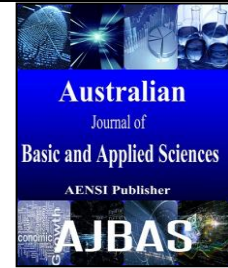




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Workers Perception on Management Commitment towards Safety in Malaysian Construction Industry

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ABSTRACT

Establishment of a good safety culture is critical to the improvement of safety performance in construction. As part of the safety culture components, worker's perception cannot be ignored especially in terms of the management commitment towards safety. This paper addresses the current level of management commitment on safety by assessing the gap between the current performance and the importance of each variable. Following a thorough literature review, a total of 11 factors were consolidated. These factors were assembled into a questionnaire survey and distributed to top management, supervisors, consultants and general workers. The results suggest the management team to focus on enhancing their concern about safety issues on site, providing more knowledge and training to the workers and providing suitable personal protective equipment (PPE).

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INTRODUCTION

For many years, people have debated the high number of incidents of injuries and fatalities in the construction industry, which generally happen due to the nature of the work, weather condition and a variety of hazards involved (CIDB, 2007). Construction workers are exposed to falling from high structures, movement of plant and machinery, electrical shocks, excessive noise, etc.

At the same time, the unsatisfactory safety record of construction industry has always been highlighted since the safety management system is a neglected area and has not been pursued and implemented systematically in the construction industry (CIDB, 2007). Bakri *et al.* (2006) commented that safety at the workplace is an issue that affects all businesses since most companies do not feel that it is vital to the success and are afraid of the possibility of prosecution. It appears that only big companies focusing more on safety related programs such as providing modern safety management systems, safety auditing, safety trainings, etc (Mahmud *et al.* 2009).

Management Commitment Towards Safety:

Many approaches have been adopted by construction companies towards safety, but most of them are focused on improving physical working conditions and safety management system/procedure,

which have led to some limited safety performance improvements. Construction companies nowadays need to actively search for a better approach to improve safety performance especially through behavior modification concept (Mahmud *et al.* 2008).

It is widely accepted that management commitment is very important in order to establish a good safety culture within the organization. Therefore, this study seeks the understanding on worker's perception on management commitment towards safety on construction site.

According to the literature, management concern on safety issues happening on site plays an important role towards shaping a positive worker's belief about safety. According to Zohar (1980), management commitment is an important indicator to a safety climate. Management role becomes more comprehensive and not only focuses on providing safety equipment or giving safety instruction. Langford *et al.* (2000) found that when employees believe the management cares about their personal safety, they are more willing to cooperate to improve safety performance.

Many researchers have studied construction safety and it appears that traditional approaches to safety management have been focused on the techniques and management tools and are related to identification of work hazards, minimizing the risks associated with these hazards, developing safety

management systems, safety procedures and standards, improving physical working conditions such as design of plant and machinery and site access, training site workers, developing better planning and work methods as well as providing personal protective equipment (Holmes *et al.*, 1998; Reese, 2003; Biggs *et al.*, 2005).

Hinze and Rabound (1988) revealed that the reduction in site accidents is related to the management participation in site safety. The attitude of the top management is crucial in drafting and enforcing company's safety policies and requirements. On the other hand, the misunderstanding between the top management and workers can increase the chance of injuries.

Study by Jannadi (1996) shows that the top management must be accountable and committed to the company's safety planning and the effectiveness of safety policies and plans should be one of topic of discussion at management meeting. At the same time, knowledge could change the attitude of a person.

Hinze and Harrison (1981) have identified that good safety programs practiced in big companies can help reduce the injury rate at the construction site. They also identified that there are several safety programs that should be implemented in the company.

1. Methodology:

This study seeks to understand the worker's perception on management commitment towards safety on construction site. The questionnaires were distributed to four different types of workers on construction site: top manager, supervisors,

consultants and general workers. The total number of respondents is 308 respondents. The instruments were designed to be anonymous; any information are regarded confidential and for the purposes of this research only.

The analysis is conducted using Gap Analysis Approach. The dual scale assessments have been used to prevent the misinterpretation on the responses and to create meaningful action plans. This method assesses respondent's agreement on management commitment towards safety in their construction site and later rate the importance of the management's commitment towards safety. The instrument uses a 5-point Likert scale from (1) Strongly Disagree to (5) Strongly Agree. The instrument also has two parts, which are the agreement on the current application and the importance of the management's commitment towards safety. Deduction of the value of importance to the current application leads to the current status of the management's commitment towards safety on site. A negative value indicates that the management commitment needs more improvement; while positive value indicates that the management's commitment is overdone.

RESULTS AND DISCUSSION

It is important for the construction company to identify how well they perform in terms of management commitment towards safety. Table 1 and 2 below present the management commitment determinants and the gap value for 11 variables in management commitment towards safety.

Table 1: Management Commitment Determinants.

Item	Determinants
1	Management concern on safety
2	Provision of safety requirements
3	Interest on safety proposal by workers
4	Safety discussion during project meeting
5	Safety checking by supervisor
6	Knowledge on safety by supervisor
7	Concern on safety issues
8	Provision for safety PPE
9	Provision for safety programs
10	NIOSH visit to site
11	CIDB support on safety training

- NIOSH – National Institute of Occupational Safety and Health
- CIDB – Construction Industry Development Board Malaysia

Table 2: Gap value.

