

Original Paper

Safety Awareness at Sea: Perspectives from Marine Unit, Royal Malaysian Custom Department

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Abstract

Law enforcement officers face many dangerous and stressful situations in the line of duty. Some, such as gun violence, are obvious; other dangers (e.g., fatalities while working at sea) are hidden but common and can hinder officer performance. Officer performance is also affected by training and other factors. This article uses best-practice research to examine the relationship between safety culture, safety training, employee involvement, and safety awareness at the workplace, specifically to law enforcement employees working at sea. Safety awareness considered a vital element in every organization to enhance their employees' performance. Quantitative research methodology was applied to examine the relationship between independent variables and dependent variable. The questionnaire are divided into five sections, covering demographic factors, safety culture, marine safety training, employee involvement, and safety awareness at the workplace. A total of 30% of 550 employees from the Marine Unit of the Royal Malaysian Customs Department were selected randomly as respondents. This study indicates that safety culture, safety at sea training, and employee involvement have a significant positive relationship to safety awareness at the workplace. A recommendation is then offered for law-enforcement safety management that can apply to the Marine Enforcement Unit of Royal Malaysian Customs to eliminate accidents, injuries, and fatalities at sea in the marine enforcement profession. The Marine Customs law enforcement professionals may benefit from studying the safety practices and safety management systems implemented in other high-risk professions to develop more effective programs that prioritize safety and mitigate risk in the workplace, especially safety at sea. The high-risk environment and nature of work conducted by Marine Customs law enforcement officers demand a holistic and dedicated approach to safety to reduce fatalities and injuries throughout the profession.

Keywords

Safety Culture, Sea, Employee Involvement, Safety Awareness, Marine Enforcement Unit, Royal Malaysian Custom Department

1 Introduction

Safety awareness in the workplace is a major issue that is affecting all types of businesses around the world these days. For many years, the literature has focused on the importance of employee safety, which is thought to be closely related to overall workplace safety and health (Neal et al. 2000; Vinodkumar & Bhasi, 2010; Shuang et al., 2015; Jiang & Probst, 2016). The goal of workplace safety is to reduce the number of accidents that occur among employees. Unsafe work behaviour, according to McSween (2003), is the result of the physical environment, the social environment, and the workers' experience in these environments. Employees' safety is believed to promote a safer working environment, and as a result, many researchers are attempting to determine the factors that can be used to increase employee safety, such as increasing safety obligations (Mullen et al., 2017), increasing an employee's safety motivation, and instilling safety knowledge (Jiang & Probst, 2016).

In the maritime industries, worker safety at sea is just as important as worker safety in land-based industries. Despite significant advancements in technology and workplace safety, the maritime sector continues to be a dangerous place to work, a situation that affects all aspects of the maritime industry. As an example, enforcing the law at sea is a profession that involves significant risk. As a result, a law enforcement officer must take the safety of the vessel and its crew members into consideration before beginning their activities.

It's a well-known fact that the sea can be deceivingly beautiful in one moment and then, in the blink of an eye, change its deceptive nature and transform into the worst nightmare the world has ever known. Therefore, safety at sea is critical, and workers' knowledge, experience, and skills are essential components of any maritime activity.

Nagalingam and Anuar (2020) highlighted issues on safety should not be taken lightly. In the perspectives of chemical warehouse, stern action need to be applied because any mistakes will caused life. The same situation applies to safety at sea. Any single mistakes will caused life. Therefore, it is a must to avoid any risks on incidents and accidents from growing.

First and foremost, safety is the motto worn by the vast majority of seafarers around the world, including law enforcement officers who are part of the seafarers in the government's sector that enforces government law at sea as well as seafarers in the private sector. With this slogan in mind, the mission of every maritime organization, including the government, the private sector, universities, academies, and training centres, is to promote maritime safety on a permanent basis, regardless of the circumstances. Science and technology have made significant improvements in maritime safety, affecting everything from seafarers' safety culture to ship design and construction to ship navigation and management. However, perhaps the most significant change in maritime safety has been

re-evaluating the importance of safety awareness in the workplace.

Many maritime organizations believe that enacting new rules and regulations is not the only way to improve safety in the industry. Instead, taking proactive rather than reactive initiatives and enforcing existing regulations may prove to be more effective in achieving safety goals than other approaches. Within the safety net, it is necessary to promote a safety-first attitude. Any maritime accident at sea, including those involving government organizations, will have a significant impact on how safety is managed in the future. This is because any maritime accident at sea will have a significant impact on how the organization operates as well as how human life and the environment are protected.

