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RESTRICTION FACTORS TO IMPLEMENT SAFETY PRACTICES IN SMALL GRADE CONTRACTORS

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ABSTRACT

This study was focused on small grade contractor in Malaysian construction industry. The total of small grade contractors in Malaysia registered by Construction Industry Development Board (CIDB) is higher and increases for every year. However, it is well known that construction project are exposed to accidents and injuries including of minor accidents, ergonomics problems, out dated machinery can cause the machine breakdown, and lack of awareness from employers and employees. The statistic of construction accidents is one of the critical sectors that need a huge and fast overhaul from the current site safety practices. Moreover, the safety practice in small grade contractors is too far to achieve the good safety performance in construction industry compare to large grade contractors. In this study, a semi-structured question was developed to identify the factors that affecting safety practice in small grade contractors. The data used in this study was collected through the interview with manager in small grade contractors, Site Safety Supervisor (SSS), and Safety and Health Officer (SHO). The finding of this paper was identified factors that influence safety practice in small grade contractors such as poor Occupational Safety and Health (OSH) management; small project value; financial constraint; lack of training and knowledge on safety management; high competition; lack of communication; unsatisfactory safety motivation; not exposed with good safety culture on site; the existing OSH framework is fragmented; difficult in contract acquirement; do not have SSS, SHO or safety person in charge; lack of OSH formal documentation; financial limitation and time constraints. The critical factors lack of safety practice which are financial limitation and lack of training and knowledge. In conclusion, small grade contractors faced for some factors that avoid them to implement safety practice in their companies.

Keywords: Safety Practices, Small Grade Contractors, Construction Industry

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1. Introduction

Construction sites are familiar with dangerous and risky sector compared to others sector. Occupational accidents are commonly in developing countries. However, occupational can be reduced through the effectiveness of prevention measure by training, good housekeeping, hazard assessment, better personal

protective equipment (PPE) and inspection (Unnikrishnan et al., 2015). An increased risk for injuries is found in small contractor and is especially evident for the construction industry (Holte et al., 2015; Dabrowski, 2015; Keller and Cunningham, 2016; Kheni et al., 2005; Cheng et al., 2010; Ozmec et al., 2015; Sunindijo, 2015). Some companies are typically engaged small contractor as subcontractors in

the construction industry. Subcontractors are located at the lower end of the inter-organizational hierarchy in a construction project. In addition, their ability to exert influence on decision making in the construction process is limited.

Previous research suggests that Australian small contractor companies may not manage OHS risk as effectively as larger firms in the industry. In Queensland's small contractor employers have a poor understanding of their responsibilities under OHS law (Holmes et al., 1999 and Legg et al., 2015). In another study of contractor company in Victoria, larger contractor employers were found to view OHS as something to be integrated into their management systems (Cheng et al., 2015 and Holmes et al., 1999), whereas small contractor employers did not focus on systems of management and believed OHS risks to be created by employees and therefore viewed risk control as the responsibility of employees (Holmes et al., 1999). It's supposed, every employer has a responsibility towards each employee to ensure that the employee safe from risk and injury during working. An employee's perception will reflect how they believe that safety is to be valued in the organization. Top management is often responsible for the implementation of safety enhancing system and the development of a safety-oriented culture. The impact of worker behavior on safety and concluded that training and reinforcement of safety practices help in preventing accidents on the work floor. Inspirational motivation which is communication is importance of safety and motivates employees to care about safety (Unnikrishnan et al., 2015).

Safety leadership motivates team members to work harder, to work efficiently, and to take ownership of responsibility for safety performance. The Federal Safety Commissioner emphasized the importance of safety leadership of senior manager in achieving a safety culture (Safety Commissioner, 2007). The Health and Safety Executive also has stated that without effective leadership, the good safety performance cannot be achieved (Lu and Yang, 2010). Developing and sustaining safety leadership is important to reduce accidents and to promote safety

among managers and general employees (Wan Faida & Mohd Saidin, 2018).

Relatively poor OHS management and outcomes in small grade contractors may be attributed to characteristics that are typical of small grade contractors. This makes it more difficult for them to create and maintain a safe and healthy work environment and to manage safety and may explain why employees in small grade contractors are generally more frequently exposed to hazardous situations and suffer more work-related injuries and illnesses than those working in large grade contractors (Holte et al., 2015).

In addition, the safety problems in small grade contractors are related to lack of adequate resources to address safety issues. For example, they have limited access to external sources of advice and support and to business information hence, are reliant on trusted relationship (Legg et al., 2015). Lack of knowledge of the contractor's safety risks (Kheni et al., 2005).

The safety activities are including safety policy and objective statement; training; inspections; risk assessments; safety responsibilities and employee involvement in safety issues (Kheni et al., 2005; Misnan & Mohameed, 2007). The contractors in small grade not apply all of safety activity in their company because of some factors or barriers to implement it on site. In order to develop a good safety culture, the attitudes of the workers need to be reoriented by adopting work practice best practices, changes in work culture and good housekeeping (Unnikrishnan et al., 2015).

