



## Insight of Safety Reporting Behaviour Determinants in the Workplace

BY

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### Abstract

The study attempts to provide empirical evidence on the direct influence of safety training, safety rules, and management commitment on safety reporting behaviour. Using data obtained from 152 Safety and Health Officers (SHO) from various companies located in peninsular of Malaysia, structural equation modeling results revealed that safety rules and management commitment had a significant influence on safety reporting behaviour. However, safety training had not influence on safety reporting behaviour. These findings provide additional insights of the importance of safety rules and management commitment as relevant factors that explains safety reporting behaviour in the workplace. It implied that SHO should be made familiar with safety rules on incident reporting process. Meanwhile, management commitment is crucial to help companies to manage under-reporting problems existing in the workplace and allows them to implement appropriate preventive and corrective actions.

**Keywords:** Safety Reporting Behaviour; Safety Training; Safety Rules; Management Commitment, Safety, and Health Officers.

## Introduction

Malaysia has been showing some significant improvements in occupational safety and health (OSH) over the past few decades. The statistics published by the Social Security Organization (SOCSCO) indicated an increase in reported occupational accidents in Malaysia from 55,186 cases in 2009 to 66,618 cases in 2016 (Social Security Organization, 2016), indicating a crude increase by 20%. The rate of occurrence of occupational accident dropped from 10.4 for every 10,000 workers in the year 2009 to 10.1 per 10,000 workers in the year 2016. However, during the same period, the rate of fatality increased from 12.5 for every 100,000 workers to 18.3 for every 100,000 workers, resulting in higher compensation for occupational injuries, diseases, and fatalities from the Employment Injury Scheme and Invalidity Pension Scheme. For instance, in 2015, it was reported that 2.68 billion was paid as compensation to reported occupational accidents as opposed to 2.48 billion in 2014. In the same vein, the statistics reported by Department of Occupational Safety and Health (DOSH) indicated that occupational accident statistics by sector in 2020 (reported to DOSH only) was 6933 cases. Meanwhile, as depicted in Figure 1, 32,674 cases of occupational accidents were reported in 2020, slightly decrease to 19.9 percent from 40,811 cases reported in 2019 (DOSH, 2020).

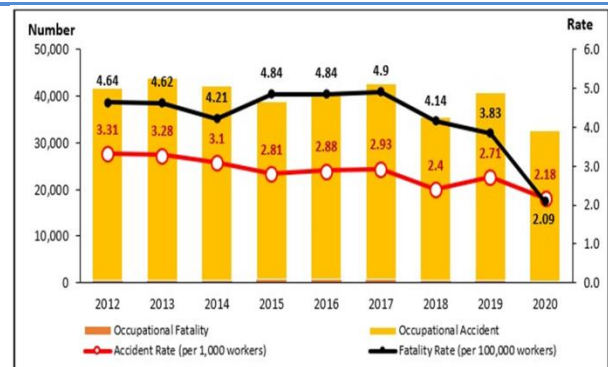


Figure 1. Annual Occupational Accidents and Fatality, 2012-2020 (source: DOSH, 2020)

Despite of huge numbers of occupational accidents and fatality, previous studies in safety and health fields claims that they are underestimations of the actual number of occupational injuries due to lack of accident reporting action in the workplace (Ganesh & Krishnan, 2016; Probst et al., 2008; Probst & Graso, 2013). One of the possible causes of the unexpected increase in workplace injuries and fatalities is ineffective accident prevention mechanisms, such as a lack of safety reporting. As a result, an actual number of occupational accidents may be underestimated.

According to Ganesh and Krishnan (2016), workplace accident statistics may probably reflect the half-truth of

workplace reality. The actual number of occupational accidents could be much higher because the organization and employees do not report occupational accidents (Ganesh & Krishnan, 2016). In the meantime, although accident under-reporting has been well reported, not much is revealed regarding what factors that may influence on safety reporting behaviour. The literature on safety reporting behaviour of occupational accidents and injuries indicated that there is limited research had been done in this area (Moore et al., 2013; Probst et al., 2008; Probst & Estrada, 2010; Probst et al., 2013). Furthermore, much of the literature on safety management practices seems to be focused on its effect on safety performance and safety compliance, which in turn, leaving a crucial gap on its possible implication to safety reporting behaviour (Hofmann, Burker & Zohar, 2017; Subramaniam et al., 2016; Vinodkumar & Bhasi, 2010).

In order to pinpoint the gap, this study will fill a research gap in the safety reporting behaviour by examining the possible influence of safety management practices such as safety training, safety rules, and management commitment on safety reporting behaviour. Therefore, this study aims to seeks to answer the following objectives (i) to examine the influence of safety training on safety reporting behaviour; to examine the influence of safety rules on safety reporting behaviour, and to examine the influence of management commitment on safety reporting behaviour..