1.1 Problem Statement

Given that Malaysia is a maritime country surrounded by water and contains more than 800 islands in total, sea transportation is extremely important, and customs law enforcement at sea is critical in protecting our maritime nation's interests. Malaysia is also home to the Malacca Strait, one of the world's busiest straits, making Malaysia's maritime zone more vulnerable to Customs illegal activities, criminal activity, and marine incidents.

In the 1980s, a study was conducted to explore employees' perceptions of the importance of safe occupational conduct in the workplace (Zohar, 2002). It was found that, perceived management towards safety, perceived effects of safe conduct on promotion, perceived effects of safe conduct on social status, perceived the organization status of the safety officer, perceived importance and effectiveness of workplace safety training, perceived risk level at work, and finally, perceived effectiveness of enforcement versus guidance in promoting safety are all investigated in greater depth than in previous studies.

The Malaysian government has made efforts to raise worker safety awareness in order to create a safer and healthier workplace. As a result, a variety of safety-related campaigns and programmes, such as a safety awareness-raising campaign, have been implemented (Zakaria et al., 2012).

Despite the fact that safety at sea is important, no comprehensive study has been conducted on the subject, particularly involving government seafarers such as Marine Customs enforcement officers who perform their duties at sea. Safety concerns at sea were raised among Marine Customs enforcement officers, and these concerns centred on the officers' safety in the workplace, particularly in the maritime working environment. When any marine accident involving the officer is likely to disrupt the Customs enforcement operation, endanger human life, environmental catastrophe, and subsequently lead to economic damage.

Ivancevich (2001) explains that accidents, injuries, and the suffering experienced by employees affect the employee only, and their employer feels even the effect. Therefore, cost-oriented employers should acknowledge how much they need to control employee safety and health issues to prevent accidents and health disorders.

Accidents or fatalities at the workplace involving law enforcement employees at sea still occur. Accident in the workplace happens when the "people" elements engage in safe and unsafe behaviour

according to their interpretation (Ali et al., 2009). Employees, devices, working practices, and so on all play a role in accidents (Syed Mohamed & Ideris, 2012; López-Arquillos & Rubio-Romero, 2016; Syed Mohamed & Ideris, 2012). Somehow, few proactive measures can be set up to identify and eliminate hazards before they establish. Some investment in equipment might be useful to meet up the current and future requirements on safety and health concerns (Clark, 2006).

It is hoped this study able to demonstrate how increased safety awareness at sea among marine customs enforcement employees contributes to the overall safety and efficiency of customs law enforcement operations at sea. This research looked into the level of safety awareness at sea among Marine Customs enforcement employees to demonstrate how important it is to manage marine safety among Marine Customs officers. This is important because any maritime accident at sea is likely to disrupt the organization's operations, endanger the environment and human life.

The research objectives are:

- 1) To determine the safety culture implemented in the organization has a statistically significant relationship with the level of safety awareness at sea among employees of the Marine Customs Enforcement Unit of the RMCD.
- 2) To investigate whether the mandatory training requirement for Marine Customs employees on the STCW Code Basic Training (BT) for seafarers has a significant impact on the level of safety awareness at sea among the Marine Customs Enforcement Unit of the RMCD employee.
- 3) To assess whether employee participation in the Safety and Training Committee of the Marine Customs Enforcement Unit of the RMCD has a significant impact on the level of safety awareness at sea or not.

In addition to its core mission of providing effective customs services to communities, the Marine Customs officer also plays other critical roles as security responders in our nation's ability to respond effectively to terrorist acts, natural disasters and pandemics. Unfortunately, these factors result in fatalities and injuries, and the readiness of an agency to respond to these and other emergencies is compromised.

1.2 Significance of the Study

Safety at sea concerning Marine Customs enforcement employees that working at sea has recently raised the management awareness in the facing of catastrophic events, for example, an incident of a collision between the customs enforcement vessel, injury at sea, fire at sea, man overboard, the vessel grounded, sinking of the vessel and so on. The highlighted issue is the first step in reducing marine casualties among the Marine Customs enforcement employees. Besides, this will lead the management to understand the Marine Customs enforcement employees' constraints while conducting their duties at sea. It also gives an overview of the significant factors that affect safety at sea in the Marine Customs enforcement environment at the Malaysian maritime zone.

It is anticipated that this research will enhance customs law enforcement at sea by implementing efficient marine safety precautions for marine customs employees and helping management to adhere

to the current situation and make actionable “The best results decisions”. However, the actionable decision and action are management privileges due to limited research scope.

