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## **ASSESSMENT OF OCCUPATIONAL SAFETY AND HEALTH AWARENESS OF PUBLIC SERVANTS IN THE WORKPLACE**

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### ABSTRACT

Occupational safety and health (OSH) awareness is a constant acknowledgment that every employee must have, and it goes beyond what they have learned in the safety and health training workshop. This study was conducted to identify and evaluates based on the seven aspects (occupational safety and health policy, commitment and attitude, standard operating procedure, training, safety and health committee, equipment, and environment) of OSH awareness of Universiti Teknologi MARA Cawangan Pulau Pinang (UiTM CPP) staff in the workplace. There were 193 respondents from various faculties and departments. Questionnaires were used as the instrument to collect the data and the Statistical Package for the Social Sciences (SPSS) version 20 was used to analyse it. The frequency, percentage, and mean score were used to identify the level of respondents' awareness. This study found that the level of OSH awareness among UiTM CPP staff in the workplace is at a high level with an overall mean score of 4.44. OSH policy with an average mean score of 4.90 is a dominant factor that contributed to OSH awareness level compared to other factors. It is hoped that this study can be a source of reference for the UiTM management and other organisation in increasing the level of OSH awareness of their employees.

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## **1. Introduction**

Levitt and Samelson (1993) stated that occupational safety and health (OSH) is an interdisciplinary field that encompasses the disciplines of industrial hygiene, occupational health, occupational medicine, occupational nursing, safety engineering, epidemiology, and toxicology. It also includes the surroundings and conditions that affect employees and other related persons at the workplace. OSH is an interdisciplinary activity concerned with the prevention of occupational risks inherent to each work activity and the main purpose of OSH is to promote and maintain safety and health at work to the highest degree (Nunes, 2021). Hence OSH aims to avoid the occurrence of work-related accidents and occupational diseases in the workplace.

Nowadays, technological progress and intense competitive pressures bring a fast change in the organisation, working conditions, and work processes. A safe and healthy environment is the fundamental right of every worker to work in any organisation. All organisations, as well as employers, have a responsibility to ensure their employees work in a safe workplace. Nevertheless, according to recent estimates released by the International Labour Organization (ILO), each year 2.78 million workers die from occupational accidents and work-related diseases (of which 2.4 million are disease-related) and an additional 374 million workers suffer from non-fatal occupational accidents (International Labour Organization [ILO], 2019). Employers must also be able to tackle OSH challenges continuously and build effective responses into dynamic management strategies.

OSH is not only focused on avoiding work accidents or occupational diseases but also in taking actions to identify the causes of hazards existent at the workplace. The implementation of adequate preventive OSH control measures can create a better working environment. Occupational accidents and work-related diseases have a major impact on individuals and their families, not only in economic terms but also in terms of their physical and emotional well-being in the short term as well as long term. It can have major effects on business, affecting productivity, leading to potential disruptions of production processes, delaying competitiveness and reputation of businesses along supply chains, and impacting the economy and society (ILO, 2019).

The Department of Occupational Safety and Health at Universiti Teknologi MARA (UiTM) is responsible for making sure that working environments are safe and healthy. As the largest public university in Malaysia with 35 campuses around the country and almost 18000 staff, the management of OSH at branch campuses is administered by a dedicated state OSH committee. UiTM *Cawangan Pulau Pinang* (UiTM CPP) is one of the branch campuses of UiTM. As a campus focusing on engineering and technology, UiTM CPP offers four main engineering courses such as mechanical, civil, electrical, and chemical. The utilisation of mechanical machines, electrical equipment, and hazardous chemicals is common in engineering laboratories.

Safety and health concerns are not confined to commercial industries alone, but also extend to institutions of higher learning such as UiTM CPP, where direct or indirect involvement in the handling of equipment, machinery and chemicals poses potential risks. The workers certainly will be exposed to the risk of accidents or any injuries at the workplace. Based on the situation faced by UiTM CPP staff, their level of awareness of the OSH regulations prepared by UiTM should not be taken lightly. Many factors influence employee awareness of OSH. According to Durrisah, Hadmidah, Hapriza, Fadilah, Rossilah, and Syaharizatul (2004), the employee level of OSH awareness in the organisation

can be measured through assessment of safety and health policy; safety and health committee; attitude and commitment; training; procedure; equipment; and environment. Therefore, this study was conducted to identify their level of awareness of occupational safety and health at the workplace, and it evaluates based on seven factors that influence their awareness as stated in the methodology section.

