

Assessing the Kiken Yochi Training (KYT) in Improving Osh Awareness and Behavior among Workers at HPI Perak

Nurul Sharmimi Ahmad Sharifuddin¹, Pravina Deligannu^{1*}

¹ Department of Chemical Engineering Technology, Faculty of Engineering Technology, Universiti Tun Hussein Onn Malaysia, Higher Education Hub, Pagoh, 84600, Malaysia.

*Corresponding Author: pravina@uthm.edu.my

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Abstract

Workers in manufacturing industries frequently face various workplace hazards, including the operation of machinery, manual handling tasks, and exposure to dust and chemicals, making safety and health management critically important. Proactive safety training is essential to strengthen hazard awareness and promote safe work practices. Despite ongoing safety initiatives, workplace accident rates in the manufacturing sector remain high. This situation indicates a need for proactive safety training such as Kiken Yochi Training (KYT) to improve workers hazard awareness and encourage safer work behavior. This study aims to assess the level of OSH awareness and evaluate the impact of KYT on safety behavior among workers at HPI Perak. A quantitative cross-sectional study was conducted using a structured questionnaire based on a standardized KYT evaluation form provided by the company. Stratified sampling was applied to select workers from the Printing and Finishing Departments. Data were analyzed using descriptive statistics, including frequency, percentage, and mean scores. The findings revealed high mean scores for both OSH awareness and safety behavior, indicating that KYT effectively enhanced workers understanding of workplace hazards, encouraged positive safety attitudes, and improved safe work practices. Continuous and structured implementation of KYT is recommended to sustain safety awareness and behavior. Greater worker participation and periodic updates of KYT content are suggested to further strengthen its effectiveness in manufacturing environments.

1. Introduction

Manufacturing workplaces involve multiple occupational hazards, particularly from heavy machinery, manual handling, and exposure to dust and chemicals, which can threaten workers' safety and health. In Malaysia, the increasing rate of workplace accidents highlights the importance of improving workers' awareness of hazards and promoting safe work practices. This study focuses on Kiken Yochi Training (KYT), a proactive hazard prediction training approach that aims to enhance workers' ability to identify potential risks and prevent accidents before they occur.

Despite the implementation of various safety initiatives, workplace accidents in the manufacturing sector remain a concern, indicating that existing measures may not be sufficient to address unsafe behavior and lack of hazard awareness among workers. KYT is introduced as an alternative approach that emphasizes active worker participation and early hazard identification. This situation highlights the need for proactive safety training such as Kiken Yochi Training (KYT) to improve workers hazard awareness and encourage safer work behavior. Therefore, this study aims to assess the level of occupational safety and health (OSH) awareness and to evaluate the effectiveness of KYT in improving safety behavior among workers in a manufacturing setting. Therefore, this study aims to assess the level of workplace hazard awareness among workers and to evaluate the impact of Kiken Yochi Training (KYT) on workers' safety behavior at HPI Perak. Specifically, this study seeks to answer the following questions: What is the level of OSH awareness among workers after KYT implementation, and how does KYT influence workers' safety behavior in the workplace?

2. Methodology

This section describes the research design, study location, participants, research instruments, data collection procedures, and data analysis methods used to assess the effectiveness of Kiken Yochi Training (KYT) in improving occupational safety and health (OSH) awareness and safety behavior among workers at HPI Perak. The main material used in this study was a structured questionnaire based on a standardized Kiken Yochi Training (KYT) evaluation form provided by the company's Japanese management. The questionnaire consisted of items measuring workers OSH awareness, safety behavior, and perceptions of KYT effectiveness using a five-point Likert scale. Additional materials included KYT hazard illustration sheets used during training sessions and Microsoft Excel software for data entry and analysis. The study was conducted in several stages. First, permission was obtained from company management, and the purpose of the study was explained to the participants. Workers who had participated in KYT activities were selected from the Printing and Finishing Departments. Next, the questionnaire was distributed to the selected workers after the KYT sessions. Participants were given sufficient time to complete the questionnaire, and all responses were collected on the same day to ensure consistency. Participation was voluntary, and confidentiality was maintained throughout the data collection process. A stratified sampling technique was applied to ensure representation from both the Printing and Finishing departments. Given the small total number of respondents, stratification was used primarily to maintain departmental balance rather than to enable statistical comparison. This approach supports a more comprehensive understanding of KYT perceptions across different operational areas within the organisation. A quantitative data analysis approach was employed in this study. Descriptive statistical methods, including frequency, percentage, and mean scores, were used to analyze the data. Microsoft Excel was utilized for data coding, calculation, and presentation of results in tables. The analysis focused on identifying overall trends in OSH awareness and safety behavior among workers after KYT implementation. Figure 1 illustrates the overall research flow, including KYT activities, questionnaire distribution, and data analysis process. The figure is referenced to provide clarity on the study methodology.