2. Royal Malaysian Customs Department (RMCD)

The Royal Malaysian Customs Department (RMCD)’s Marine Customs Unit is chosen for this study because it was one of the essential divisions in the Royal Malaysian Customs Department (RMCD) that has contributed significant devotion to the country enforcing Customs Law at the Malaysian maritime zone. The RMCD’s Marine Customs Unit headquarters in Putrajaya monitors all Marine Customs activities in 30 Marine Customs Stations in Peninsular Malaysia, Sabah, and Sarawak, including Labuan. It organizes, coordinates, and oversees all customs enforcement roles in the Malaysian maritime zone, including sea, river, and coastal areas.

The RMCD’s Marine Customs exercised the department’s functions that provided in the following legislations: Customs Act 1967, Customs Regulations 1977, Customs (Prohibition of Exports) Order 1988, Customs (Prohibition of Imports) Order 1988, Customs Duties Order 1996, Customs (Rules of Valuation) Regulation 1999, other related legislation such as the Sales Tax Act 1972.

The Marine Customs core functional is exercising Customs law enforcement role in detecting any illegal activities such as altering or falsifying Customs declaration or Customs documents including any related documents, submitting an application, which is untrue. Smuggling offences involve persons’ attempts or actions leading to the evasion of Customs duties or the breach of export or import prohibited goods. Smuggling means importing, exporting, offshore transportation, and manufacturing or issue any goods contrary to any written law relating to the department for fraudulent results or avoidance of anything prohibitions, restrictions or regulations or conditions on the importation, exportation, offshore transportation, manufacturing or production.

The Marine Customs Officer, appointed under the Customs Assistant Superintendent scheme, was responsible for carrying out its function of customs enforcement role. The Customs law enforcement at sea is their specific duty, or in other words, the marine customs officer has such authority supplied in the Customs Act 1967 and related. Marine Customs Officer is a competent seafarer handling the customs enforcement vessel, marine navigational, and ship maintenance. Marine Customs Officers are required to comply with the International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers 1978 or The STCW Convention and Code, as prescribed and issued by the Marine Department Malaysia in accordance with International Maritime Organization recommendations before participating in sea patrol.

2.1 Safety Practice and Theory

When it comes to explaining why accidents and injuries occur in the workplace, there are indeed a few academic theories of safety management systems found. People and their ability to adapt to changing circumstances are highlighted in one approach, whereas systems inside an organization are highlighted in the other. Although, these concepts are closely associated with organizations that manage complex

and dangerous technologies, such as the nuclear industry. However, understanding them may assist organizations in developing a comprehensive approach to implementing appropriate safety programmes aimed at prevention in their respective industries.

2.1.1 The Safety Theories of Herbert William Heinrich

To trace the history of accident modelling back to its origins, we must look no further than Herbert W. Heinrich's 1931 book *Industrial Accident Prevention*, which was the important work on accident comprehension. Heinrich asserted that the following are his fundamental principles for applying research to the prevention of accidents: "(1) through cultivating and maintaining an active interest in safety; (2) through fact-finding; and (3) through the implementation of corrective action based on research findings" (Heinrich, 1931).

Heinrich's defence, which is both a practice and philosophy, is one of the most widely accepted safety theories. Despite the fact that his theories date back to the late 1920s, Herbert William Heinrich's theories continue to have an impact on the practice and philosophy of protection today. Friedrich Heinrich's philosophy had a significant impact on both safety practice and safety theory. Heinrich explicitly connects this to the distinctions between causes, injuries, and effects that we have already seen in the series of accidents that he describes. According to him, one should not wait for serious incidents to occur, but should instead respond to what we might refer to as "poor signals" today (Weick & Sutcliffe, 2001).

The most fundamental of all safety management paradigms is accident prevention and it is also the most difficult to implement. When safety management is effective, there should be a reduction in the number of injuries. In the event of an incident, however, it is necessary that robust safety controls are not in place. It is therefore critical to understand how accidents occur in order to develop strategies to prevent them from occurring in the first place.

As noted by Hovden, Albrechtsen and Herrera (2010), accident models have an impact on the way people think about safety, how risk factors are evaluated, and how success can be measured... Their application is flexible, allowing them to be used in both reactive and proactive safety management... Several models are based on the concept of causality, with accidents being the result of human error, technological faults, or organizational failures.