## **2. Literature Review**

Knowledge and awareness of OSH play a significant role in the prevention of occupational injuries and illnesses. Awareness activities can be used to reinforce positive attitudes, working behaviour, and safety culture among the workers. Occupational safety and health awareness enables the workers to fit into their work by receiving the proper knowledge and skills that assists in making the right decisions, ultimately contributing to the achievement of good working conditions and environments (Alli, 2008). Ibrahim, Jared, and Paul (2017) concluded in their study that OSH awareness affected workers' consciousness of their work environment. Previous studies have revealed OSH awareness levels in safety and health policy, safety and health training, safety and health committee, safety and health procedures, complaint and accident investigation, emergency action preparation, and safety commitment and behaviour that can be used as a reference by any organisation (Baizura, Fazidah, Faradiana & Riduan, 2016; Faiqah et al., 2019; Kadir, Wan, Zainor & Amirul, 2021).

Safety awareness is an important aspect of the employer to ensure safety rules and procedures are followed so that the accident rates among employees can be reduced (Mohammad & Kadir, 2020). Safety awareness is a continuous realisation that every worker must always have, it means that they are constantly aware of how they are working and able to recognize the hazards and it is essential in reducing safety-related risks (Advanced Consulting & Training Ltd., 2021). The workers who have more exposure to safety awareness are expected to be more aware of safety issues, including being inexperienced in handling equipment and not adhering to standard operating procedure to run the machine (Arora et al., 2012).

Management of all employers should maintain OSH awareness among employees in the workplace through regular training, campaigns, and refresher seminars. Effective OSH awareness programmes have significant benefits for both employers and employees. Various programmes and training should be implemented by different government agencies and private sectors to increase knowledge and awareness of OSH in the workplace. Employers must perform a risk assessment regarding safety and health at work, so they will be able to decide the required actions to be taken. The OSH management must determine the type of OSH measures that should be implemented if the desired state of safe working conditions is to be achieved. Employers, employees, and the public should care about occupational safety and health for economic, legal, and moral reasons (Montgomery & Kelloway, 2002). It means that OSH requires cooperation among multiple stakeholders including the government, employers, and employees with their own roles to play in enhancing safety and health outcomes.

Employers need to understand the relevant legislation and regulations and also should have an effective OSH committee while workers should understand work hazards and safe work practices (Patrick, Charles, & Benson, 2019). The workers will feel safe doing their job, more productive, accountable, and engaged in work when they work in workplace with proper safety precautions. Getting a safe workplace is an ongoing process that involves safety awareness, a safety culture, and as well as safe practices and procedures. With a positive attitude, the worker will behave in a good way and take precautionary actions to stay safe while with a negative attitude, the worker

are likely to have negative behaviour and confidence that will lead towards danger and risk. Therefore, attitudes towards safety awareness will influence individual behaviour, as behaviour is greatly influenced by these attitudes (Jackson & Allemand, 2014).

The right to work in a safe and healthy environment is a fundamental right of every worker (Lugah et al., 2010). Hence, all employers should provide a safe and healthy working environment for their employees. There is no denying that accidents in the workplace are unpredictable and uncontrollable, but it is not an excuse for employers to ignore and disregard all aspects related to safety in the workplace (Mustazar & Peng, 2009). Hwang et al., (2000) stated that many health problems and injuries are caused by not practicing safety awareness practices. Hence, all parties should play their respective roles and not be selfish so that accidents can be avoided.

### **3. Methodology**

The study employed a cross-sectional survey research design. Data were collected at Permatang Pauh and Bertam campuses of UiTM CPP. The questionnaires were distributed among academic and non-academic staff who were involved with the operation of hazardous machines or equipment in teaching and learning either in the workshop, kitchen, laboratory, or fieldwork. The respondents consist of lecturers, assistant lecturers, assistant science officers, assistant engineers, chefs, and assistant chefs.

Questionnaires were used to determine the socio-demography and the awareness level of the OSH of the respondents on awareness factors. The OSH awareness questionnaire consists of seven awareness factors which are i. Occupational Safety and Health (OSH) policy; ii. Standard Operating Procedure (SOP); iii. Equipment; iv. Training; v. Safety and Health Committee (SHC); vi. Commitment and Attitude (CA); and vii. Environment. Most sources of the questionnaires were adapted from a research study by Durrisah et al. (2004), and the questions were modified to meet the research objectives. The total number of OSH questions is 43. The questionnaire consisted of close-ended questions with five rating levels according to the Likert scale which is 1 (strongly disagree), 2 (disagree), 3 (unsure), 4 (agree), and 5 (strongly agree).