## Literature review

### Safety Reporting Behaviour

In this study, safety reporting behaviour is defined as reporting of unsafe work behaviours that may result in harm or injury to oneself or others. Unsafe work behaviours include work errors, near misses, or adverse events (Williamsen, 2013). The conceptual definition of safety reporting behaviour is grounded from accident reporting behaviour and safety performance aspects. For instance, accident reporting behaviour is commonly evaluated by asking participants to indicate how many accidents, lost-time injuries, and first-aid injuries they personally reported in the past 12 months (Probst & Estrada, 2010). Since the measure only tackles the frequency of reporting, it does not provide the qualitative aspect of the reporting behaviour. That is, one will not be able to know qualitatively the degree of the reporting behaviour demonstrated by employees. For instance, one could not discern whether an employee is likely to report all types of accidents or injuries that will occur at work. Without such information, effective intervention in encouraging employees to report occupational accidents (including near misses) is not likely to take place.

In the similar vein, safety performance model proposes two dimensions of safety behaviour such as safety compliance and safety participation (Borman & Motowildo, 1993; Neal et al., 2000). Safety compliance is defined as obeying to safety rules and procedures and working safely in the workplace. Meanwhile, safety participation refers to actions that indirectly influences to a worker's safety and development of work culture that supports safety implementation (Neal et al.,

2000). We argue that these two safety behavioural dimensions are insufficient to capture safety performance behaviour well because safety reporting behaviour is a formally sanctioned behaviour mandated by law (Storgard et al., 2012). In fact, Section 32 of the Occupational Safety and Health Act 1994 stipulates that employers in Malaysia are required to report immediately to the Department of Occupational Safety and Health (DOSH) any accident, dangerous occurrence, occupational poisoning, and occupational diseases that happened during work. Employers are subject to penalty or fines if they fail to report or hide facts on any case.

### Safety training and safety reporting behaviour

Previous studies have specified an important function of safety training in handling and preventing an accident in the workplace (Eskandari et al., 2017; Vinodkumar & Bashi, 2010). For instance, the qualitative study was conducted among 17 safety experts working in Iranian universities and industries indicated that education and training was an effective factor in reducing occupational accidents. This is line with Vinodkumar and Bashi (2010) finding. According to them, safety training program is an effective way to improve behavioural knowledge, attitudes, and skills towards safety behaviour. Safety training gives more attention on safety-related matter such as priority in training program, effectiveness of training content, encouragement from top management in safety training, and learning transfer.

Preventing accidents through safety training is a crucial statement that provides good foundation of reducing occupational injury in the workplace. As pointed out by Subramaniam et al (2016), the main objectives of safety training are to comply with safety and health regulations and to prevent workplace injuries. This is achieved by facilitating employees with the relevant knowledge on safety and health practices in the workplace. Underlying on this issue, organization should plan and develop an orderly safety training program for improving safety behaviour. Underlying on the above discussion, it is believed that safety training could be related to positive participation of employees in safety incidents reporting activity in the workplace. Therefore, the following hypothesis is postulated: H1: Safety training is positively related to safety reporting behaviour

### Safety rules and safety reporting behaviour

Safety rules addresses the important of the safety rules and procedures to be followed by all employees in the company as a mechanism to prevent occupational injuries (Vinodkumar & Bashi, 2010). It also highlights various aspects of safety rules such as facilities in the safety department, enforcement of safe working procedures, safety inspections usefulness of safety rules and procedures. Employees must comply with the company's safety procedures or rules and understand the criticality of rules and procedures in preventing workplace accidents and injuries (Fernández et al. 2012). While having clear safety rules have been found to be significantly linked with safety behaviour (Koroma & Kangbai, 2020; Subramaniam et al., 2016), more importantly, is the enforcement of safety rules and procedures at work. Pettitta et al. (2017) found that supervisor enforcement was significantly

liked with safety compliance. A study by Bhattacharya (2012) revealed that ineffective regulatory infrastructure, and weak employment practices were the key factors which made incident reporting unsuccessful. In this regard, we anticipate that because safety rules and procedures set the expectations of employees' safety behaviour, employees are likely to report unsafe practices to meet such expectations. Underlying on the above discussion, it is believed that safety rules could be related to positive participation of employees in safety incidents reporting activity in the workplace. Therefore, the following hypothesis is proposed: H2: Safety rules is positively related to safety reporting behaviour

