

Health and Safety Practice during Covid-19: A Case of Siburan Clinic Construction Project

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Abstract

The construction industry remains a critical sector impacted due to the Covid-19 Pandemic outbreak and the continuous rise in Covid-19 cases in the construction sector. The situation demands health and safety practices among the stakeholders to minimize the Covid-19 cases in the construction sector. Thus, the objective of this study is to explore the current practice of health and safety in the construction site during Covid-19 and select the Siburan Clinic project as a case study. This objective was achieved by conducting semi-structured interviews among the parties involved in the Siburan clinic construction project. The finding shows that the health and safety practice in the Siburan Clinic construction project mainly refers to the Standard Operation Procedure (SOP) recommended by the “*Jabatan Kerja Raya (JKR)*”, “*Majlis Keselamatan Negara (MKN)*”, and “*Construction Industrial Development Berhad (CIDB)*”. It can be concluded that the health and safety aspect is an important practice that needs to adapt as it can significantly impact the construction progress and its financial management.

Keywords: Health and safety, practice, construction project, Covid-19, Siburan project

1. Introduction

The construction industry plays a significant role in the country's development, which involved a megaproject, a multifaceted, and dynamic industry that accommodates processes for building new structures and engineering projects (Çelik et al., 2017). The development in the construction industry provides a positive impact on the surrounding community, which will increase the social services sector as it increases the economic activities in the developed area (Hidayat et al., 2020). Indeed, this sector is an essential employer of a nation's workforce, as it employs between 2% and 10% of the total workforce of most countries. Malaysia has gained impressive economic growth during the last three decades, and this sector employed an estimated 1.463 million workforce nationwide in 2019 (Hirschmann, 2022).

However, since the COVID-19 outbreak in March 2020, the Malaysian government has announced the Movement Control Order (MCO) to ensure all Malaysians' safety. The restriction poses challenges and risks in all industries across the board, including the property development industry. Everyone in the supply chain, such as developers, contractors, suppliers of building materials and equipment, manufacturers, professionals, and purchasers, is facing a tough time meeting their various commitments. According to Kana (2020), the RM66 billion construction sector cannot be delayed due to COVID-19 and a much-needed boost to its infrastructure projects. This is supported by Auto (2020), which stated that Malaysia's construction industry had suffered

RM18.5 billion in losses during the three phases of the country's lockdown. Under these circumstances, financial issues caused the most severe impacts, project deliveries, and "workforce limitations" have impacted the construction phase. Considering the current condition, during the COVID-19 pandemic the construction industry was one of the first sectors in Malaysia's economy to reopen with a strict SOP (CIDB, 2020). Nevertheless, the COVID-19 pandemic crisis has been a global issue that needs to be highlighted as it significantly impacts safety and health regulation in the construction phase.

According to the statistics from the CIDB (2020), the COVID-19 cases at the construction site at the end of the year 2020 reached more than four thousand positive cases. This happens due to the close contact of the construction workers with the existing cluster of COVID-19 and a lack of awareness of the SOP at the construction site. Thus, various organisations emphasise construction site safety and health due to the consequences of an unsafe environment on stakeholder productivity and health (Singh & Misra, 2021). Therefore, this study aims to explore the current practice toward safety and health at the construction site during COVID-19 and makes the Siburan Clinic construction project a case study. This project is located in Sarawak, and there are no reports regarding COVID-19 cases among the construction stakeholders. In addition to that, the Siburan Clinic construction project is selected as it is one of the huge projects handled by the government in the Kuching zone. The overall cost of this project is RM 28,668,435.51 million. Apart from that, the Siburan Clinic construction project is fully handled by JKR Sarawak.