The reliability test on the set of research questionnaires was conducted involving a total of 35 selected respondents. The results of analysis using Statistical Package for Social Sciences (SPSS) version 20.0 software showed that the level of reliability of the questionnaire set for this study is at a high level with a Cronbach alpha value of 0.85. According to Feinberg, Kinnear, and Taylor (2013), the Cronbach alpha value of more than 0.7 is an acceptable level for measuring the reliability of the questionnaire instrument.

The respondents for this study were selected through a random sampling method. The estimated number of respondents is calculated based on the population size,  $N = 526$  people. The required sample size,  $S = 217$  people is obtained from the table for determining the sample size of a given population, and no calculation is needed (Robert and Daryle, 1970). The distribution of the online questionnaires to the respondents was done via UiTM CPP e-mail. The total number of staff who answered the questionnaires is 193 which is 88.9% of the sample size. The data were analysed using the Statistical Package for the Social Sciences (SPSS) version 20 and presented in descriptive statistics which are percentage, frequency, and mean.

The interpretation of the aspects of awareness possessed by the respondents in this study are based on 5-level scales of the mean score which is designed by Best (1981) and Degang (2010) as shown in Table 1. Very high and high level (3.5 – 5.0) indicates the respondent have extensive knowledge

of OSH awareness and high confidence about its details. A moderate level (2.5 - 3.49) indicates a moderate knowledge of OSH but with some uncertainty about its details. Low and very low level (1.0 – 2.49) indicates inadequate or less knowledge of OSH with less uncertainty about its details. These scales are commonly used for the interpretation of the five-point Likert scale in the descriptive analysis.

*Table 1  
Interpretation of mean score of motivational levels*

<b>Scale</b>	<b>Mean range</b>	<b>Motivational Level</b>	<b>Score range</b>
5	Strongly agree	Very high	4.5 – 5.0
4	Agree	High	3.5 – 4.49
3	Unsure	Moderate	2.5 – 3.49
2	Disagree	Low	1.5 – 2.49
1	Strongly disagree	Very low	1.0 – 1.49

#### **4. Results and Discussion**

##### **4.1 Distribution of Respondents of Socio-Demographic**

The demography of 193 respondents tabulated in Table 2 shows the information on gender, age, staff category, faculty, education level, and duration of service. Male respondents accounted for 54.4%, slightly higher than female respondents who constituted 45.6%. This shows a good balance of feedback between male and female staffs. The largest group of respondents is between 31 to 40 years old at 58.1%, followed by 41-50 years old at 32.1%. The remaining 5.7% of respondents are 51 years old and above. 81.9% of respondents are from academic staff and 18.1% are non-academic staff. 66% of respondents representing 127 out of the total respondents were from the faculty of engineering. This data was followed by the fact that 77.2% of the respondents have acquired master's and PhD level of education. Based on the data, 91.1% of respondents have more than 5 years of working experience indicating the group of staff involved in this study should have a good understanding of safety and health regulations and practices.

*Table 2  
Socio-demographic of the respondents*

<b>Characteristics</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Gender</b>	Male	105	54.4
	Female	88	45.6
<b>Age (years)</b>	< 20	0	0
	20 – 30	6	3.1
	31 – 40	112	58.1
	41 – 50	62	32.1
	> 51	13	6.7
<b>Staff category</b>	Academic	158	81.9
	Non-academic	35	18.1
<b>Faculty</b>	Mechanical engineering	45	23.3
	Civil engineering	42	21.8
	Electrical engineering	29	15.0

<b>Education</b>	Chemical engineering	11	5.7
	Hotel Management and Tourism	26	13.5
	Health Sciences	11	5.7
	Pharmacy	12	6.2
	Department of Applied Science	17	8.8
	Ph.D	46	23.8
	Master	103	53.4
	Degree	7	3.6
	Diploma	27	14.0
	STPM	1	0.5
<b>Duration of service (years)<sup>a</sup></b>	Certificate	7	3.6
	SPM	2	1.0
	< 5	17	8.9
	6 – 10	56	29.2
	11 – 15	79	41.1
	16 – 20	35	18.2
	> 21	5	2.6

1. <sup>a</sup>Data was missing for 1 respondent.

