupational injury, (i.e. traffic accident and fall accident).
Agency still find a job	The agency is still finding a job for the worker.
Non-payment of air ticket	The employer does not want to pay for the return ticket.

Table 2. Outcome of fisheries cases.

Outcome	Definition
Death	The worker passed away due to occupational or non-occupational fatality.
Employment Transfer	The employer or employee could propose employment transfer to the Ministry of Labor.
Stay at the same employer with compensation	After mediation between IETO, agency, and the employer, the worker decided to stay at the same employer with compensation.
Quit the job without compensation	The worker decided to quit the job without compensation and move to a new employer or return to Indonesia.
Finished the contract	The worker finished the contract and return to Indonesia.
Runaway	The worker decided to run away from his or her employer or agency due to the problem that he or she faced.

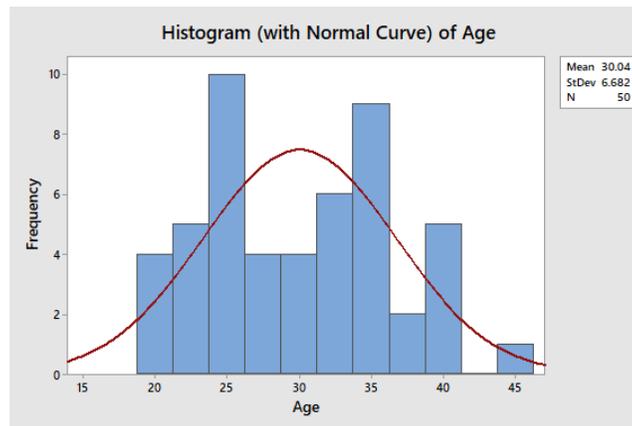


Figure 1. Age distribution of the victims.

3. Results and Discussion

The patterns of occupational injury, illness, fatality, and work-related abuses of Indonesian fisheries immigrant workers in Taiwan during 2013-2014 is presented in Table 3. Based on Table 3, the most common case is occupational fatality which explains 34% of the data (N = 17). It was not surprising that occupational fatality is dominated in the case since fisheries worker is one of the most dangerous occupations in the world (Håvold, 2010). There was also one non-occupational fatality which reported one fisherman was hit by a flying object during a typhoon, therefore, there is a total of 18 fatalities between 2013-2014.

Based on Table 3, six cases were found had 2, 3, and up to 4 causes. For 2 causes, one worker was reported not being paid and had occupational injury, one worker was reported that its ID was detained and had psychological abuse by the employer, one worker had physical abuse and the agency was reported not helping him, and one worker had non-payment for his overtime work while the agency was also reported not helping him. It could be seen that some agencies were not protecting the fisheries workers while the workers were facing some difficulties. For 3 causes, one worker was reported not being paid for his salary including the overtime work and his ID was detained. For 4 causes, one worker was reported had a psychological abuse, psychological abuse, food problem, and accommodation problem.

Table 3. Cause combination of fisheries cases.

(N=50)	Freq.	%
1-cause	44	88%
• Occupational fatality	17	34%
• Occupational injury	4	8%
• Excessive and undefined working hours (3 victims mentioned too heavy. Work: 2 years, 1 year, unknown)	3	6%
• Occupational illness	2	4%
• Food and accommodation problem (They were not provided food)	2	4%
• Non-payment, detention, or delayed payment by the employer	2	4%
• Physical abuse (1 case two victims)	2	4%
• Non-payment, detention, or delayed payment by the agency	1	2%
• Job mismatch with the contract	1	2%
• Threat by agency	1	2%
• Agency still find a job	1	2%
• Non-payment of air ticket	1	2%
• Psychological abuse	1	2%
• Abuse by other workers	1	2%
• Non-occupational fatality (hit by a heavy object during a typhoon)	1	2%
• Stealing the employer's property	1	2%
• Unknown	3	6%
2-causes	4	8%
• Non-payment*Occupational injury	1	2%
• Detention-ID*Psychological	1	2%
• Physical*Agency no help	1	2%
• Overtime non-pay*Agency no help	1	2%
3-causes	1	2%
• Non-payment*Overtime non-pay* Detention-ID	1	2%
4-causes	1	2%
• Physical*Psychological*Food*Accommodation	1	2%

