

A Study on Construction Workers' Satisfaction with Welfare Facilities at Construction Sites

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DOI: <https://dx.doi.org/10.47772/IJRISS.2024.8110177>

Received: 06 November 2024; Accepted: 10 November 2024; Published: 14 December 2024

ABSTRACT

Employers are legally obligated to provide basic welfare facilities to their construction workers yet many fail to meet the standards, which endangers their comfort, health and safety. This study aims to assess the level of construction workers' satisfaction with welfare facilities at the construction sites. Focusing on basic welfare facilities provided in construction sites which are temporary accommodation, sanitary facilities, kitchen, canteen, first aid and medical facilities, drinking water and washing facilities. The satisfaction level is measured based on four (4) main factors which are hygiene and cleanliness, safety and health, condition of welfare facilities and adequacy of the facilities. A quantitative survey research design was employed where the data was collected from construction workers at five (5) construction sites in Johor, Malaysia using stratified sampling. Out of 592 construction workers, sixty-one (61) were allowed to participate in the survey and all the responses were analyzed. The satisfaction level is indicated by using the Likert Scale, ranging from very dissatisfied to very satisfied. Descriptive and frequency analysis was performed using SPSS and the result is presented through mean score and rank. The analysis revealed that temporary accommodation had the highest satisfaction level with a mean score of 3.96, followed by a kitchen, canteen and sanitary facilities. In contrast, washing facilities scored the lowest mean score of 2.80. Overall, the construction workers reported moderate satisfaction with the provided welfare facilities at their construction site. The findings highlight areas of improvement, especially in washing facilities. Ensuring the proper provision of welfare facilities on construction sites will not only improve the satisfaction, health and safety of the construction workers but also contribute to their productivity, reducing turnover, influencing a positive work culture, and enhancing the reputation of construction companies. This can lead to higher overall project efficiency and the sustainable development of Malaysia's industry standards which prioritize construction workers' well-being.

Keywords: welfare facilities, construction workers, satisfaction

INTRODUCTION

The construction sector has an impact on economic development worldwide. An active collaboration among stakeholders in achieving the objectives of Construction 4.0 shows a significant positive impact on Malaysia's construction industry. This includes employers and construction workers. The well-being, safety, access to resources and overall performance of construction workers influence their performance in the construction industry. However, the critical problem within the industry is insufficient welfare facilities which leads to worker dissatisfaction, resulting in low productivity and financial losses (Zaid et al., 2019). Current research shows that many employers fail to meet the standards of worker welfare in construction sites as specified in Malaysia's standard such as accommodation, sanitary facilities, kitchen, canteen, first aid and medical facilities and drinking. For instance, Roslan et al., (2021) reported issues such as employers did not provide beds in the workers' rooms, the rooms provided had foul accommodation and cramps with people in a single

room. Hamid et al. (2020) further highlight that many ongoing construction sites fail to meet the Department of Occupational Safety and Health Malaysia (DOSH) requirements for on-site welfare facilities, leading to an RM6.8 million fine for non-compliance recorded in 2022. To address this gap, employers must provide adequate welfare facilities as prescribed by CIDB Technical Publication No. 185 (2018). In addition to measuring the degree of employers' compliance and construction workers' comfort level, it is crucial to assess their satisfaction level. This study is timely as the construction workers which includes unskilled, semi-skilled and skilled workers are important for the growth of Malaysia's construction industry. However, their satisfaction with welfare facilities has received limited attention and their dissatisfaction leads to potential risks to productivity and safety. Therefore, this study seeks to evaluate the level of satisfaction of construction workers on welfare facilities at construction sites in Johor to make recommendations for improvement following the industry standards and workers' expectations.

WELFARE FACILITIES AT CONSTRUCTION SITES

Employers must plan on-site welfare facilities, considering the factors influencing construction workers' satisfaction such as the safety and health measures, hygiene and cleanliness, and condition and adequacy of facilities. In Malaysia, there are bodies that enforce safety, environmental compliance and quality standards on construction sites which are the Occupational Safety and Health Act 1994, Employment Act 1955, Act 520 Malaysian Construction Industry Development Board (CIDB), Minimum Standards of Housing and Amenities (Amendment) 2019 Act 446, Factories and Machinery Act 1967 (Act 139), and Town and Country Planning Act 1976 (Act 172).