#### 4.2 Level of Awareness of Occupational Safety and Health Policy

The level of respondents' awareness of OSH policy is tabulated in Table 3. It was found that the level of awareness of OSH policy is very high, with an average mean score of 4.90. All respondents (100%) agreed that the employer must have a safety and health policy, the policy must be clear, easy to understand, and must be displayed in an easy-to-see area. Meanwhile, 192 (99.5%) agreed the policy must be explained to all the employees so that the employees will understand every statement that was stated in the policy and how it can be implemented in their workplace. The average percentage of respondents agreeing with the awareness question item on safety and health policy is 99.9%.

Table 3  
Occupational Safety and Health (OSH) policy

Question		1	2	3	4	5	Mean	Standard deviation
Every organization needs to have a safety and health policy.	(F)	0	0	0	15	178	4.92	0.27
	(%)	0	0	0	7.8	92.2		
Safety policy needs to be posted in an easy-to-see area.	(F)	0	0	0	20	173	4.90	0.31
	(%)	0	0	0	10.4	89.6		
Safety policy needs to be explained to all employees.	(F)	0	0	1	21	171	4.88	0.34
	(%)	0	0	0.5	10.9	88.6		
Safety policy needs to be clear and easy to understand.	(F)	0	0	0	19	174	4.90	0.30
	(%)	0	0	0	9.8	90.2		
<b>Average</b>							4.90	0.30

The findings of the present study are supported by the previous study by Baizura et al. (2016) who found that the level of safety and health awareness among staff in the workshop and laboratory of an Engineering Technology University campus of UniKL MSI, Kedah Malaysia on safety policy is high with an average mean score of 4.4. Similar results were obtained in a study by Patrick, Sedem, and Ben (2017), as the awareness level of OHS policy implemented among 88 workers of the South



Tongu District Hospital in Ghana is high (73.5%) where the workers faced safety, mechanical, biological, ergonomic, physical, and psychological hazards. The findings by Siti Nakiah, Raudhiah, and Azharuddin (2015) in a study of factors influencing employee awareness of occupational safety practices in a logistics company in Selangor Malaysia showed that safety policy had a significant relationship and influences the level of employee awareness of occupational safety practices. However, different results were found in a study by Daniel, Paul, and Benson (2019) among the 191 public health care facilities workers in Uasin Gishu County, Kenya, which indicated low awareness of OSH policies, and the nursing profession has the lowest OSH awareness. Generally, 84% of the respondents were aware of the existence of the OSH programmes and 88% agreed that guidelines on OSH precautionary principles were available in their facilities. These findings show that employers should have a clear and easy safety policy to understand all employees.

### 4.3 Level of Awareness of Standard Operating Procedure

The Standard Operating Procedure (SOP) is another aspect that requires staff to strictly adhere to ensure OSH at the workplace. The frequency distribution and percentage of respondents to SOP in the workplace are shown in Table 4. It was shown that the level of respondents' awareness of SOP is at a very high level with an average mean score of 4.59. This result can be seen in that 190 (98.4%) and 189 (97.9%) respondents respectively agreed that the SOP should be clear, easy to understand, and placed in a convenient place. Most respondents acknowledged the SOP, as 173 (89.6%) were aware of the existence of SOPs and 179 (92.8%) adhered to the SOP in their workplace. Moreover, 189 (97.9%) respondents understand the risk of not following SOP for themselves and others. The average percentage of respondents agreeing with the awareness question item on SOP is 95.3%.

Table 4  
Standard Operating Procedure (SOP)

Question		1	2	3	4	5	Mean	Standard deviation
I know there are SOPs at my place of duty.	(F)	0	3	17	100	73	4.26	0.68
	(%)	0	1.6	8.8	51.8	37.8		
I adhere to all SOPs while doing work.	(F)	0	1	13	88	91	4.39	0.64
	(%)	0	0.5	6.7	45.6	47.2		
Failure to comply with the SOPs may result in injury to me, and other users.	(F)	0	1	3	48	141	4.70	0.52
	(%)	0	0.5	1.6	24.8	73.1		
SOPs should be clear and easy to understand.	(F)	0	0	3	35	155	4.80	0.43
	(%)	0	0	1.6	18.1	80.3		
SOPs documents need to be placed in a convenient place.	(F)	0	0	4	31	158	4.80	0.45
	(%)	0	0	2.1	16.1	81.8		
<b>Average</b>							4.59	0.54

The present study agrees with the previous study by Baizura et al. (2016) who found that the level of safety and health awareness among staff regarding the safety procedure is high with an average mean score of 4.53. Similarly, the resulting study by Faiqah et al. (2019) had shown that the level of safety and health awareness of the safety procedure among 25 laboratory staff in Universiti Teknologi Malaysia, Johor Malaysia is high with an average mean score of 3.92. The results of this study were also in line with the result found by Kadir et al. (2021) where the level of awareness

of safety and health procedures among 259 staff of the Putrajaya Department of Occupational Safety and Health Office was very high with an average mean score of 4.36. The results of this study are consistent with the findings of the study by Mohd Hakimi, Shahida, and Firdaus (2014) who stated that the safety and health operating procedures influence an increased level of employee safety awareness.