Table 4 represents the frequency distribution of 17 occupational fatality cases. Based on Table 4, the cause detail of occupational fatality consists of crushed by another vessel (1 case 3 victims), poisoning gases, jump from the vessel during parking, hit the sea coral, hit by fishing wire (heavy object), and huge wave. Unfortunately, 9 cases were not well documented in the IETO database. These 9 fatality cases reported that 1 fatality occurred while the worker was sleeping, 1 worker was reported to throw up, unconscious and passed away, 1 case was reported due drowning, 1 case was reported drowning during parking, 1 fatality was reported due to occupational injury, 1 was reported fall in the sea, and 3 cases were not reported in the database. Therefore, it is extremely important for IETO to describe each fatality in detail since it would be very beneficial for further monitor safety performance, causal factors, and prevention measures (O'Connor & O'Connor, 2006). Finally, two dead bodies of fisheries workers who drown due to huge waves were reported could not be found by Taiwan Coast Guard.

Table 4. Frequency distribution of occupational fatality.

(N = 17)	Freq.	%
• Crushed by another vessel (1 case 3 victims)	3	17.5%
• Poisoning gases	1	5.9%
• Jump from the vessel during parking	1	5.9%
• Hit the sea coral	1	5.9%
• Hit by fishing wire (heavy object)	1	5.9%
• Huge wave (the body was not found)	1	5.9%
• Unknown	9	53 %

(1 while sleeping, 1 throw up unconscious and passed away, 1 was reported drowning, 1 was reported drowning during parking, 1 was reported due to an occupational injury, 1 was reported to fall in the sea, and 3 didn't mention in the report)

Table 5 represents the frequency distribution of 5 occupational injury cases. Based on Table 5, the cause detail of occupational injury consists of stuck in the fishing wire and gas explosion. One worker lost 4 right fingers, the other two workers were just mentioned had a finger injury. In addition, one worker was reported had a serious skin injury due to a gas explosion and he was also reported could not walk. Fishermen typically acquire their occupational skills on the water without any formal job training (Davis, 2012) and Roberts (2004) mentioned that 40% fatalities at sea were cases of fisheries workers being struck or entangled in trawling lines and other equipment. Some fisheries are seldom done the most basic protective equipment (Lincoln & Woodley, 2010). Therefore, it is important to educate the fisherman about the occupational hazard especially related to fishing wire and gas.

Table 5. Frequency distribution of occupational injury.

(N = 5)	Freq.	%
• Stuck in the fishing wire (1 victim lose 4 right fingers, the other 2 just mentioned finger injury)	3	60%
• Gas explosion (burned skin, cannot walk)	1	20%
• Unknown (didn't mention in the report)	1	20%

Table 6 represents the frequency distribution of occupational illness. Based on Table 6, there were two occupational illness cases. One worker's left brain was contaminated with bacteria and another worker was reported had an intestine problem. He received medical treatment including surgery on his left brain and it is also reported that he received 5000 NTD for compensation. For the worker who had an intestine problem, he already recovered and returned to work with a regular checkup once a week for the following 4 months. Poor food and accommodation could be the contributing factors for these two cases.

Table 6. Frequency distribution of occupational illness.

(N = 2)	Freq.	%
Left brain contaminated with bacteria	1	50%
Intestine problem	1	50%

Table 7 represents the frequency distribution of outcomes. Based on Table 7, the outcome of 11 cases was reported death without compensation while 7 cases were reported dead with compensation. In addition, 8 cases were solved using employment transfer without compensation while 7 cases were solved using mediation between IETO, agency, and the employer without compensation. 6 workers were reported to quit the job without compensation and return to Indonesia while 2 workers were reported also quit the job but

with compensation before returning to Indonesia. Unfortunately, 3 workers were reported runaway. If the workers were reported runaway, he would lose the right of getting a new employer and it is more difficult for IETO for mediation for getting his final salary or finishing the contract. Therefore, it is extremely important to educate the fisheries workers not to choose runaway form the employer since he would lose the right for mediation including getting the final salary.

Table 7. Frequency distribution of outcomes.

