



## Sharing Knowledge of Occupational Issue in Indonesia and Thailand

Ratih Pramitasari<sup>1,\*</sup>, Izzatul Alifah Sifai<sup>2</sup>, Aprianti Aprianti<sup>3</sup>, Chalobon Treesak<sup>4</sup>

<sup>1,2,3</sup> *Country Faculty of Health Sciences Universitas Dian Nuswantoro, Indonesia*

<sup>4</sup> *Thammasat University, Thailand*

*\*Corresponding author email: [ratih.pramitasari@dsn.dinus.ac.id](mailto:ratih.pramitasari@dsn.dinus.ac.id)*

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### Abstract

Occupational Safety and Health (OSH) remain critical issues in Southeast Asia, particularly in Indonesia and Thailand, where industrial growth has led to an increase in workplace accidents and occupational diseases. This study focuses on an international community service collaboration between Thammasat University in Thailand and Indonesian institutions. The program aims to enhance students' understanding of OSH challenges, share knowledge on workplace accident prevention, and introduce ergonomics-based health promotion media. The activities included presentations, discussions, and evaluations to measure knowledge improvement. Results indicated that students significantly increased their understanding of OSH principles, as evidenced by high scores on post-activity quizzes. Additionally, the introduction of ergonomics-based health promotion media highlighted its potential as a preventive tool in addressing workplace hazards. This program underscores the importance of cross-border collaborations in advancing workplace safety and offers insights for scaling similar initiatives across ASEAN countries.

*Keywords:* Occupational safety, health promotion, ergonomics, workplace safety, international collaboration

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### 1. Introduction

Occupational safety and health is one of important issues for workforce movement among ASEAN countries after establishment of ASEAN community 2015. In 2011, occupational injury rates among Thailand, Malaysia, Philippines, and Singapore were 15.41, 3.4, 5.65, and 3.87 cases per 1,000 workers, respectively. Occupational fatality rates among Thailand, Malaysia, Philippines, and Singapore were 6.7, 6.2, 4.0, and 2.3 cases per 100,000 workers, respectively in the same year. There are differences of occupational safety and health management among ASEAN countries. Thailand has its Occupational Safety, Health, and Work Environment Act 2011. Its main agency was Department of Labor Protection and Welfare. Indonesia had Work Safety Act (Law No. 1, 1970). Its main agency was Department of Manpower and Transmigration. Malaysia had Occupational Safety and Health Act (OSHA) 1994. Its main agency is the Department of Occupational Safety and Health. The Philippines has its Occupational Safety and Health Standards. Its main agency was Department of Labor and Employment. Singapore has its Workplace Safety and Health Act 2006 (Qun and Kawakami 2013). Its main agency is Occupational Safety and Health Division. Occupational safety and health law enforcement among each country covers work environment surveillance, workers' health surveillance, advice about prevention and control of occupational health hazards, training and education of employers and employees, data systems, and research (Buranatrevedh 2015).

Especially in Indonesia and Thailand, the two countries are facing the era of improving industrial. The more increasing industry, the higher the level of accidents and diseases that will burden to the workers. In Indonesia, small industry is the biggest industry with a frequency of 83.70%. Accidents and illnesses to workers is still relatively high, eight workers died every day. Most of the workers who had work accidents were aged (Megasari 2022). In Thailand, 62.6% from 39.3 millions of workers, working as an informal and mostly in the agriculture sector (Navianti, Garini, and navianti 2015). Work accidents can be caused by several factors, including; the direct cause is a cause that can be seen and felt directly. The direct causes are divided into two groups, namely unsafe acts are a form of action that is not in accordance with safety at work and is dangerous because this is closely related to the way of work, and unsafe conditions are all conditions that can have a risk of causing danger to workers. The basic causes are divided into 2, namely internal conditions, including human or personal factors, lack of knowledge skills, and insufficient motivation, and environmental factors, including physical, biological, chemical, and ergonomic factors (Bryan et al. 2022). According

to Notoatmojo, three levels of behavior domains were developed, namely knowledge, attitudes, and actions; Knowledge is the result of someone's sensing or the result of knowing someone about an object through the senses they have, such as the eyes, nose, or ears. In general, knowledge is divided into six levels, namely: knowing, understanding, application, analysis, synthesis, and evaluation; attitude is a closed human response to an object or stimulus, which involves opinion factors and also the emotions involved, such as being happy or not, agreeing or disagreeing. As with knowledge, attitudes are divided into several levels as follows: receiving, responding, appreciating, and responsible; actions are divided into three levels according to their quality, namely: perception, guided practice, mechanistic practice, and adoption. Attitudes do not appear automatically manifest in action (overt behavior). In order for the attitude to become real, it needs supporting factors or enabling conditions, including facilities (Notoatmodjo 2010). So one way to prevent work accidents is to increase knowledge. Increasing knowledge can be done through health promotion activities, one of which is media development.