2. Methods

This study employed a qualitative research approach through a case study design to explore the health and safety practices during COVID-19 in the Siburan Clinic construction project. The most employed method in qualitative research is the "in-depth" interview, where the interviewer can encourage informants to talk, ask supplementary questions, or ask respondents to further explain their answers. In-depth interviews are often divided into structured, semi-structured, and unstructured interviews according to their interview schedule and design (Bryman, 2004). Thus, this study utilised semi-structured interviews for the data collection. The online interview through Google Meet was performed to achieve the objective of the study. Construction workers and other parties involved in the Siburan Clinic construction project are informants for the data collection.

2.1 Semi-Structured Interviews

For the semi-structured interview, the researcher has prepared a set of questions, the so-called interview guide, the interview process is flexible, and the informant can respond freely in his or her own words (Bryman, 2004). Open questions in the in-depth interview allowed informants to explain their point of view and understanding of safety and health practices in the Siburan Clinic construction project without being limited by preconceived categories provided. The researcher could also clarify any ambiguity in the instructions or questions, and he or she could allow probes on questions to encourage informants to expand on, clarify, or explain their answers (Berg, 2009). The topic covered in the in-depth interview was based on the objectives of the study.

2.1.1 Informant Selection

This study used purposive sampling based on the criteria that have been identified to select the informants for the study and the criteria considered are having experience, knowledge, willingness to provide information, and being directly involved in managing the Siburan Clinic construction project. Based on these criteria, six (6) informants were selected, which consist of "Project Engineer", "Site Safety Supervisor", "Mechanical and Electrical Supervisor", "Quality Assurance and Quality Control Officer", "Operator," and "General Worker" as shown in Table 1.

2.2 Data Analysis Method

All the interviews were transcribed and manually coded. At the beginning of any qualitative data analysis, the coding process is essential to structure the data and facilitate the social sustainability element in the Siburan Clinic construction project. Morse and Richard (2002) differentiate between the following three kinds of coding, which all contribute differently to the analysis of the process: descriptive coding simply stores information; topic coding identifies material through themes, and analytic coding is used to develop the concept. Through analytic coding, the following reoccurring themes were identified: safety and health practise in the Siburan Clinic construction project.

Table 1. List of Informants

No.	Name	Position	Year of Experience
1	Informant 1	Site Safety Supervisor	3 years
2	Informant 2	Site Engineer	8 years
3	Informant 3	M&E Officer	5 years
4	Informant 4	Quality Assurance & Quality Control Officer	3 years
5	Informant 5	Operator	2 years
6	Informant 6	General Worker	1 year

2.3 Overview of the Siburan Clinic Construction Project

A case study has been carried out on the "Proposed Construction and Completion of *Klinik Kesihatan* (Jenis 3) with Quarters in Lot 608, Block 6, 17th Mile, Siburan, Kuching, Sarawak". This ongoing clinical construction project reported that about 60.1% of the current progress had been completed. The construction of this project begins in June 2019 and is scheduled to be finished by December 2021. The overall cost of this project is RM 28,668,435.51 million, where the clinic will be a welcome sight as the current clinic, constructed in 1964, is unable to cope with the number of patients and is frequently congested. This project, which sits on 3.01 hectares of land, includes a two-storey clinic building, staff quarters, and a parking lot. The client of this project is *Kementerian Kesihatan Malaysia* (KKM), JKR Malaysia is the consultant, and the main contractor for this project is *Welfield Services Sdn Bhd*, which wins the tender. The description of the Siburan Clinic construction project was summarized as shown in Table 2.

Table 2. Siburan Clinic Construction Project Background and Overview

Scope	Description
Project Name	Proposed Construction and Completion of <i>Klinik Kesihatan</i> (Jenis 3) with Quarters in Lot 608, Block 6, 17 th Mile, Siburan, Kuching, Sarawak
Project Area	3.01 hectare
Project Start	June 2019
Project Complete	December 2022
Project Duration (Years)	3 Years
Project Cost	RM28,668435.51 milion
Project Progress (100%)	60.1%

Client	<i>Kementerian Kesihatan Malaysia (KKM)</i>
Consultant	<i>Kementerian Kerja Raya</i>
Supervision Team	<i>Jabatan Kerja Raya Sarawak</i>
Contractor	Welfield Sdn. Bhd
Number of Workers	132 people