#### Management commitment and safety reporting behaviour

Management commitment is conceptually defined as degree of attention, support, and encouragement given by top management to safety-related matters such as identification, management, evaluation, prevention, and control of injuries and illness (Zohar, 2003). Previous empirical studies have stressed that management commitment is the main factor influencing safety program and safety behaviour (Marsh et al., 1998; Subramaniam, et al., 2016; Saharani et al., 2017; Zohar, 2003). For instance, Marsh et al. (1998) found that the management commitment showed a significant relationship with safety performance. The result indicates that management commitment is vital to the success of such as safety commitment practice in the workplace. Underlying on the above discussion, it is believed that management commitment could be related to positive participation of employees in safety incidents reporting activity in the workplace. Therefore, the following hypothesis is anticipated: H3: Management commitment is positively related to safety reporting behavior

### Research framework

The connection between safety training, safety rules, management commitment, and safety reporting behaviour has been grounded in both theoretical reviews and empirical findings. Firstly, the direct influences of these factors on safety reporting behaviour are justified based on the foundation of social exchange theory that in interdependent correlations, exchanges of resources between parties (i.e; managers and employees) is a ground to create norm of reciprocity and, possibly, favourable treatment received by one party obligates him/her to provide favourable treatment in return (Blau, 1964). Taking this posits as underlying assumption, safety training, safety rules, management commitment could be treated as a source of exchange to create a norm of reciprocity and obligation among employees. Then this would encourage employees to involve in safety reporting activity as a return of good safety management practices by organization. Studies in other industries with similar safety practices have identified critical components of safety management practices for improving the safety compliance and safety performance (Loannou et al., 2017; Subramaniam et al., 2016) which could be used to predict the influences of safety training, safety rules and management commitment on safety reporting behaviour. Taking into consideration the discussion on literature and empirical

findings on the relationship between safety training, safety rules, management commitment and safety reporting behaviour, the diagram demonstrates the conceptual framework of research is depicted in Figure 2.

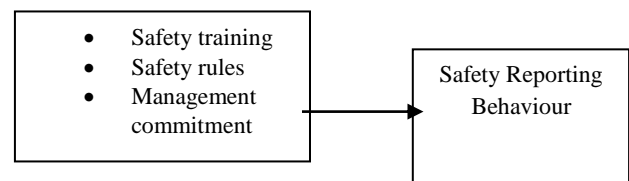


Figure 2: Research framework

### Research Methods

This study used quantitative design to answer the research questions and research objectives. It purposely employed for testing the influence of safety training, safety rules, and management commitment on safety reporting behaviour. According to Sekaran (2003), quantitative study is suitable to be used for identifying the relationship between the variables in the study, and no manipulation of the variables as the study is conducted in the natural environment. This study used cross-sectional design for data collection. The unit of analysis is individual (Safety and Health Officer)

Population in the study is Safety and Health Officer in various industry in Malaysia. The list of Competent Person provided by DOSH was used as a foundation for determining the total population in the study. As listed on DOSH website, the total Safety and Health Officer was 9000 officers (DOSH, 2021). As for sampling technique, purposive sampling was used. Purposive sample is a type of nonprobability sample, whereby the objective of a purposive sample is to select a sample that can be logically assumed to be representative of the population (Sekaran & Bougie, 2010). Therefore, this foundation is relevant in the study because the data were collected from a particular target group (SHO) and researchers can rely on their judgment when choosing members of population to participate in the study. Specifically, judgment sampling was used to select a sample of SHO from the list of SHO in various industry in Malaysia. Two criteria were used for sample selection. First, the respondent was SHO who having at least 5 years working experience. Second, the respondent was SHO who working in manufacturing company.

The Statistical Package for Social Sciences (SPSS) version 20 and structural equation modelling (SEM) with Partial Least Square (PLS) data analysis techniques were used in the study. SPSS was used to check for data error, missing values, outliers, and normality. In addition, other statistical test such as the frequencies, means, and standard deviations were also analyzed. Meanwhile, PLS-SEM was used for testing research hypotheses (Chin, 1998; Chin & Newsted, 1999; Urbach & Ahleman, 2010).

### Results

Majority of respondents are male (53.9%) and most of them have bachelor degree as their highest education (48.0%). The mean age of the respondents is 38.48. With respect to the

years of experience as Safety and Health Officer they have it is reasonably long ( $M=6.46$ ,  $SD=4.137$ ). meanwhile, it is reported the mean number of employees are 1685.37 which shows that the respondents are from large organizations.

Table 1 shows hypothesis testing result. Hypothesis 1 postulates that safety training is positively related to safety reporting behaviour. The results indicated that safety training

( $\beta = -0.110$ ,  $p > 0.01$ ) was not related to safety reporting behaviour thus hypotheses 1 is not supported. While, hypothesis 2 is supported whereby that safety rule is positively to safety reporting behaviour ( $\beta = 0.274$ ,  $p < 0.01$ ). While as the results indicate, management commitment to safety is also related to safety reporting behaviour ( $\beta = 0.3666$ ,  $p > 0.01$ ). Thus hypothesis 3 was supported.