#### 4.4 Level of Awareness of Equipment

Table 5 presents the data on OSH awareness levels among respondents regarding equipment. It was found that the level of awareness of equipment is high with an average mean score of 4.34. A total of 183 respondents (94.8%) agreed that all equipment or machine must be clearly labelled. The result shows that 181 (93.6%) agreed to the use of personal protective equipment if required for any specific job. They (90.1%) were aware that the layout requirement of the machine in the laboratories must be appropriate and safe. They (89.2%) were also highly aware of the presence of fire extinguishers, indicating the locations of fire extinguishers are good and visible. The average percentage of respondents agreeing with the awareness question item on equipment is 89.4%.

Table 5  
Equipment

Question		1	2	3	4	5	Mean	Standard deviation
There is personal protective equipment at my place of duty.	(F)	1	7	19	72	94	4.18	0.91
	(%)	0.5	3.6	10.2	37.2	48.5		
I will use personal protective equipment while on duty.	(F)	1	4	7	83	98	4.42	0.71
	(%)	0.5	2.1	3.8	42.8	50.8		
I found adequate fire extinguishers.	(F)	1	7	25	84	76	4.18	0.83
	(%)	0.5	3.6	13.0	43.5	39.4		
Fire extinguishers are conveniently located.	(F)	1	5	15	80	92	4.33	0.77
	(%)	0.5	2.6	7.8	41.5	47.7		
Equipment /machines need to be clearly labeled.	(F)	0	0	10	56	127	4.61	0.59
	(%)	0	0	5.2	29	65.8		
The machine/equipment layout is appropriate and safe.	(F)	0	4	15	89	85	4.32	0.71
	(%)	0	2.1	7.8	46.1	44		
<b>Average</b>							4.34	0.75

A similar result was obtained by Firdaus, Koh, and Latib (2013) in their study of polytechnic staff in Kedah where the awareness level regarding the safety equipment was high with an overall mean score of 4.03. Similar results were also obtained in previous study by Baizura et al. (2016) and Faiqah et al. (2019), where it was found that the level of safety and health awareness among staff regarding the safety tools and equipment was high with an overall mean score of 4.11 and 4.32 respectively. However, the findings in a study by Ibrahim and Abdullah (2014) who studied tools and equipment arrangements for 196 technical and vocational pre-service teachers in Malaysia found that the mean of safety awareness is in moderate level.

#### 4.5 Level of Awareness of Training

Safety and health training is a very important aspect to be considered by the OSH management. The frequency distribution and percentage of respondents for safety and health training in the

workplace are shown in Table 6. It was found that the respondent's level of awareness in the training aspect is high with an average mean score of 4.48. The majority 191 (99%) of the respondents agreed that the important training is first aid training. A total of 188 respondents (97.4%) realised that the safety training activities must be exposed to all employees and 173 respondents (89.6%) stated that they need to follow the safety training programmes continuously. The OSH committee of UiTM CPP was aware of the training requirement and always provided the opportunity to all staff to upskill their knowledge in OSH. The average percentage of respondents agreeing with the awareness question item on safety and health training is 91.1%.

Table 6  
Training

Question		1	2	3	4	5	Mean	Standard deviation
I have attended the activity related to OSH.	F	2	17	23	79	72	4.05	0.97
	%	1	8.8	11.9	40.9	37.4		
I have to follow the activity and safety training continuously.	F	0	4	16	85	88	4.33	0.72
	%	0	2.1	8.3	44	45.6		
Activity and safety training needs to be exposed to all employees.	F	0	1	4	41	147	4.73	0.52
	%	0	0.5	2.1	21.2	76.2		
I am aware that first aid training is important.	F	0	0	2	38	153	4.79	0.44
	%	0	0	1	19.8	79.2		
<b>Average</b>							4.48	0.66