2.1.2 Normal Accident Theory

According to Saleh et al. (2010), the Normal Accident Theory, which was developed in the aftermath of the Three Mile Island nuclear disaster in the 1980s by Yale sociologist Charles Perrow, accidents are "normal" and should be expected in some systems "characterized by interactive complexity and tight coupling among its components". The theory is based on the principles that people make mistakes and that large-scale accidents are the result of a series of smaller incidents that spiral out of control over time.

The Normal Accident Theory, according to Ruchlin et al. (2004), emphasizes that not all problems can be anticipated, especially in high-risk organizations, it is critical for organizations to focus on

minimizing errors rather than completely avoiding them as their primary goal. As stated by Graham (2015) that developing a thorough understanding of the factors that contribute to accidents, as well as developing policies and programmes that address these factors, are crucial in order to improve safety and reduce injuries. As law enforcement expert Gordon Graham points out, this is analogous to the process of risk assessment and what he refers to as the identification of problems that are waiting to be discovered.

Normal Accident Theory, is not easily transferable or directly applicable to the Marine Customs law enforcement profession in light of the inherent dangers of the profession as well as the uncontrollable variables involved and the likelihood of being injured by a variety of threats, but this concept is an appropriate concept for law enforcement leaders to consider. Improved culture of safety within an organization is dependent on employees' understanding of the possibility of accidents, injuries, or fatalities, as well as their ability to learn from mistakes and close calls. To improve the culture of safety within an organization, policies and programmes that identify risks and hazards while also not unfairly punishing employees are all necessary components of the overall process.

Seafarers have been seriously injured or killed as a result of the destruction of the marine environment's pristine state, according to a study by Hvoid (2010). Financial losses resulting from maritime accidents can be recovered through insurance claims, but environmental damage is almost always irreversible and cannot be recovered (International Maritime Organization, 2012).

The European Maritime Safety Agency (2019) reported in the 2019 Annual Overview of Marine Casualties and Incidents that 426 accidents resulted in a total of 696 deaths in 2011-2018. The decrease from 2015 was reversed in 2018. During this period, crew was the most affected victim category with 566 fatalities.

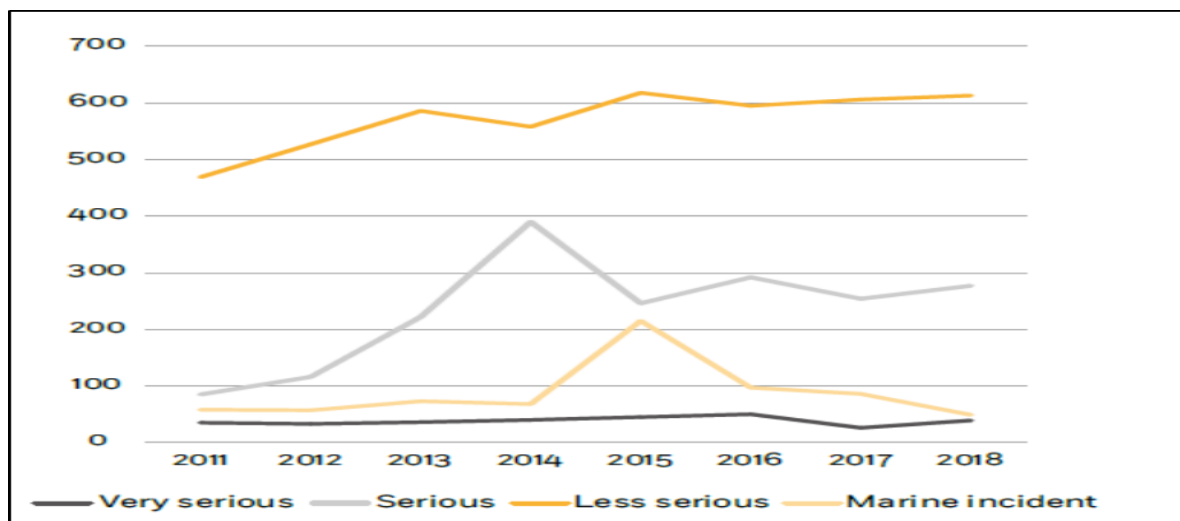


Figure 1. The Marine Casualties and Incidents Related to Occurrence with Person(s)

Source: European Maritime Safety Agency (2019)

Maritime accidents have devastating consequences for both seafarers and non-seafarers. A recent study found that seafarers are up to 27.8 times more likely than the general shore-based workforce to die as a result of a work-related fatal injury, based on an average of 14.2 injuries per million working hours reported (Hvold, 2010). The fact that statistics on maritime injuries and accidents, according to some sources, maybe under-reported (Lützhöft, Grech, & Porathe, 2011), these figures are particularly striking.