**Table 2.** Paths coefficient

	Relationship	Beta	T-value	5.00%	95.00%	Decision
<b>H1</b>	ST -> SRB	-0.11	0.687	-0.354	0.177	Not Supported
<b>H2</b>	SRP -> SRB	0.274	1.797	0.027	0.516	Supported
<b>H3</b>	MC -> SRB	0.366	2.979	0.124	0.531	Supported

\*\* $p < 0.01$  (2.33), \* $p < 0.05$  (1.645)

## Discussion

Safety training was posited to be related to safety reporting behaviour. In this study, the proposed link was not significant. A possible explanation for the result is that safety training is not able to help SHO in identifying the importance of safety reporting action. In the context of the study, safety training is not an appropriate mechanism to help employees understand approved safety practices and safety expectations, particularly in increasing safety reporting cases in the workplace. On the other hand, the results also implied that safety training is not important in developing safety reporting behaviour culture even it has good capacity to encourage managers and SHO in strategizing comprehensive safety and health protection policies and procedures. It can be achieved if safety training program is developed by reflecting a common safety and health goal that aims to create a safe and secure workplace.

Safety rules was posited to be related to safety reporting behaviour. In this study, the proposed link was significant as the relationship was positively related. The result indicated that perceptions of safety rules rule would influence SHO's decision to report hazardous or job-related injuries in the workplace. A possible explanation for the result is that safety rules and procedures are introduced to protect employees' safety and health, which indirectly will increase employees' desire to report hazardous and job-related injuries in the workplace. In similar vein, safety rules and procedures are commonly used as an important internal control. It can be used as an effective mechanism to ensure SHO are aware of safety and health problems by reporting hazardous and injuries consistently. Therefore, the importance of safety rules and procedures lies mostly in increasing the number of workplace reporting incidents.

As hypothesis 3 postulated, there would be a positive relationship between management commitment to safety and safety reporting behaviour. The result revealed that management commitment was related to safety reporting behaviour. It indicates that the perception of management support would influence on SHO's action to report any unsafe

acts and/or unsafe conditions, work-related injuries or accidents in the workplace. The finding was expected because management commitment from managers and supervisors could be characterized by formal authority in job hierarchical and their responsibility for safety in organization. Therefore, in such conditions, management commitment to safety reporting action may be more salient to SHO especially when management and supervisors are ready to receive any hazardous or accidents without any possible negative consequences on safety reporting action. For instance, managers or supervisors are more likely to influence SHO's safety reporting behaviour norms that can relate to increases of hazardous and job-related injuries report through inspirational attitude, decision, and support shown by them in the workplace.

From the theoretical perspective, the findings provide valuable inputs for researchers. This study is first attempt to explore safety reporting behaviour in SMEs and its different from previous studies in employee reporting activity which emphasized the influences of safety training, safety rules, and management commitment on safety reporting behaviour. The findings of the present study offer guidelines for practitioners. This study gives a significant implication to managers because safety reporting behaviour can create and reflects organizational safety culture. This is because when a healthy safety culture fully adopts the value of safety reporting behaviour, this will encourage all parties in organization such as managers, supervisors, and SHO to understand the benefits of the aviation safety reporting action.

A plenty of future research opportunities can be identified from the present study. As there is empirical evidence of direct impact of some components of safety management practices on safety reporting behaviour, future research may wish to modify the research model into different industry by adding another possible variable such as human and environment factors. For instance, organization support theory provides interesting idea to identify and to test possible influences of various organizational practices such as human resources management, leadership, recognition, and leader-

member exchange on safety reporting behaviour. By doing so, it will provide additional value to the current study because a very few research that investigated the role organizational support in influencing safety reporting behaviour in Malaysia.

## Conclusion

In a nutshell, this study managed to examine the direct influences of safety management practices on safety reporting behaviour and indirect impact of organization trust on this relationship. Focusing on the safety reporting behaviour in SME, this research examined the safety reporting activity among SHO by examining three aspects such as safety training, safety rules, and management commitment. The findings revealed that safety rules and management commitment had significant impact on safety reporting behaviour. This study indicated that safety reporting behaviour is a vital part of health and safety management in organization. This is because an inaccurate or misused of incidents and job-related injuries may contribute to serious repercussions on company safety and health management practice. Similarly, reporting incidents is essential since it raises the organization's awareness about the things that can go wrong so that corrective and preventative actions can be taken promptly.

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