Bangkok is one of the fastest growing cities, with a dynamic economy and a progressive society in Southeast Asia. The city is also listed as one of the cities in the world with the fastest rate of skyscraper construction. Bangkok has many cultural sites and is one of the most popular tourist destinations in the world. On the other hand, there are more than 70 universities in Bangkok with a student population of more than 100,000 students. One of the state universities with a large number of students in Bangkok is Thammasat University. In addition to having a large number of students, there is also a global health study program where many foreign students from Asia are students there. The results of an interview with one of the lecturers at Thammasat University Thailand, health problems such as occupational health in Bangkok are quite common, knowledge about the occurrence and handling of occupational health from Indonesia can help them overcome these problems. The problems faced by partners are, 1) There has been no sharing of incidents and health treatments between students at Thammasat University, 2) There has been no sharing session related to occupational health promotion media between students at Thammasat University. 3) There has been no comparison of incidents and handling of occupational health in Indonesia with Thammasat University to obtain maximum handling. Based on the partner's problems, the team held an international community service with Thammasat University, with the aim of 1) Increasing the knowledge of students in each country about incidents and handling of occupational health 2) Occupational health promotion media as a preventive effort to reduce the incidence of work accidents from each country.

## 2. Literature Review

Occupational safety and health (OSH) in Thailand and Indonesia has been evolving, with both countries implementing various regulations and initiatives to improve workplace safety and health standards. Occupational Safety and Health (OSH) has long been recognized in Thailand, since the occurrence of severe manganese poisoning among 41 workers at a factory in 1964. As a result, OSH issues were raised and incorporated into the 2nd National Economic and Social Development Plan (1967-1971). In 1972, the first OSH law came into force as provisions under the "Announcement of the Revolutionary Party No. 103 Re: Labour Protection". A series of Ministerial Notifications on various OSH aspects was also issued under this Announcement (1) In Thailand the primary legislation governing OSH in Thailand is the "Occupational Safety, Health and Environment Act" (1992), which outlines the responsibilities of employers, employees, and the government. The Ministry of Labor oversees its implementation. OHS Key Initiatives in Thailand are: (1) The Thai government has launched campaigns to raise awareness about workplace safety. (2) Training programs for workers and employers are regularly conducted to promote safe practices. (3) There is a focus on high-risk industries, such as construction and manufacturing (Organization 2024).

In Indonesia, Indonesia Regulatory Frameworks are Indonesia's OSH regulations are governed by the "Law on Manpower" (2003) and the "Government Regulation on Occupational Safety and Health" (2016), which establish standards for workplace safety and health. Key Initiatives OHS in Indonesia are The Ministry of Manpower promotes OSH through campaigns and training, The government encourages companies to implement OSH management systems (SMK3) to enhance safety standards, and Partnerships with international organizations to improve OSH practices are being developed (Organization 2023).

There are still challenges in implementation of OHS in Thailand and Indonesia, including underreporting of workplace injuries, Limited resources for enforcement, and informal sector workers often lack adequate protection, High rates of occupational accidents and fatalities, Inconsistent enforcement of regulations, and a large informal sector where safety standards are often neglected (Adiratna et al. 2022).

Both countries are making strides in improving occupational safety and health, but ongoing efforts are needed to address existing gaps and enhance worker protections. Comparative between two countries are both countries have established legal frameworks, but enforcement can vary significantly. Also about awareness and training, both Thailand and Indonesia are working on improving awareness and training, though the effectiveness and reach of these programs can differ.