(N = 50)	Freq.	%
Death without compensation (without mentioning the detail in the report)	11	22%
Employment transfer without compensation	8	16%
Death with compensation	7	14%
Stay at the same employer without compensation	7	14%
Quit the job without compensation	6	12%
Runaway	3	6%
Quit the job with compensation	2	4%
Stay at the same employer with compensation	2	4%
Employment transfer with compensation	1	2%
Finished the contract	1	2%
Special case → Employer contact IETO	1	2%
Unknown	1	2%

Fishermen who had been involved in a serious accident/incident showed a significantly more positive attitude to rules and regulations (Håvold, 2010). Therefore, it is extremely important to educate fisheries workers through intensive training prior to the employment period. In addition, a constructive dialogue with Taiwan Fisheries Bureau is very essential. Taiwan Ministry of Labor is also responsible for achieving fisheries safety legislation and practices. Finally, it is also required to take further actions through a constructive dialog between Taiwan Fisheries Bureau, Taiwan Ministry of Labor, agencies or brokers, and Indonesian Economic and Trade Office to prevent future occupational injury, illness, fatality, and work-related abuses.

4. Conclusions

Fisheries worker is constantly mentioned as one of the most dangerous occupations in the world. The purpose of this study was to analyze the pattern of 50 cases of Indonesian fishing immigrant workers in Taiwan from 2013 to 2014 using a cross-sectional study. The cases consist of occupational injury, illness, fatality, and work-related abuses which were coded up to four causes for each case. In addition, the outcome of each case was also analyzed. Based on our study, occupational fatality was found to be the most frequent case and it can be further classified into six patterns: crushed by another vessel, poisoning gases, jump from the vessel during parking, hit the sea coral, hit by fishing wire, and huge wave. For occupational injury, three workers were stuck in the fishing wire with a significant finger injury and one worker was reported heavily injured due to a gas explosion. For occupational illness, one worker was reported that his left brain contaminated with bacteria and another one was reported had an intestine problem. Finally, for work-related abuses, there were twelve patterns which include: excessive and undefined working hours, food problem, non-payment or delayed payment by the employer, physical abuse, non-payment or delayed payment by the agency, job mismatch with the contract, threat by the agency, agency still find a job, non-payment or air ticket, psychological abuse, abuse by other workers, non-occupational fatality, and stealing employer's property.

This research contributes to the determination of important characteristics in the statistics (Lin et al., 2018; Lin & Prasetyo, 2019; Lin et al., 2019a; Lin et al., 2019b; Martinez et al., 2019; Miraja et al., 2019; Prasetyo,

2019; Prasetyo et al., 2014; Prasetyo et al., 2019; Torres et al., 2019) which may be used for prevention measures, especially for fisheries immigrant workers. This study also contributes to highlighting some important issues of Indonesian fisheries workers in Taiwan which require a constructive dialogue between Taiwan Fisheries Bureau, Taiwan Ministry of Labor, agencies or brokers, and Indonesian Economic and Trade Office to prevent future occupational injury, illness, fatality, and work-related abuses.

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Biography

Yogi Tri Prasetyo is currently an associate professor in the School of Industrial Engineering and Engineering Management, Mapúa University, Philippines. He received a Bachelor of Engineering in Industrial Engineering from Universitas Indonesia (2013). He also studied for one year (2011-2012) at Waseda University, Japan, during his junior year as an undergraduate exchange student. He received an MBA (2015) and a Ph.D. (2019) from Department of Industrial Management National Taiwan University of Science and Technology (NTUST), with a concentration in human factors and ergonomics. He was awarded as NTUST Outstanding Youth with a perfect GPA 4.00. He has a wide range of research interests including human-computer interaction particularly related to eye movement, color optimization of military camouflage, strategic product design, usability analysis, and now he is currently doing accident analysis and prevention. He published several SCI journals in Displays, Color Research and Application, Journal of Eye Movement Research, several non-SCI journals, and several conference proceedings. In addition, Dr. Yogi has contributed to several international conferences as co-chair, chair session, and even committee members. Apart from academics, Dr. Yogi likes playing flute, judo, swimming, and hiking. He has two black belts (1st dan black belt judo and 1st dan black belt taekwondo), an international certified lifeguard, and a certified advanced diver. He speaks Indonesian, English, Chinese, Japanese, and currently, he's working hard for his Filipino.