Small grade contractors often employ family and/or friends, seasonal, casual or part-time non-unionized workers. They often suffer from skill shortage. Staff wages are often low. Jobs are less secure. Table 1 represented the management characteristics of contractor's grade.

Table 1 Management characteristics of micro, small and medium grades (Legg et al., 2015)

Micro (G1)	Owner-manager
	One management level, owner often works in operation
	Rarely growth and profit oriented
	Very low division of work
	Low formalization
Small (G2-G4)	Both owner-manager and professionals
	Two management levels, owner does not work in operation
	Sometimes growth and profit oriented
	Division of work with a few different professions
	Some formalization-systematic bookkeeping
Medium (G5-G7)	Often professional management
	Several full time management levels
	Stronger growth and profit orientation
	Division of work with several professions and expert support functions
	Formalization in terms of book-keeping, contracts and certification

2. Methodology

Figure 1 show the research methodology framework. This study was used qualitative approach in order to identify the factors that influence the safety practices in small grade contractors. The primary data collection was conducted in this study are semi-structured interview for explanations on safety practice in their company and secondary data were collected from reports by CIDB and DOSH, electronic data bases such as ScienceDirect and Open Access Journals.

The selection of semi-structured interviews because it's more flexible, the questions are focusing and to better understanding about the safety practice in small grade contractors. The interview process involved face to face interview and via phone with randomly small grade contractors company in Malaysia. All questions were prepared before interview session and the questions are involving the grade of company; types of construction work; and factors that influence of safety practice on their company.

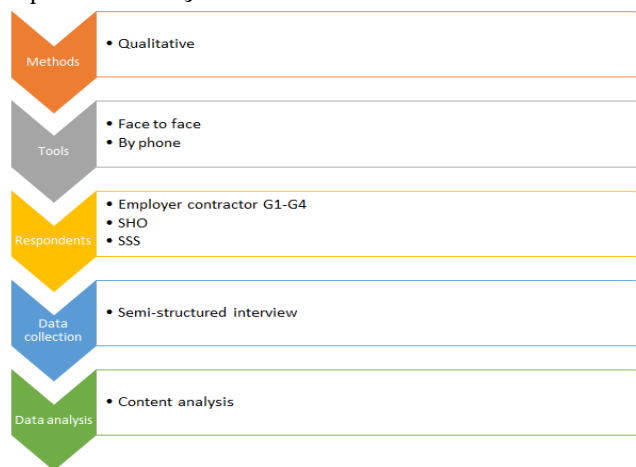


Figure 1 Methods of study

The respondents for this study are manager of small grade contractors, SHO and SSS were randomly chosen to identify factors that influences safety practice in small grade contractors. The data was

analyzed using content analysis. The tool of data analysis was used transcription, identifying theme and frequency.

3. Results and Discussion

Figure 2 show the groups of respondents for this study. 11 respondents from randomly small grade contractors were interviewed includes employer contractor G1 and G4 (1 person) respectively; 2

persons for employer contractor G2, G3 and SHO; and 3 persons for SSS. Based on interviewed, some respondents are very agreed that the small grade contractors are too far from safety practice in construction industry.

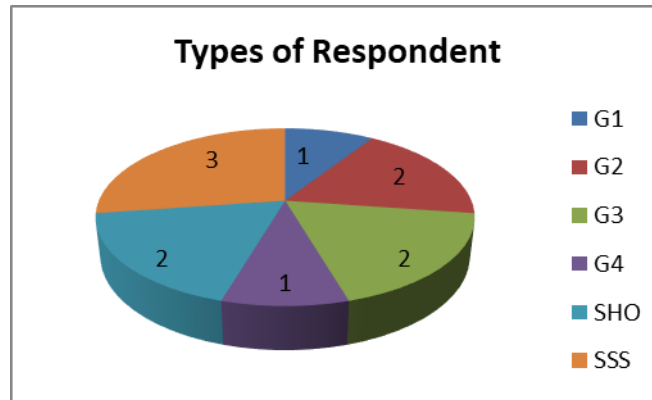


Figure 2 Type of respondents

The factors of influences safety practices in small grade contractors were analyzed and the results are summarized in Figure 3. The critical factors that influence the safety practice in small grade contractors are financial constraints (50%) and lack of training and knowledge (40%). Poor OSH management; time constraints; and not exposed

with good safety culture (20%) respectively. Moreover, small project value; high competition; lack of communication; unsatisfactory safety motivator; do not have SHO, SSS and safety person in charge; and lack of OSH formal documentation (10%) respectively.