3. Results and Discussion

3.1 Health and Safety Aspects of Siburan Clinic Construction Project before and during Covid-19

The progressive increment of the project is only 38.1% from March 2020 until July 2021, as shown in Table 3. This is one of the vital impacts of the COVID-19 pandemic on the construction project. According to informants, the construction project suffers from a project delay due to the pandemic, which caused the contractor to reschedule the initial planning to boost the construction activities. However, due to COVID-19, there are some changes to the SOP. Previously, the Siburan Clinic construction project followed a regular SOP from the CIDB and "the Department of Safety and Health (DOSH)" for implementation of the construction project. As COVID-19 exists, the previous SOP was enhanced to fit the current situation. Thus, there are several new SOPs that need to be complied with and fulfilled by the Siburan Clinic construction project. In addition to this, the enhanced SOP toward safety and health aspects and practices has also been changed. Previously, before the COVID-19 pandemic, only a safety helmet was mandatory to be worn at the construction site. But then, since the COVID-19 pandemic, there have been some personal protective equipment (PPE) and practices that are mandatory to comply with for the workers, such as wearing a face mask, practising social distancing, and applying the principles of 3W and 3C at the construction site. Not only that, the capacity of the workers at the construction site was adjusted, as previously the site was allowed to have a full capacity of workers. However, this number is adjusted to avoid the construction site being congested and to reduce the probability of COVID-19 infection on the construction site (Informant 1 & Informant 2).

Table 3. Health and Safety Aspects of Siburan Clinic Construction Project before and during Covid-19
Before Covid-19 During Covid-19

Scope	Before Covid-19	During Covid-19
Project completion	21% in March 2020	60.1% in July
SOP	<ul style="list-style-type: none"> • CIDB • DOSH 	<ul style="list-style-type: none"> • CIDB with addition of Covid-19 SOP • <i>Jawatankuasa Pengurusan Bencana Negeri Sarawak (JPBNS)</i> • <i>Majlis Keselamatan Negara (MKN)</i>
Health and Safety Equipment and Practice *Compulsory	<ul style="list-style-type: none"> • Safety Helmet* 	<ul style="list-style-type: none"> • Safety helmet* • Face mask* • Social distancing* • Temperature health screening* • Work from home • Practicing 3W (wash, wear, warn) & 3C (crowded place, confined space, close conversation)

Worker’s Capacity	<ul style="list-style-type: none"> • Site office workers’ capacity 100% • Construction site workers’ capacity 100% 	<ul style="list-style-type: none"> • Site office administration management team capacity 50% • Construction site workers’ capacity 100%
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3.2 Health and Safety Practice in Siburan Clinic Construction Project

The discussion regarding health and safety practices in the Siburan Clinic construction project will be divided into several themes as follows:

3.2.1 Pledging Compliance with the SOP

The pledging compliance here refers to the health and safety elements practiced in the Siburan Clinic construction project. Based on the interview, Informant 1 and Informant 2 mentioned that the main contractor company, Weilfield Sdn Bhd., is compulsory to pledge compliance to the SOP before they start the construction operation. Since the Siburan Clinic construction project is one of the government funding projects this construction project is always monitored by the Kuching Divisional JKR, therefore, they must go through the JKR for the application to resume the construction site operation. However, the contractor also needs to send the application to "Majlis Bandaraya Kuching", CIDB, and "MKN". This element is required to ensure that the construction project meets the SOP available on the CIDB websites before it can resume operations.

3.2.2 Testing and Health Screening of Workers

The testing and health screening of workers was conducted every day for those who entered the Siburan Clinic construction project (Informant 1). People who are not related to the construction site are not permitted to enter to avoid congestion at the construction site and to avoid the infection of COVID-19 in the Siburan Clinic construction project (Informant 2). The workers in the Siburan Clinic construction project can resume their work while waiting their turn for health screening. However, the workers are strictly following the SOP to avoid COVID-19 cases at the Siburan Clinic construction project (Informant 6).

