

# The Safety Awareness of Construction Workers Regarding Workplace Health and Safety Standard

Pasha Nur Fauzania, Tutin Aryanti, Nanang Dalil  
Herman  
Vocational and Teaching Education  
Universitas Pendidikan Indonesia  
Bandung, Indonesia  
pasha.nur.f@student.upi.edu

Amalia Cahaya Putri  
Building Design  
North Metropolitan TAFE (Central Institute of Technology)  
Perth, Australia

**Abstract**—Construction work is one of the professions which has a high risk of accidents. Therefore, construction work has to be carried out properly in terms of occupational health and safety standards. The high rate of workplace accidents shows workers' lack of understanding of occupational health and safety standards. The purpose of this research was to identify workers' awareness especially construction workers regarding occupational health and safety standards. This research uses a qualitative approach, and the data is collected by interviewing 24 construction workers in Bandung, Indonesia. The result of this research indicates that not all of the workers understand the importance of occupational health and safety. Hence, they rarely wear protective clothing even for their own safety.

**Keywords**—occupational health and safety; construction projects; work dangers; work incidents

## I. INTRODUCTION

Occupational health and safety are a critical factor that must be considered in carrying out the job. Construction work is a dangerous profession with a high risk of accidents [1-3]. According to ILO estimation, there are 270 million of workplace accidents per annum and 160 million of diseases related to the job [4], at least 60,000 fatal accidents take place at construction sites all over the world each year [5]. A significant number of construction industry workers suffered injuries (17%) and deaths (25%-40%) each year [6-8].

The factors that dominate work accidents are human error, bad behavior, skill and experience, company commitment, and work environment [9]. Bad or negative behaviors are the main factor that that can affect the occurrence of work accidents, damage and this could endanger themselves or others [9, 10].

This paper is the result of a preliminary study on civil construction workers in Bandung, Indonesia. The purpose of this research is to identify workers' understanding especially construction workers in relation to occupational health and safety standards. This issue is interesting to discuss as there are still many workers who do not use PPE clothing while working and many construction workers have injured to death while working.

## II. MATERIALS AND METHODS

Participants in this study were 24 civil construction workers in Bandung, Indonesia. Data collection was carried out by interviewing 24 civilian construction workers in the city of Bandung. After the interviews were conducted, group discussions were held.

The researchers aimed to identify construction workers' understanding, especially in the field of civil engineering regarding occupational health and safety standards. The researchers also identified workers' former education; their work experiences in construction field; their knowledge and understanding about occupational health and safety; their participation in occupational health and safety training; and whether their company provides health insurance.

The result of data analysis regarding education level reveals that the participant who successfully managed to completed their studies at the elementary school level were 20.83%, at the junior high school level 29.17%, and at the high school level by 50%. It shows that the level of high school education has a greater percentage.

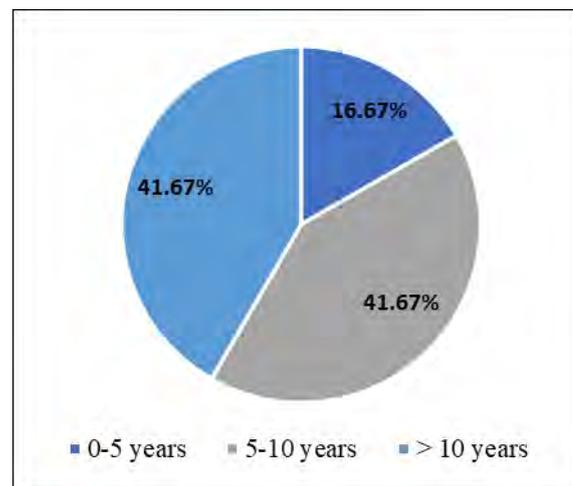


Fig. 1. Work experience.

Figure 1 shows that most of the workers have working experience for more than five years which corresponds to

83.34%. Work experience could determine how well the workers understand about the importance of OHS after certain years of experience. They still lack training in OHS as most workers have never received specialized training in OHS. There are only less than 10% of workers who have received specialized training in OHS.

Construction workers continuously get briefings (safety talks) on OHS twice in a week by the field supervisors. They also have insurance in case of a work place accident. However, OHS supervision has not been executed intensively.