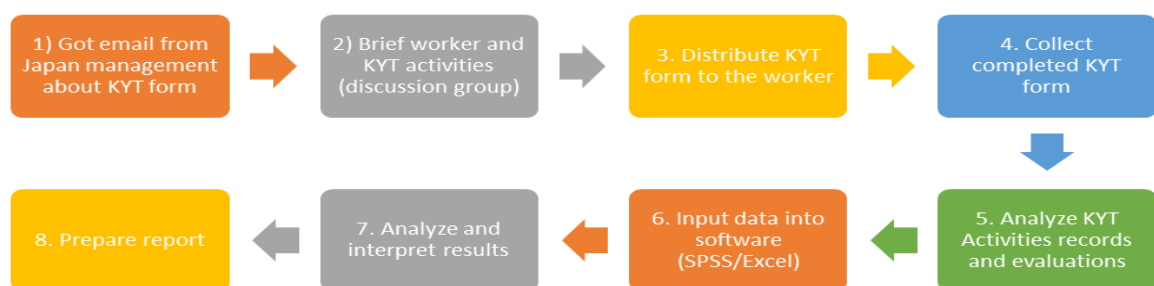


Figure 1 Flowchart of data collection

3. Result and Discussion

This chapter presents the results and analysis of the data collected to assess the effectiveness of Kiken Yochi Training (KYT) in improving occupational safety and health (OSH) awareness and safety behavior among workers at HPI Perak. The data were obtained through a structured questionnaire distributed to workers who had participated in KYT activities. The analysis in this chapter focuses on three main sections. The first section describes the demographic profile of the respondents to provide an overview of the study sample. The second section analyzes the level of OSH awareness among workers after the implementation of KYT. The third section examines the impact of KYT on workers safety behavior and work performance. Descriptive statistical methods, including frequency, percentage, and mean scores based on a five-point Likert scale, were used to analyze the data. The findings presented in this chapter aim to address the research objectives and provide empirical evidence on the effectiveness of KYT as a safety training approach in enhancing workplace safety awareness and behavior.

Table 1 *Demographic Profile of Respondents*

Demographic Variable	Category	Frequency	Percentage (%)
Department	Finishing	5	50
	Printing	5	50
Working Experience	More than 3 years	10	100
Race	Malay	2	20
	Chinese	1	10
	Indian	3	30
	Bangladeshi	2	20
	Nepalese	2	20
Total		10	100

Based on Table 1, a total of 10 respondents participated in this study. The respondents were equally distributed between departments, with 5 respondents (50%) from the Finishing Department and 5 respondents (50%) from the Printing Department. This balanced distribution indicates that the perspectives gathered represent both operational areas fairly, allowing a more comprehensive assessment of the effectiveness of Kiken Yochi Training (KYT) across departments in HPI Perak. With regard to working experience the results show that the majority of respondents were experienced workers. Nine respondents (90%) had more than three years of working experience, while one respondent (10%) had less than three years of experience. This indicates that most participants possessed substantial exposure to workplace conditions and hazards, which strengthens the reliability of their responses in evaluating KYT effectiveness and workplace safety awareness. In terms of race, the respondents consisted of a diverse workforce. Indian workers formed the largest group with 3 respondents (30%), followed by Bangladeshi and Malay workers with 2 respondents each (20%), and Chinese workers with 1 respondent (10%). This diversity reflects the multicultural nature of the workforce at HPI Perak and suggests that the findings represent safety awareness and behavior across different ethnic backgrounds.

3.1 Osh Awareness After KYT Activities

This section presents the analysis of workers occupational safety and health (OSH) awareness after participating in Kiken Yochi Training (KYT) activities. Descriptive statistics, including frequency, percentage, and mean scores based on a five-point Likert scale, were used to analyze the responses. Based on Table 2, the highest mean score was recorded for Q2 (Mean = 4.70), indicating that respondents strongly agreed that KYT increased their awareness of workplace safety risks. This suggests that KYT effectively enhanced workers understanding of potential hazards present in their work environment.

Additionally, high mean scores were observed for Q3 and Q8 (Mean = 4.60), demonstrating that workers were better able to identify hazards during work activities and clearly understood the preventive measures explained during KYT sessions. The item related to understanding workplace hazards and control measures (Q1) also recorded a high mean score of 4.50, further supporting the effectiveness of KYT in improving OSH awareness.

These findings are consistent with previous studies that reported KYT as an effective training approach for enhancing hazard recognition and safety awareness among workers. For instance, Noor Afifah et al. (2016) found that KYT significantly improved workers awareness of occupational hazards across various industries. Similarly, studies conducted in manufacturing settings highlighted that KYT enhances workers ability to anticipate risks and apply appropriate preventive measures.

Overall, the mean score of 4.60 indicates a high level of OSH awareness among workers after KYT implementation. This finding supports the role of KYT as a proactive safety training method in strengthening workers safety knowledge and hazard awareness at HPI Perak.