3.2.3 MySejahtera Mobile Application

Based on the interview, Informant 1 mentioned that workers are encouraged to download and register the MySejahtera application on their respective individual mobile phones for contact tracing. This is one way to control the spread of the COVID-19 virus. Informant 5 and Informant 6 said that they are compulsory to scan QR Code through the MySejahtera application before entering the construction site to avoid the infection of COVID-19 in the Siburan Clinic construction project.

3.2.4 Worker’s Transportation

The Siburan Clinic construction project does not provide any type of worker’s transportation because all the workers live on the construction site to prevent them from mixing with the outside community (Informant 2). The worker’s quarters are provided to them as accommodation and equipped with essential resources such as tap water and electricity (Informant 5 & Informant 6). Generally, the workers who live on the construction site are the construction workers who come from abroad. While other workers used their transportation to the site every day and compulsory to undergo health screening before entering the construction site. This group of workers are all local workers and work as the top management on the construction site (Informant 2 & Informant 4).

3.2.5 *Worker Returning from Overseas*

From the observation and information from Informant 1 and Informant 6, any workers returning from overseas, either local workers or foreign workers, are compulsory to undergo fourteen days of quarantine. This is to ensure that the workers are not infected by the COVID-19 virus before they are permitted to enter the Siburan Clinic construction site.

3.2.6 *Materials Supply Driver/ Carrier Health Screening*

According to Informant 1 and Informant 4, all material suppliers are compulsory to undergo health screening before they are permitted to transport the material to the Siburan construction site. The material suppliers need to register their names or use the MySejahtera QR code for contact tracing and take a temperature reading (Informant 3). However, if the material supplier does not comply with the health screening requirement, they are not permitted to enter the construction site (Informant 2). Nonetheless, based on the observation of the material supplier's compliance with the requirement of health screening, there are no significant problems faced by the Siburan Clinic construction site as the material suppliers give good cooperation. However, there is no complaint by the material suppliers regarding the requirements needed by the Siburan Clinic construction project (Informant 4).

3.2.7 *Covid-19 Positive Cases in Centralised Labour Quarters (CLQ)*

The centralized Labour Quarters (CLQ) at the Siburan Clinic construction project are used to separate the workers with COVID-19 symptoms. Based on the data collected from Informant 1, the CLQ will be monitored by the appointed warden to monitor the worker's condition, examine workers' body temperatures daily and keep a record, and ensure the workers practice social distancing and good hygiene at the CLQ. The workers will be allocated sufficient temporary quarantine rooms at CLQ, and they are not allowed to leave the CLQ without the warden's approval, and there is no visitor allowed to enter the CLQ except the authorities and government agencies. However, if the workers possess high-risk COVID-19 symptoms, they are not allowed to return to their CLQ room, but they must be quarantined in a designated quarantine room at CLQ for 14 days of monitoring.

4. **Conclusion**

This study aims to explore the health and safety practices of the Siburan Clinic construction project. Based on the results gained, it was shown that the practice toward health and safety in the Siburan Clinic construction project is linked with the element as recommended by the CIDB. Also, the health and safety practice adaptation has not received any complaints from the Siburan Clinic construction project management. Therefore, the recommended practice helps ensure that the risk of COVID-19 in the construction project can be minimized. The overview of the current practice of health and safety in the Siburan Clinic construction project provides an amenable understanding, and its practice is effective. Thus, the prevailing practices in the Siburan Clinic construction project play significant roles in ensuring the safety and health of the workers. Based on the current practice of health and safety in the Siburan Clinic construction project, there is an enhancement of the previous SOP, which follows the guidelines provided, such as the CIDB, *Jawatankuasa Pengurusan Bencana Negeri Sarawak (JPBNS)*, and MKN. Overall, SOP compliance is very important at the construction site during COVID-19 as it provides a positive impact. If the SOP is ignored, there will be a negative impact.

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