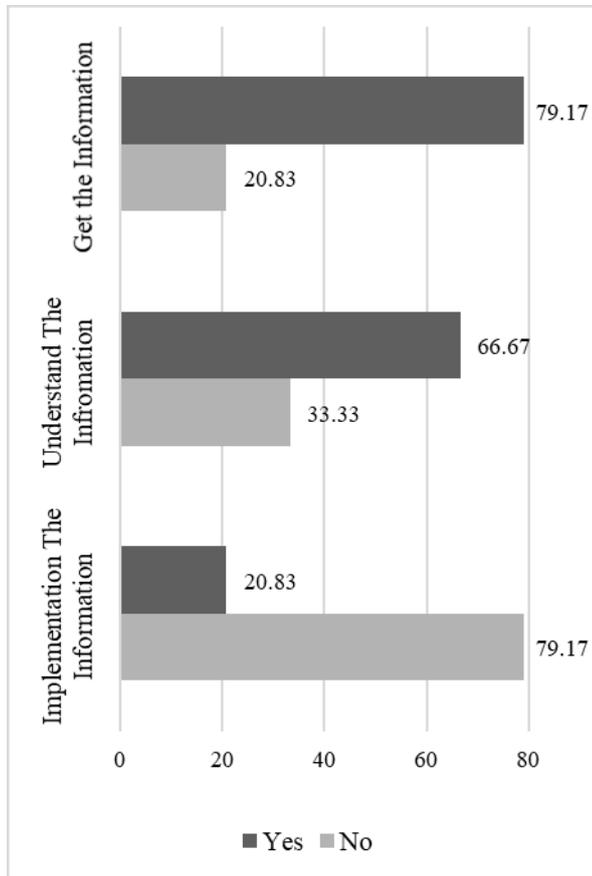


Fig. 2. Getting information, understanding information, and implementing information about occupational health and safety.

The level of understanding about the Occupational Health and Safety Regulations and Standard is shown in Figure 2. Some workers haven't received enough information and haven't understood about OHS. While on the other hand, there are also many construction workers who don't implement the received information related to OHS. One example is that a lot of the participants still don't use proper personal safety devices while they are working.

### III. DISCUSSION

Construction work is a difficult job that requires high alertness and accuracy. The construction industry has unique characteristics compared to other sectors. Construction is a work field that deals with people and plays a significant role in the economy of a country [5, 11]. Working in a construction

area is a profession that can be harmful to human health and safety [3].

There are several important factors affect health and safety in the workplace. These factors are categorized into 3 parts, i.e.: factors that are directly related to the construction site (work environment, management, work methods), factors that are generated throughout the organization of the construction company (company management, organization, safety culture, technical equipment) and the factors produced further in the company environment (education, national economy, society) [12].

Various studies have been conducted to increase the awareness of construction workers about the risks of the work they face and to reduce the possibility of workplace accidents [13-15].

More than 65% of workers are aware of and understand the OHS. That percentage indicates that construction workers have obtained various information concerning Occupational Health and Safety (OHS) as long as they are involved in working in the construction industry. Although the workers understand the information about OHS, many of them don't implement it when carrying out the job. Take the use of Personal Protective Equipment (PPE) as an example, many of them do not use PPE according to standards during working, some even do not use it at all. They use complete PPE only in a large construction project such as a multi-story building. Workers will use the tool if the company provides it. There are still many construction companies in Indonesia that do not provide or lack of the PPE clothing in accordance with the standards for their workers. The results of our observations show that the construction workers who used safety helmets, boots, gloves, glasses, safety belts and masks were less than 30%. Checking OHS equipment is often neglected by the workers.

The results of the discussion revealed that construction workers were adequately informed and understand the information about OHS equipment and their utilization, but they did not feel the need to implement those in their work. They know the risks they will face if they do not use the PPE, but they stickle that using PPE is not their top priority, even some of them argue that using it makes them feel uncomfortable to work.

### IV. CONCLUSION

The construction industry is an operation that requires a large number of people and has a high risk of accidents. To reduce the number of accidents in the workplace, workers must comprehend and implement information about Occupational Health and Safety. Last but not least, construction workers must be provided with further guidance, training and supervision so that they will apply OHS in their awareness.

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