Figure 1 shows the types of welfare facilities at construction sites:

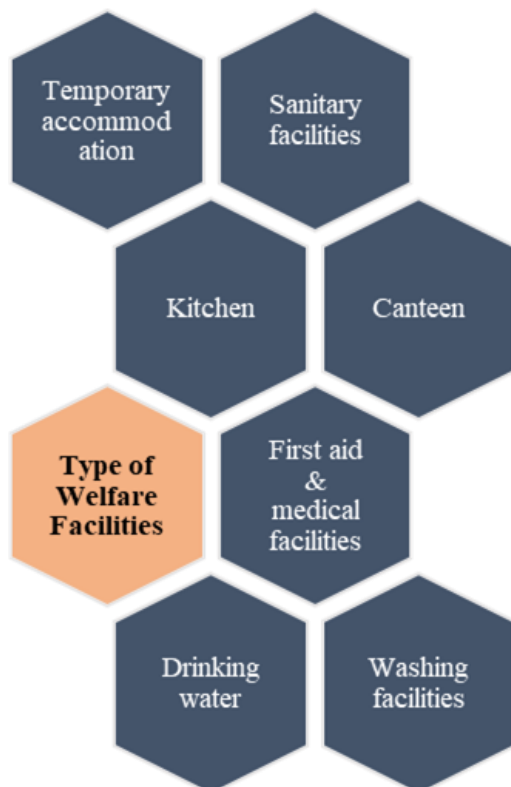


Figure 1: Types of Welfare Facilities

Temporary Accommodation

Contractors must provide temporary accommodation near or within the construction site and ensure that it does not interfere with construction or the flow of people. It must meet minimum standards of ventilation, lighting and space (JKR Standard Building Specification, 2014). The Workers Act 446 (1990) states that every

worker should receive comfortable and adequate accommodation. Rooms should strictly be used as bedrooms so as to preserve the right environmental quality that is needed for resting (Kyritsis & Sellers, 2019).

Sanitary Facilities

The provision of sanitary facilities must include sufficient toilets, urinals and private areas for both urination and menstrual needs (Akanzum, 2023). The space must follow requirements such as adequate ventilation, lighting and regular cleaning. MS 2593:2015, CIDB (2018) is a standard that addresses the ratio of toilets to workers, regular maintenance and ensuring proper connections to sewer systems. Inadequate sanitation not only risks workers' health

Kitchen

It is required to provide a separate and properly equipped cooking area on construction sites. Kitchen must meet specific size requirements, constructed using easy-to-clean materials and include necessary items like sinks, storage shelves, tables and seating. Additionally, the regulations require garbage bins with secure lids for proper waste disposal. These measures are to guarantee that workers can eat comfortably and safely at the construction site, and that hygiene levels are kept high.

Canteen

Having a canteen facility onsite makes a positive difference to the workers especially when the sites located far from stores or restaurants (Erika H., 2019). Hence, it offers convenient access to food. A well-equipped and sheltered canteen allows workers to relax and optimize their break times effectively (Monalisa, 2020). Bench, tables and separate cutleries should be made available, and the canteen should be located away from construction areas to minimize exposure to hazards (Emma, 2021).

First Aid and Medical Facilities

Employers must ensure they provide a complete set of first aid facilities in workers' living area. Hence, they can assess and use it to administer effective early treatment. The first aid must include a bandage, cleaning materials, a thermometer, some relievers for pain and temperatures and an instant hot and cold pack. First aid in the workplace plays a crucial role in saving lives and reducing number or injuries (Argent, 2023).

Drinking Water

Providing clean and accessible drinking water dispensers is essential for construction workers to maintain their physical energy, promote hydration and meet health and safety obligations (Ameco, 2023). Contaminated water can cause diseases that may impact workers' health. Hence, it is important to ensure workers can access clean drinking water through water dispensers.

Washing Facilities

Washing facilities should be conveniently accessible to the workers' accommodation through a direct access from workers living area. It includes providing clean water, soap and detergent to ensure workers' hygiene and safety, meet legal requirements and prevent occupational hazards (Schmidt, 2018). They should include sinks, proper lighting and ventilation to prevent contamination.

The satisfaction of construction workers is reflected by the condition of welfare facilities provided at the construction site. Herzberg's two-factor theory emphasizes the role of hygiene in creating a positive work environment. Employers are responsible in ensuring workers' basic needs are met, including food, water, salary, and infrastructure facilities (DOSH, 2023). Providing adequate welfare facilities not only enhances job satisfaction but also contributes to better human performance, underscoring the importance of management's responsibility in meeting employees' diverse needs (International Labor Organization, 2023).