This study revealed results that are like previous studies by Baizura et al. (2016), Faiqah et al. (2019) and Kadir et al. (2021) who found that the level of safety and health awareness among staff regarding safety and health training was high with overall mean score of 4.35, 4.24 and 4.44 respectively. A study by Noorhasimah, Marsyifa, and Rafee (2017) indicated that the level of awareness of safety behaviour, the safety of rules and procedures, safety training, safety promotion and policy, safety communication and feedback, workers involvement, and management commitment are high among Malaysian small and medium enterprise workers. Meanwhile, Muhammad and Rosmah (2018) in their study of the factors that influence the level of OSH awareness in DENSO company, Malaysia workers also showed that training factors are the most dominant factors that affect the level of OSH awareness. In addition, Rosmah, Amirul, and Amer (2018) in their study on the relationship between attitudes and training with the level of OSH awareness in Malaysian private medical centres showed a positive relationship between safety and health training with the level of OSH awareness of employees in the employer concerned.

#### 4.6 Level of Awareness of Safety and Health Committee

Table 7 shows the frequency and percentage of respondents responding to safety and health committee (SHC) factors. The findings revealed that the level of awareness of respondents on SHC is high with an average mean score of 3.90. The highest average mean score is 4.50 in which 178 (92.3%) are aware of the existence of SHC at the university level followed by the faculty level 164 (84.9%). The lowest average mean score is 3.43 which means only 84 (48.2%) of the respondents are aware that SHC regularly conducts safety and health activities and yearly OSH week. The respondents (77.2%) agreed that SHC must organize an OSH talk to ensure enlightenment on the importance of maintaining OSH in the workplace. The average percentage of respondents agreeing with the awareness question item on safety and health procedures is 67.2%.

Table 7  
Safety and Health Committee (SHC)

Question		1	2	3	4	5	Mean	Standard deviation
I am aware of the SHC at the university level.	F	0	2	13	65	113	4.50	0.67
	%		1	6.7	33.6	58.7		
I am aware of the SHC in my faculty/department.	F	3	6	20	53	111	4.36	0.90
	%	1.6	3.1	10.4	27.5	57.4		
I like to engage in activities organized by SHC.	F	2	7	43	90	51		0.85
	%	1	3.6	22.3	46.6	26.5	3.94	
SHC regularly conducts occupational safety activities such as talks, fire drills, and first aid.	F	11	15	74	66	27		1.01
	%	5.7	7.8	38.3	34.2	14	3.43	
Every occupational accident will be investigated by SHC.	F	4	3	52	73	61		0.91
	%	2.1	1.6	26.9	37.8	31.6	3.95	
The safety and health talk organized by SHC enlightened me on the importance of maintaining safety and health wherever I am.	F	3	6	35	84	65		0.89
	%	1.6	3.1	18.1	43.5	33.7	4.05	
OSH week is held every year by SHC.	F	9	15	85	52	32		1.01
	%	4.7	7.8	44	26.9	16.6	3.43	
The campaign for 'safe work' and a 'healthy environment' in the workplace is being conducted continuously by SHC.	F	6	16	76	57	38		1.00
	%	3.1	8.3	39.4	29.5	19.7	3.54	
<b>Average</b>							3.90	0.91

The results of this study are in line with the result found by Faiqah et al. (2019) and Kadir et al. (2021) found that the level of safety and health awareness among staff regarding the safety and health committee was high with an average mean score of 3.72 and 4.42 respectively. However, the results found by Baizura et al., (2016) are moderate level with an overall mean score of 3.35. In this study, 134 (69.4%) respondents agreed that occupational accident is investigated by SHC. Meanwhile, Siti Hajar, Ahmad, and Rashid (2015) concluded in their study that 58 quarry workers in East Coast Malaysia had a high level of safety awareness, with the highest being 88% of workers were aware that all accidents at the workplace must be reported to the responsible person. However, the different findings of the study by Siti Nakiah et al. (2015) showed that the safety and health committee had a weak significant relationship and did not influence the level of employee awareness of occupational safety practices.

#### 4.7 Level of Awareness of Commitment and Attitude

The success of OSH management and practices is notably influenced by commitment and attitude, as highlighted by the findings shown in Table 8. The analysis shows that the respondent's awareness level of commitment and attitude is very high with an average mean score of 4.63. The highest average mean score is 4.84 which means 193 (100%) agreed that OSH must be prioritized in the workplace while the lowest average mean score is 4.39 which means 91.8% of the

respondents stated that personal protective equipment did not interfere with their work. All the respondents (100%) agreed that negligence in safeguarding safety will endanger the user. A total of 191 (99%) of the respondents agreed that the workers must obey the safety regulations at the workplace, and the machines must be cleaned after being used. The average percentage of respondents agreeing with the awareness question item on commitment and attitude is 97.3%. High awareness of commitment and attitude shown by the respondents are important keys to the success of OSH management and practices at the campus. The top management should continuously educate staff with proper training and activities to have a sustainable OSH system.

