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SAFETY ISSUES IN CONSTRUCTION SITE OF LRT 3 AT SECTION 7 SHAH ALAM, SELANGOR

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ABSTRACT

In order to avoid any incidents on a construction site, health and safety regulations must be observed. Because accidents occur on construction sites so frequently, it has also been confirmed that the construction sector is among the most hazardous and dangerous. Since this sector of the economy is one of the most hazardous for employment, all parties, especially the general contractor, must manage and monitor safety. As a result, I choose Section 7 of Shah Alam, Selangor, as my case study location for this essay. Section 7 is the location of the LRT 3 project. This study aims to identify the safety issues at construction sites and rank them in terms of importance. This study employs a quantitative methodology to gather the necessary opinions and viewpoints regarding problems on the construction site and the drawbacks that will occur nearby. Thus, there were 80 respondents in total, and all of them resided nearby the construction site for the purposes of this study. The public's perspective of the LRT 3 construction site in Section 7 Shah Alam, Selangor, is particularly interesting to this study's investigation.

Keywords: *contractor firm, construction work, post-pandemic challenges*

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INTRODUCTION

The provision of proactive warning systems to prevent incidents of workers being struck by mobile equipment, such as cranes on site, the provision of fall protective systems, the effective scheduling of construction site activities, and the provision of frequent safety training sessions for employees are some of the international best practices about health and safety on the construction site. Additionally, the best practices for ensuring safety at construction sites were highlighted. These practices included adequate provision and use of engineering controls, safer machinery and procedures, and protective equipment, and increased observance of safety guidelines and labour inspections. By identifying common safety problems and developing solutions for them, the study can help reduce the number of accidents and fatalities at construction sites (Onubi, 2019).

The fundamental obstacles to construction workers using personal protective equipment (PPE) and the reasons they don't were also found to be unexplored by research. PPE that is frequently used on construction sites includes a safety helmet, eye protection, a mask and respirator, ear protection, protective gloves, safety footwear, protective clothing, and safety belts. The worker's incomplete understanding of PPE use poses a risk in a construction site (Ebekozien, 2021).

According to the Construction Industry Development Board (CIDB), a profit-driven mentality, insufficient health and safety management, insufficient supervision, insufficient health and safety training, a lack of worker involvement in the health and safety implementation, and disregard for personal risk assessment are the root causes of poor construction health and safety. You can also argue that, just like in any other industry, health and safety regulations in the construction industry compete for resources like time, workers, managers, supervisors, and executives with other operational activities. The construction sector frequently engages in dangerous and risky operations that can result in unpredicted human tragedies and have an effect on productivity costs and the reputation of the industry (Amoah, 2020).

Reducing workplace accidents and their consequences, such as injuries, fatalities, disabilities, and illnesses, is the main objective of establishing Health and Safety regulations. Accidents on construction sites are more likely to happen if there are lax organizational policies, risky practices, uncooperative worker attitudes towards health and safety, a lack of managerial commitment, worker ignorance, or inadequate training. This research study's primary interest is in how well the contractors are aware to this quality of safety issues in construction site (Onubi, 2019).

LITERATURE REVIEW

Important of Safety Issues in the Construction Site

- Educate the workforce

Workers need to be aware of the risks and hazards they may encounter on the job site in order to work safely. Some workers might not always be as familiar with the work being done or the hazards involved because of the industry's transient workforce. (ASSP, 2019).

- Remember the hierarchy of controls

Personal protective equipment (PPE) may occasionally be used as the first line of defines to protect workers from dangers on construction sites. Lindgren emphasizes the importance of workers, safety experts, and contractors, keeping in mind that the hierarchy of controls starts with removing or replacing hazards. Prior to moving further down the hierarchy to PPE, these methods should be pursued because they offer the greatest hazard mitigation to protect workers. (ASSP, 2019).

Table 1 : List of Personal protective equipment (PPE)

A list of the PPE commonly used in the construction industry and their functions.	
PPE	Function
Safety helmet	Avoidance of head injury.
Eye protectors	Eye protection from dust, particles, flying chips, smoke and chemical splattering.
Ear protectors	Ear protection from high levels of noise.
Mark and respirator	Protection from inadequate oxygen supply, presence of toxic gases, harmful particles and virus in the air.
Protective gloves	Avoidance of hand injury.
Safety belts	Fall protection for working at heights
Safety footwear	Avoidance of foot injury and slipping on wet floors
Protective clothing	Physical protection and increase of comfort levels

- Employ effective safety management

No matter how they refer to it, many businesses have a safety management system in place. Executives' attitudes towards safety, the amount of training given to employees, and how those employees carry out their duties all reflect this. Organizations must comprehend what contributes to safety and health success in order to foster continuous improvement in occupational safety and

health (ASSP, 2019)

As one example, OSHA provides guidelines for effective safety and health program management that include the elements of commitment and leadership from management, worker participation, hazard identification and assessment, hazard prevention and control, education and training, communication and program improvement.

Even though construction companies have increased their efforts to prevent workplace accidents and fatalities, there is still a possibility that a standard procedure or tool being used could lead to a hazardous incident. In addition to a general lack of proper planning to prevent these occurrences, the top 5 safety hazards that are most frequently found on construction sites are listed below:

- Improper Scaffolding Use

Scaffoldings can endanger construction workers if they are not assembled or used properly. Due to their elevated height, faulty scaffolds risk a fatal fall. On construction sites, scaffolding accidents whether they involve falls or collapses are all too common. As a safety measure, construction workers should wear a body harness. Workers must also receive sufficient training on using scaffolding, according to Occupational Safety and Health Administration (OSHA) regulations.