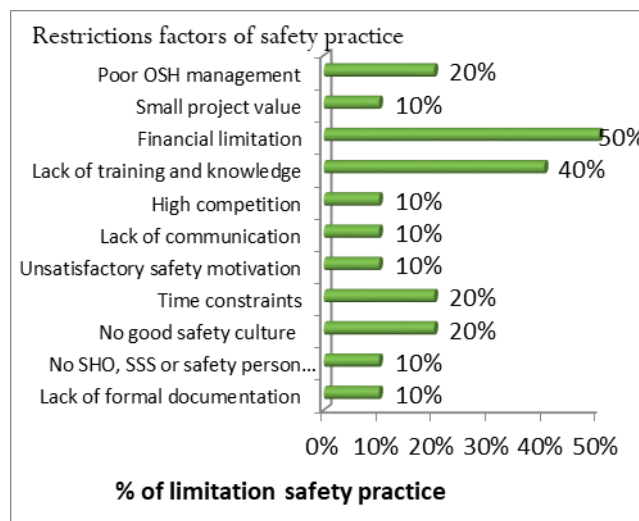


Figure 3 Restriction Factors to Implement Safety Practices in Small Grade Contractors

Based on this result, small grade contractors have problem to appoint safety person in charge because of financial constraints. Fee of safety person in charge is quite expensive and they just work for 3 hours/day. In addition, the Personal Protection

Equipment (PPE) for safety equipment also expensive and small grade contractors just provide the common PPE in their company such as safety helmet, safety boots, and safety jackets. In addition, small grade contractors also lack of training and

knowledge about the safety practices. This is because the fee of safety training is higher and company do not have budget to give training for their employees. As results, the employees have limitation knowledge and not familiar with safety practices. Because of that small grade contractors have non-skills workers and lack of expertise workers in safety practice caused their company exposed to unsafe working condition. The difficulties in obtain funds from financial institutions and government. Usually the interest charges by financial institutions on loans borrowed by small grade contractors are high, and this is compounded by a lack of financial transparency by small grade contractors. They also run into problems due to late payments by clients. Delays with interim and final payments, as well as onerous contract conditions faced by construction firms, can also impose huge constraints on the industry.

Small grade contractors have shortage period to finish or complete their project. Thus, because of time constraints they cannot be appoint SSS or safety person in charge for their project. For example; contractors G1 normally doing the project for 2 to 4 weeks, but the process to appoint the SSS or safety person in charge is takes time. Basically, contractors G4 appoint the SSS or safety person in charge as for their company. As consequent, small grade contractors do not have SSS or safety person in charge in their company and automatically they have poor OSH management and safety practices not implemented properly on their company. In addition, the safety culture in small grade contractors also too bad compared to large grade contractors.

The value of project is one of the factors that influence safety practices in small grade contractors. For example, to appoint SHO or SSS is depending on value of project. According to Department of Occupational Safety and Health (DOSH) the SHO can be appointed if the value of project is more than RM20 million. But for sure the project value for small grade contractors is not exceeding 3,000,000 and how to appoint the SHO. Fortunately, the small grade contractor can appoint the SSS on their company but the qualifications and experiences

between SHO and SSS are not same. As result, the safety practices in small grade contractors cannot challenge large grade contractors.

In addition, safety motivation in small grade contractors are unsatisfactory that influence the safety practice on their company. The employees of small grade contractors have low qualification and education. Normally, employees in small grade contractors are not skilled workers and temporary workers. They just finish their work without think about safety practice on site. Consequently, the employees lack of safety motivation in small grade contractors. Unfortunately, the employer also not exposed to safety practice and do not push their employees to understand about safety practice in construction site. Safety practice is very difficult for employees to follow without guidance or instructions from employer.

The factors that influence the safety practices in small grade contractors are high competition. Table 2 shows the statistic contractors registration in CIDB and surprisingly those small grade contractors are the highest in construction industry compared to large grade contractors since 2014 to 2016. Because of the number of small grade contractors are highest; they complete each other to get the project. Small grade contractors are facing increased competition due to the long-term real decline in demand and many contractors have responded by shedding labour. So, they bid and put the lowest price (value of project) to win the tender. They try to maximize their profit and reduce the safety part. This is because; they cannot reduce obviously the price of material. Normally, large grade contractors will sub their project to sub-contractors especially to small grade contractors and from that the large grade contractors can choose the best or good sub-contractors to take over the project. The number of small grade contractors is higher and easier for large grade contractors to choose any sub-contractors who they want.

Table 2 Contractors statistic registered with CIDB since 2014-2016 (CIDB, 2017)

Grades	Number of contractors		
	2014	2015	2016
G1	33,991	34,068	34,862
G2	10,441	12,407	14,636
G3	8,875	9,375	10,167
G4	4,287	3,408	3,669
G5	3,093	4,746	4,992
G6	1,528	1,589	1,574
G7	5,618	6,206	6,650

4. Conclusion

This study can be concluded that many factors are influence safety practices in small grade contractors in Malaysia. Some factors in small grade contractors are causes safety practice is very poor. The critical factors can affect the safety practice are financial limitation and lack of training and knowledge. So, to improve the safety practice in small grade contractors the researcher need to find the solving problems based on that factor. The factors were identified and the new safety framework will be proposed. In Malaysia already have safety act, laws, regulations and framework but it very general and not enough especially for small grade contractors. The education, knowledge, training and support from external (large grade contractors and government) also that influence to improve the safety practice in small grade contractors.

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