Item	TM	SL	C	GW
1	-0.61	-0.36	-0.68	-0.25
2	-0.58	-0.33	-0.59	-0.38
3	-0.12	-0.19	-0.42	-0.05
4	-0.39	-0.28	-0.27	-0.13
5	-0.52	-0.36	-0.42	-0.45
6	-0.64	-0.4	-0.32	-0.13
24	-0.12	-0.2	-0.32	-0.36
25	-0.58	-0.38	-0.48	-0.38
26	-0.48	-0.47	-0.49	-0.33
43	-0.15	-0.25	-0.07	-0.16
44	-0.27	-0.35	-0.31	-0.25

*TM- Top Management SL- Supervisor
 C- Consultants GW-General Workers

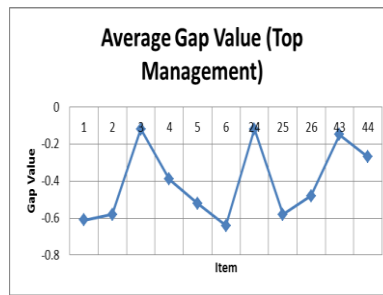


Fig. 1: Gap value for top management.

According to Figure 1 above, the top management agreed that the company needs to enhance their supervisor’s knowledge on safety (-0.64). It is believed that an increase in safety knowledge among supervisors will lead to better supervision on safety on site. The top management itself needs to increase their concern pertaining to safety (-0.61) besides providing more safety

requirements (-0.58) needed for site operations, such as modern safety management systems, etc. On the other hand, the management team agreed that their team has done satisfactorily on discussing safety proposal and feedback suggested by their workers (-0.12) and showing their concern on safety issues (-0.12).

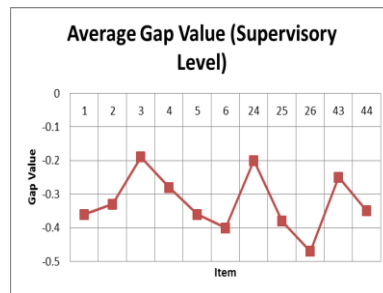


Fig. 2: Gap value for supervisor.

Figure 2 shows the agreement between the supervisor group that the management team needs to spend more money in providing safety programs on site (-0.47). The safety programs will increase worker’s ability to work safely and improve safety performance. The knowledge on safety among supervisors (-0.40) needs to be enhanced, besides

providing more good and quality personal protective equipments (PPE) (-0.38). At the same time, they are satisfied with the management team’s commitment to safety proposal (-0.19), concern on safety issues (-0.20) and NIOSH visit to site (-0.25).

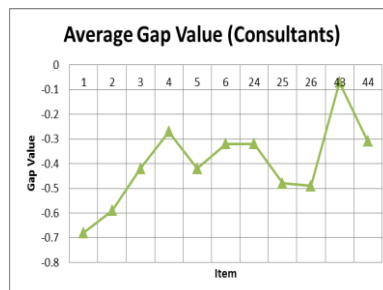


Fig. 3: Gap value for consultants.

The consultants agreed that in order to improve safety performance on site, the management team needs to increase their concern on safety (-0.68).

The management team needs to show the workers that they take safety as an important aspect that needs to be considered during the construction

process. On the other hand, they also suggested that the management team needs to provide more safety requirements (-0.59) and spend more money on safety programs (-0.49). On consultants point of

view, they are satisfied with the management team's commitment during NIOSH to the site (-0.07) and safety discussion during project meeting (-0.27).

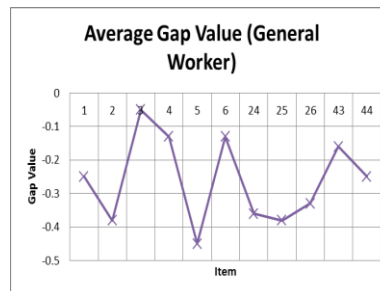


Fig. 4: Gap value for general workers.

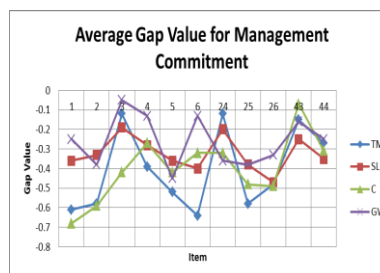


Fig. 5: Gap value for overall respondents.

As for general workers, they wanted the supervisor to do more check on safety activities and requirements (-0.45) and at the same time, the management team needs to enhance the safety requirements on site (-0.38) and spend more money on personal protection equipment (PPE)(-0.38). This group of workers is almost satisfied with the proposal on safety that has been brought to the management team (-0.05).

Figure 5 above shows the average gap value on management commitment for all types of respondents. It shows the agreement that the management team needs to show more concern on safety to their workers. At the same time, they need to provide safety requirements on site especially the safety management systems, safety procedures and regulations, etc. The management team also needs to provide full personal protective equipment (PPE) to the workers besides increasing the safety knowledge among the supervisors. NIOSH's visit to the site also plays an important role to increase workers commitment to safety.

5 Conclusions:

This study represents the current perceptions of construction workers towards management commitment on safety on construction site. It is believed that in order to improve safety performance, one cannot ignore the perceptions held by the workers. Positive management commitment is part of the safety culture that needs to be addressed.

Furthermore, developing a safety construction culture is something that cannot occur overnight. It is a journey rather than a destination, which takes time and commitment over an extended period of time (Loosemore and Zou, 2006).

It is concluded that besides concentrating on the safety management system and new technologies, focus on the human side of safety also an important aspect and need to be addressed. The target of incident and injury-free construction sites is achievable when the management and workers have positive perceptions on safety, adopt appropriate behavior and the organization has an integrated safety management systems that focus on not only policies, regulations, and site conditions, but also the human factors.

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