Table 2 Level of Mean about OSH Awareness After KYT Activities

Questions	1	2	3	4	5	Mean Value
Q1 KYT improved my understanding of workplace hazards and how to control them	0	0	1 (10.0%)	4 (40.0%)	5 (50.0%)	4.40
Q2 I am more aware of safety risks at the workplace after KYT	0	0	0	3 (30.0%)	7 (70.0%)	4.70
Q3 KYT improved my ability to identify hazards during work activities	0	0	1 (10.0%)	3 (30.0%)	6 (60.0%)	4.50
Q8 KYT sessions clearly explained workplace hazards and their countermeasures	0	0	1 (10.0%)	3 (30.0%)	6 (60.0%)	4.50

3.2 Safety Behavior After KYT Activities

This section presents the analysis of workers safety behavior after participating in Kiken Yochi Training (KYT) activities. The analysis is based on responses obtained from the same structured questionnaire used in the previous section, focusing on items related to workers attitudes, actions, and behavior toward safety at the workplace. Descriptive statistics, including frequency, percentage, and mean scores based on a five-point Likert scale, were used to analyze the responses. Table 3 presents the mean scores and levels of workers safety behavior after the implementation of Kiken Yochi Training (KYT) at HPI Perak. The findings indicate that all safety behavior items recorded high mean values, demonstrating a positive impact of KYT on workers safety-related attitudes and behaviors.

The highest mean score was recorded for Q6 (Mean = 4.90), indicating that respondents strongly agreed that they were able to perform their job more efficiently due to increased awareness of workplace hazards after KYT.

This suggests that KYT not only improved safety behavior but also contributed to enhanced work performance by encouraging safer and more informed work practices.

High mean scores were also observed for Q4 and Q7 (Mean = 4.70), indicating that workers developed a more positive attitude toward working safely and perceived the KYT activities as clear and easy to understand. Additionally, Q5 and Q9 recorded high mean scores of 4.60, reflecting that KYT encouraged workers to think before acting and improved their overall safety behavior.

These findings are in line with previous studies that demonstrated KYT's effectiveness in improving safety behavior. For example, Anbari et al. (2019) reported a significant reduction in unsafe behaviors among construction workers after KYT implementation. Similarly, Rosmiyati et al. (2022) found that KYT improved workers alertness to abnormal situations and promoted safer work practices in an industrial setting.

Overall, the overall mean score of 4.67 indicates a high level of safety behavior among workers after KYT implementation. This confirms that KYT is effective in promoting positive safety attitudes and behaviors, which are essential components of accident prevention at HPI Perak.

Table 3 *Level of Mean about Safety Behaviour After KYT Activities*

Questions	1	2	3	4	5	Mean
Q4 I have a more positive attitude towards working safely after KYT	0	0	0	3 (30.0%)	7 (70.0%)	4.70
Q5 KYT training activities help me to think before acting	0	0	0	4 (40.0%)	6 (60.0%)	4.60
Q6 I can perform my job more efficiently because I am more aware of hazards	0	0	0	1 (10.0%)	9 (90.0%)	4.90
Q7 The KYT activities were clear and easy to understand	0	0	0	3 (30.0%)	7 (70.0%)	4.70
Q9 KYT training activities improved my safety behavior at work	0	0	0	4 (40.0%)	6 (60.0%)	4.60
Q10 Overall, KYT improved my work performance and safety awareness	0	0	0	5 (50.0%)	5 (50.0%)	4.50

3.3 Effectiveness of KYT in Improving Osh Awareness and Safety Behavior

Based on the results obtained, KYT was found to be effective in improving both OSH awareness and safety behavior among workers at HPI Perak. High levels of agreement and mean scores across all questionnaire items indicate that workers perceived KYT as beneficial in enhancing their understanding of workplace hazards, promoting safe behavior, and improving overall work performance.

The clarity of KYT sessions and the effective explanation of hazards and preventive measures further contributed to the positive outcomes observed in this study. These findings support the role of KYT as a practical and effective safety training approach in industrial settings.

4. Conclusion

The main objective of this study was to assess the Kiken Yochi Training (KYT) in improving occupational safety and health (OSH) awareness and safety behavior among workers at HPI Perak. Based on the findings presented in Chapter 4, both research objectives were successfully achieved.

The first objective, which was to assess the level of workplace hazard awareness after the implementation of KYT, was achieved. The results showed that workers demonstrated a high level of OSH awareness, with all

related questionnaire items recording high mean scores. The findings indicate that KYT effectively improved workers understanding of workplace hazards, safety risks, and appropriate control measures. The second objective, which was to evaluate the impact of KYT on improving safety behavior among workers, was also achieved. The analysis revealed high mean scores for safety behavior items, indicating that KYT positively influenced workers attitudes toward working safely, encouraged them to think before acting, and contributed to improved work efficiency. These results suggest that KYT was effective in promoting positive safety behavior and enhancing overall work performance. Despite its limitations, this study provides valuable preliminary insights into workers perceptions of KYT and serves as a foundation for future, more robust investigations into workplace safety training effectiveness. Overall, the findings of this study indicate that Kiken Yochi Training (KYT) is perceived as an effective safety training approach for enhancing OSH awareness and safety behavior among workers at HPI Perak. The use of group-based KYT activities, visual hazard identification, and discussion of countermeasures contributed to the positive outcomes observed.

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