RESEARCH METHODOLOGY

In this study, a quantitative approach is employed, with data collected in 2023 from five (5) construction sites in Johor, chosen due to ongoing development in the area. The study focuses on the types of welfare facilities and factors influencing satisfaction levels among construction workers. Descriptive analysis is used to summarize the data. Frequency distribution is utilized for respondents' demography, while mean analysis evaluates the construction workers' satisfaction with welfare facilities at their sites. A Likert scale ranging from very dissatisfied (1) to very satisfied (5) serves as the measurement technique. The study population consists of 595 construction workers in Malaysia, with a stratified sampling technique used, where the five construction sites represent the strata. The sample includes 61 available respondents from these sites. The number of respondents varied based on safety officer permissions and construction workers' availability during the survey session. Table 1 shows the population and sample size from these five (5) selected sites. Ethical approval was obtained from University Technology Malaysia, Sukadi.

Table 1: Population and Sampling Size

Construction Site	Total Construction Workers (Population)	Number of Available Respondents (Sample)	Percentage of Respondents
Site A	54	14	25.93%
Site B	400	11	2.75%
Site C	35	11	31.42%
Site D	50	15	30.00%
Site E	53	10	18.87%
Total Size	592	61	10.30%

RESULTS AND DISCUSSION

Demographic Analysis

The demographic analysis shows that all respondents were male, reflecting the dominance of men in the construction industry. Most respondents fell into the 21 to 30 age group and have 1 to 5 years of experience in construction. These findings indicate that the construction workforce is predominantly young, male, and relatively inexperienced. Furthermore, all respondents currently reside in temporary accommodations at project sites, aligning with the study's scope. These findings are significant in understanding the need to provide welfare facilities that suit the young, mainly male workers living in the construction site.

Evaluation of Workers' Satisfaction with Welfare Facilities on Site

As shown in Figure 2, the result of the study reveals that the construction workers' satisfaction with the welfare facilities provided is moderate with a mean score of 3.63. The respondents' satisfaction is highest in accommodation which has the highest mean of 3.96. This includes factors such as cleanliness, size of the room, adequacy of furniture available, and the distance to the construction area. This shows that good accommodation plays a critical role in the level of satisfaction among construction workers as noted in the literature (Zuber H. & Rahim A.A., 2021). Despite poor living conditions, Bangladeshi workers, who dominate the workforce, are happy because the conditions are almost similar to their home country. As stated by Saidin et al. (2022), this implies that optimizing projects or practices to these factors would increase satisfaction levels to better than that under the 2015 Code of Practice.

Kitchens and canteens score high, with mean scores of 3.90 and 3.85 respectively. This considers the cleanliness, ventilation, and the provision of cooking facilities. This means that workers consider a clean and neat environment for food preparation as important, as evidenced by other research on nutrition and productivity in the workplace (Chung L.M.Y et al., 2019). On the other hand, employers understand that high-

quality food boosts the health and efficiency of workers. This goes further to suggest that dining and kitchen areas need to be well maintained because they enhance job performance. Sanitary facilities rank fourth with a high mean score of 3.76. This includes portable toilets that are well-planned, functional and compliant with the standards. The finding shows that sanitary facilities are sufficient to address the needs of workers. However, further upgrades might be more in line with the government standards and make the employees happier (SMBL & Jayasinghe B., 2023). First aid and medical facilities are also highly rated, ranking sixth with a mean score of 3.69. The study therefore concludes that although these facilities are reasonably adequate, enhancing training and acquisition of improved equipment would go a long way towards enhancing worker safety and health (Karadag T., 2023).

Washing facilities are moderately satisfactory, with a mean of 3.47. Suggesting that separate washing area from bathroom should be provided, together with the required necessities. The lowest satisfaction level is achieved by the drinking water facilities with a mean score of 2.80. This low rating calls for improvement as water is a basic need that should be easily accessible and clean to avoid diseases such as dehydration (Matondang Z, et al., 2019). With these results, it becomes clear that employers need to improve medical and drinking water facilities as these have the largest effect on workers' health and performance. If these areas are subject to consideration by the workers, overall safety and satisfaction of the workers could be enhanced to improve the health of the workers and boost the productivity of the workplace



Figure 2: Summary of Construction Workers' Satisfaction Level with Welfare Facilities

CONCLUSION

In conclusion, this study shows that construction workers are moderately satisfied with the provision of welfare facilities at their sites. It indicates the condition of the provision of welfare facilities in Johor is at a medium level. Hence, there is significant room for employers to enhance the current and future provision of welfare to better meet the needs and well-being of construction workers. This study recommends that construction firms invest money in providing on-site welfare facilities. Additionally, the client should ensure that appropriate welfare facilities are provided on-site as part of the preliminary work. Furthermore, policymakers and construction professionals should regularly inspect welfare facilities to ensure they meet the required standards.

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