Table 8  
Commitment and Attitude

Question		1	2	3	4	5	Mean	Standard deviation
Negligence in safeguarding the safety will endanger all the users.	F	0	0	0	34	159	4.82	0.38
	%	0	0	0	17.6	82.4		
I always obey safety regulations at my place of duty.	F	0	0	2	62	129	4.66	0.50
	%	0	0	1	32.2	66.8		
I always make sure the equipment is always clean and tidy after use.	F	0	0	2	66	125	4.64	0.50
	%	0	0	1	34.2	64.8		
I will tell the importance of OSH to colleagues and students.	F	0	1	2	75	115	4.58	0.54
	%	0	0.5	1	38.7	59.8		
I will check the equipment first before using it.	F	0	0	10	73	110	4.52	0.60
	%	0	0	5.4	37.8	56.8		
Personal protective equipment does not interfere with my work.	F	0	0	16	86	91	4.39	0.64
	%	0	0	8.2	44.6	47.2		
Any equipment damage will be reported immediately.	F	0	0	9	67	117	4.57	0.57
	%	0	0	4.4	34.7	60.9		
OSH must be prioritized.	F	0	0	0	32	161	4.84	0.37
	%	0	0	0	16.6	83.4		
<b>Average</b>							<b>4.63</b>	<b>0.51</b>

The findings of the present study are supported by the previous studies by Baizura et al. (2016), Faiqah et al. (2019) and Kadir et al. (2021) which showed that the level of safety and health awareness among staff regarding the safety commitment and attitude was high with average mean score of 4.3, 4.44 and 4.18 respectively. Contrasting findings were reported in a study by Perdana, Amarria, Dilla, and Amirah (2018), who found that the electrical workers in an airport service company in Indonesia were not aware of personal protective equipment usage but aware of safety implementation and unsafe behaviour. The implementation of Behaviour-Based Safety (BBS) can effectively increase safety awareness among workers. The element of human, behaviour, and environmental factors in the Behaviour-Based Safety (BBS) awareness method was studied by Rosliza, Noorhasimah, Syed, and Norsyahidah (2015) among 53 Safety and Health Officers in the Malaysian manufacturing industry, which shown that the level of awareness was moderate where the knowledge was higher than understanding and practices level. In addition, a case study on the level of OSH awareness of forklift dangers among forklift drivers in the manufacturing sector in the state of Selangor by Nor Azimah & Hamirul (2015) also concluded that attitude factors had a significant relationship with the level of OSH awareness.

**4.8 Level of Awareness of the Environment**

The safe working environment greatly contributed to the safety and health of the workers. Table 9 presents respondents' data regarding the environment of their workplace. The result shows that the respondent's awareness level of the environment is high with an average mean score of 4.22. The highest average mean score is 4.49 in which 183 (97.8%) agreed that the aisle in the workplace must not be blocked by any obstacles while the lowest average mean score is 3.94 in which 148 (76.7%) of the respondents found that the air circulation system is good and sufficient. A total of 182 (94.3%) of the respondents agreed that the floor in the workplace must always be kept clean from oil, dust, water, and unsafe materials. In this study, 164 (85%) agreed that solid and liquid waste materials must be disposed of in a safe place. Meanwhile, 166 (86.1%) stated that their working environment is safe and 175 (90.6%) found that the exit door in the workplace is sufficient. The average percentage of respondents agreeing with the awareness question item on the safety environment is 87.9%.