### 3. Materials and Methods

#### 3.1. Materials

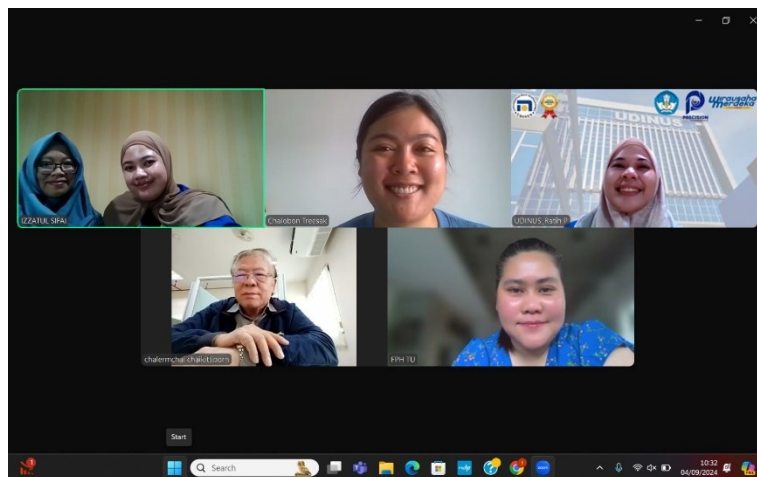
- a) **Presentation Materials**  
Comprehensive slides detailing OSH issues in Indonesia, particularly among informal workers, who often lack adequate protection. Data on ergonomic challenges faced by workers and strategies for prevention. Comparative analysis of OSH regulations and practices in Thailand and Indonesia.
- b) **Health Promotion Media**  
Ergonomics-based posters and digital infographics designed to educate workers on safe workplace practices. Examples of simple, actionable guidelines for maintaining proper posture and reducing ergonomic risks.
- c) **Evaluation Instruments**  
A Google Form quiz with 15 multiple-choice questions assessing participants' knowledge before and after the activities. Metrics included the number of correct responses, percentage improvement, and qualitative feedback from participants.

#### 3.2. Methods

- a) **Preparation Stage**  
Initial coordination with faculty and students at Thammasat University, defining program objectives and logistics. Review of existing OSH materials and selection of key themes relevant to both countries.
- b) **Implementation**  
Presentations: Delivered by experts from Indonesia, focusing on OSH issues, with emphasis on ergonomic risks in informal work settings. The presentation was tailored to highlight practical examples and case studies from both countries. Interactive Discussions: Facilitated Q&A sessions where students could share insights and ask questions, encouraging active engagement. Hands-on Media Introduction: Students were introduced to ergonomics-based health promotion materials and guided on how to apply them in real-world scenarios.
- c) **Evaluation**  
A post-activity quiz assessed knowledge retention and understanding. Quiz results were analyzed to determine the effectiveness of the activities. Participants with scores above 50% were considered to have successfully grasped the concepts. Feedback from students was gathered to refine future activities.

### 4. Results and Discussion

- a) The desired result in the activity program carried out by the community service team is that Increasing the knowledge of students in each country about the occurrence and handling of occupational and reproductive health, introducing occupational health promotion media especially related to ergonomics as a reminder for workers to behave healthily and safely, and reducing cases of occupational diseases related to ergonomics in each country. In the early stages, discussions were held with Thammasat University Thailand to explain the objectives of the activity and formulate the implementation technique of the activity. The picture of the activity is listed in Figure 1.



**Figure 1:** Coordination with Thammasat University about Ergonomic Project



**Figure 2:** Ergonomi Media Health Promotion Implementation in Workers

- b) Provide a presentation about occupational safety and health issue in Indonesia and situation of ergonomic in informal worker in Indonesia. The presentation of this material is the initial process of introducing the occupational safety and health in Indonesia and the implementation in the field give update knowledge in master and phd students in occupational safety and health and environmental health.



**Figure 3:** occupational safety and health issue in Indonesia and situation of ergonomic in informal worker in Indonesia

- c) Evaluate the results of presentation that have been delivered through discussions or questions and answers. This activity was carried out by the community service team using google form with fifteen questions about the presentation. The result showed that students had a good result as evidenced by a correct answer score of more than fifty percent.

**Table 1:** Result of Quiz after Presentation

Participant	Score
Participant 1	36/90
Participant 2	66/90
Participant 3	66/90
Participant 4	78/90
Participant 5	84/90
Participant 6	84/90





**Figure 4:** Evaluation process

## 5. Conclusion

The international community service program successfully addressed the need for enhanced awareness and knowledge about occupational safety and health in both Indonesia and Thailand. Through presentations, interactive discussions, and the introduction of ergonomics-based health promotion media, the program achieved its goals of increasing knowledge and fostering preventive measures against workplace accidents. This initiative demonstrates the potential of cross-border collaborations in addressing common challenges and suggests a scalable model for similar programs in other ASEAN countries. Future efforts should focus on expanding the reach of such initiatives and integrating feedback from participants for continuous improvement.

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