- Improper Crane Use

Inappropriate crane use can result in serious, often fatal injuries. Using these machines improperly can result in fatalities from falling loads or being struck by the swing radius. Other tragic incidents may occur when a crane collides with an electrical overhead line. Crane operators can avoid accidents by maintaining constant awareness and moving at a safe speed.

- Faulty Ladders

Each year, accidents involving stairs and ladders occur on construction sites. If the ladder is not properly fastened, is not structurally sound, is broken, or has something slick on the rungs that could cause someone to slip and fall, the risk increases. Supervisors should exercise caution when inspecting ladders before employee use and providing necessary fall or personal protection equipment to prevent a ladder accident.

- Lack of Head Protection

Without proper head protection, working on a construction site increases the risk of traumatic brain injuries (TBI), as well as the possibility of death from

head contact with potential electrical hazards or stationary or falling objects. It may be necessary to protect your head with hard hats that are in good shape, free of dents and cracks, and that are also replaced in the event of an impact or electrical shock.

- Inadequate Equipment on Excavation Sites

Due to careless machinery operation, falling objects, or a lack of personal protective equipment, any excavation can be fatal. Before beginning any work, your team should know all underground electrical and pipeline locations to eliminate this potential hazard. Additional safety measures such as when machinery is being operated nearby, having an alert system, employees should not be allowed to stand next to or underneath lifted loads, and make sure that the machinery's operator always has a clear view of the excavation site.

- Forklift Operation Without Proper Training

Accidents at work involving large machinery like forklifts and other powered industrial trucks. The equipment must undergo safety inspections before use by employees who hold the required certifications. In addition, OSHA has a comprehensive list of recommendations and safety measures for all employees to follow when using a forklift that can be accessed through their official website and should be read thoroughly before each use.

RESEARCH METHODOLOGY

Section A of the questionnaire survey consists of demographic questions. Section B were set to discover the factors that influence the public's perception on the Safety Issues in Construction Site of LRT 3 at Section 7 Shah Alam, Selangor. The type of questions in Section B used Likert-type scales with choices ranging from "strongly agree" to "strongly disagree" that was simple designed to clarify the ambiguous question for the respondents to choose. Moreover, for Section C were listing types where respondents could tick one answer from the given optional answers whether "Yes" or "No". The instruments were made based on several previous studies with some modifications in accordance to the researcher's objectives in this study.

FINDINGS

Table 2 below shows the Data collection about the Safety Issues in Construction Site Based on General Opinion. The data shown is in percentage form.

Table 2: Data collection about the Safety Issues in Construction Site Based on General Opinion

Question	Safety Issues in Construction Site Based on General Opinion	1	2	3	4	5
1	Does this construction look safe?	1.1%	10.9%	31.5%	47.8%	8.7%
2	Do the workers follow the safety requirements?	0%	3%	15.2%	60.9%	20.7%
3	Safety and Health are very important on the construction site?	0%	0%	2.2%	12%	85.9%
4	Do these construction workers keep their tools in a safe place?	0%	6.5%	53.3%	30.4%	9.8%
5	Is this construction site too noisy and disturbing the surroundings?	1.1%	19.6%	38%	27.2%	14.1%
6	Is the construction site still operating at night?	2.2%	3.3%	15.2%	52.2%	27.2%
7	Does this construction site often have incidents?	31.9%	44%	17.6%	6.6%	0%
8	Is the construction site suitable for visitors?	54.3%	21.7%	9.8%	9.8%	4.3%
9	Can outsiders easily access the construction site?	57.6%	7.6%	9.8%	14.1%	10.9%
10	Is this construction site dangerous for kids?	1.1%	1.1%	4.4%	9.9%	83.5%

As shown in Table 2 Data collection indicates that most of the respondents agree with Question 1 regarding this construction looking safe, while the second most of the respondents are neutral because the construction site is near highways. Question 2 reveals that most respondents agree about workers following safety requirements. For Question 3, most respondents strongly agree that safety and health are very important on the construction site. Moreover, Question 4 indicates that the respondents are neutral regarding construction workers keeping their tools in a safe

place. Same with Question 5, most of the respondents are neutral about the construction site being too noisy and disturbing the surrounding because this construction site is near the residential area. Most respondents agree with Question 6, which is the construction site still operating at night. As for Question 7, most respondents disagree that the construction site often has incidents. Furthermore, half of the respondents strongly disagree with Question 8 about whether the construction site can be suitable for visitors. Additionally, in Question 9, most respondents strongly disagree that outsiders can easily access the construction site. Every construction site must employ security guards or add a perimeter fence to protect the construction site. Lastly, almost all the respondents strongly agree with Question 10, which is that construction sites are dangerous for kids. It is commonly known that a construction site is dangerous for kids.

CONCLUSION

In conclusion, safety concerns at construction sites pose serious risks to the health of employees, guests, and the local community. It's critical to recognize and address these safety issues to avoid mishaps, injuries, and property damage. Cooperation between the government, contractors, and construction firms is crucial for the construction industry to become safer. Future research can advance construction site safety by examining long-term safety effects, technological advancements, human factors and behavior, organizational climate and safety practises, safety management systems, cultural and regional factors, and site design and planning. We can better understand safety issues, develop workable solutions, and improve safety procedures on construction sites by conducting research in these areas.

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