Table 9  
Environment

Question		1	2	3	4	5	Mean	Standard deviation
My working environment is safe.	F	2	6	19	97	69	4.17	0.81
	%	1	3.1	9.8	50.3	35.8		
The air circulation system is good and sufficient.	F	5	10	30	95	53	3.94	0.93
	%	2.6	5.2	15.5	49.2	27.5		
The noise level is safe.	F	3	9	19	105	57	4.06	0.85
	%	1.6	4.7	9.8	54.4	29.5		
The exit door provided is sufficient.	F	0	3	15	98	77	4.29	0.68
	%	0	1.6	7.8	50.8	39.8		
Solid/liquid waste materials are disposed of in a safe place.	F	0	0	29	99	65	4.16	0.74
	%	0	0	15	51.3	33.7		
Workpieces /tools are organized neatly and securely and labeled by respective categories.	F	1	2	13	103	74	4.28	0.68
	%	0.5	1	6.7	53.4	38.4		
I always keep the floors clean of oil, dust, water, and unsafe materials.	F	1	1	9	92	90	4.39	0.65
	%	0.5	0.5	4.7	47.7	46.6		
I always make sure the aisle is not blocked by any obstacles.	F	0	1	9	77	106	4.49	0.61
	%	0	0.5	4.7	39.9	54.9		
<b>Average</b>							4.22	0.74

The findings of the present study are consistent with the results of previous studies by Baizura et al. (2016), Faiqah et al. (2019), and Firdaus et al. (2013), indicating high level of safety and health awareness among staffs regarding safe environment with an average mean score of 4.30, 4.24, and 4.56 respectively. Similarly, Naresh, Bhat, Chavan, Bhat, and Vira (2018) who studied work-related occupational hazards from various work areas among staff in Cancer Centre India indicated that employee awareness and perceptions concerning safety measures to be more than 90%, while 92% to 98% had complied with safe work practices including personal protective equipment and waste disposal. Meanwhile, Nur Shafini, Ayuni, Siti, Suhaily, and Dalila (2020) concluded in their study among 217 production workers in a manufacturing company in Malaysia that the environmental factor contributed to safety in the workplace.

#### **4.9 Overall Level of OSH Awareness**

The overall mean score results for each factor that contributes to the OSH awareness level among the UiTM CPP staff are presented in Table 10. It was found that their OSH awareness level is high with an overall mean score of 4.44. The highest level of awareness factor is OSH policy with a mean score of 4.90 while the lowest awareness level is safety and health committee with a mean score of 3.90. It means that OSH policy is a highly influential element contributing to the awareness level than other factors. All respondents agreed that safety is important and needs to be practiced. The overall findings of the present study are consistent with previous studies by Baizura et al. (2016), Faiqah et al. (2019), and Firdaus et al. (2013) which also indicated high level of safety and health awareness with overall mean score of 4.19, 4.26, and 4.32 respectively. They concluded that the factors of safety procedure, safety policy, and safety training contributed the most to the level of OSH awareness. Patrick et al. (2019) in their study of the health workers and management of public dispensaries and health centres in Kenya concluded that the lack of OSH awareness caused obstruction in the implementation of the OSH policy and OSH act.

*Table 10  
Distribution of Overall Mean Score*

<b>Factor</b>	<b>Mean score</b>	<b>Standard Deviation</b>	<b>Awareness level</b>
Occupational Safety and Health Policy	4.90	0.30	Very high
Commitment and Attitude	4.63	0.51	Very high
Standard Operating Procedure	4.59	0.54	Very high
Training	4.48	0.66	High
Equipment	4.34	0.75	High
Environment	4.22	0.74	High
Safety and Health Committee	3.90	0.91	High
<b>Overall</b>	<b>4.44</b>	<b>0.63</b>	<b>High</b>

#### **5. Conclusion**

This study has shown that the level of OSH awareness among UiTM CPP staff in the workplace is at a high level with an overall mean score of 4.44. The results of this study highlight that OSH policy (mean score = 4.9) is the most dominant factor compared to other factors. It clearly shows that OSH policy is a factor that plays an important role in ensuring the level of awareness among employees at UiTM CPP, whether it is successful or otherwise. However, other safety factors also show very high mean score values such as commitment and attitude (mean score = 4.63), and Standard Operating Procedure (mean score = 4.59) which are driving factors in the level of employee awareness of OSH. Therefore, this study hopes that awareness of OSH is given wider exposure, encompassing all levels of job specialization and the entire spectrum of employers so that awareness can be achieved. Understanding the concepts of OSH management will help the employer to understand the actual situation and the correct actions that can be taken to prevent accidents, injury, and health hazards in the workplace. The continuous and consistent effort by the OSH management team could gradually improve the factors at a high level to a very high level of awareness among the staff and accomplish an effective and sustainable OSH management system at UiTM CPP. Since this study focused only on faculty members, future research should

extend coverage to all administrative staff and students which will yield insights into the broader impact of the OSH policy execution.

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### **Conflicts of Interest**

There are no conflicts of interest.

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