In light of the high number of reported accidents and incidents at sea, there are a number of possible explanations. When compared to land-based operations, operating in a harsh natural environment is inherently riskier (Bloor, Thomas, & Lane, 2000; Hetherington, Flin, & Mearns, 2006; Roberts & Marlow, 2002, 2005; Rodryguez, 2007).

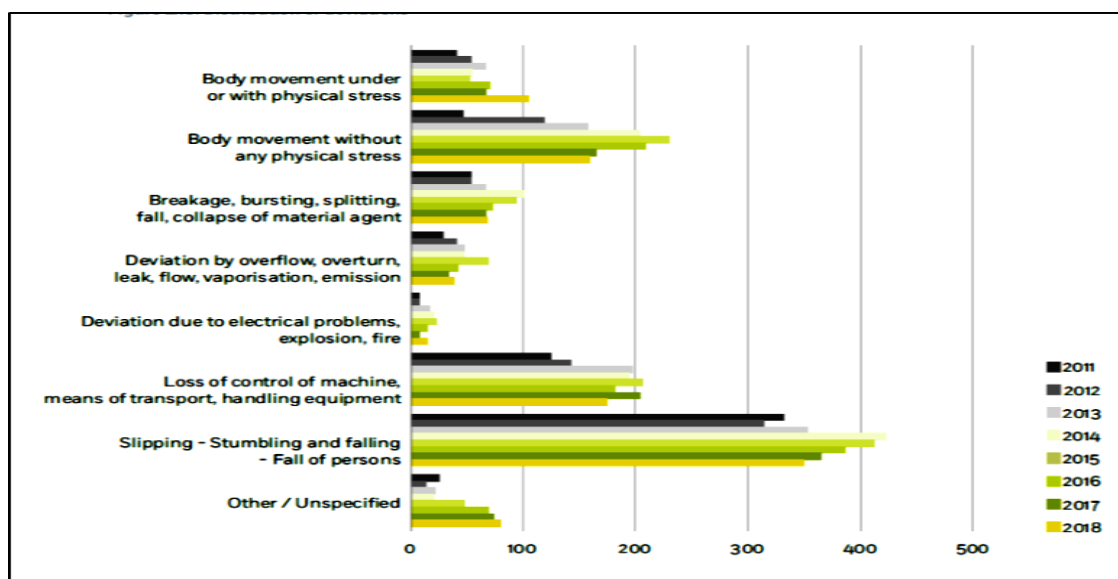


Figure 2. The Marine Casualties and Incidents Related to Various Factors in Maritime Operation

Source: European Maritime Safety Agency (2019)

3. Research Methodology

The descriptive research method was used for this study. The descriptive approach was chosen for this study. It allowed for a detailed description and understanding of the safety awareness factor of employees at work, as well as an assessment of its success. This approach examined the relationship between workplace safety culture, safety training, employee involvement, and workplace safety awareness, with a specific focus on law enforcement employees working at sea in the Marine Unit of the RMCD.

The Customs Marine Unit of the RMCD was chosen for this research. The RMCD's Customs Marine Unit was selected for this study because it is one of the most important Customs law enforcement divisions in the organization, and it has made significant contributions to the country in the prevention of smuggling activities. The investigation was carried out at the RMCD's Customs Marine

headquarter's in Putrajaya and all 30 Marine Customs stations throughout Peninsular Malaysia, Sarawak, and Sabah, including Marine Customs stations in the Federal Territory of Labuan.

3.1 Population

Coopers and Schindler (2014) submitted that a population encompasses a total number of study subjects that qualify to be studied. That percentage of the population can be studied if the population is too large. The target population of this study encompassed the Marine Unit of Royal Malaysian Customs Department employees working at all 31 stations of Marine Customs in Peninsular Malaysia, Sarawak, and Sabah, including the Federal Territory of Labuan.

3.2 Sampling Design

Bell (1999) describes a sample as a subclass of the population and possesses similar traits as the study's target population. Since the population was too large to be studied as a whole, a portion of the population was earmarked to be studied. The researcher took sufficient care to ensure that the sample chosen was representative of the population. The researcher chose the sample size using the procedure described in subsequent sections. The researcher used Krejcie and Morgan concept to develop an appropriate sample size from a population of 571. Cooper and Schindler (2014) explained that the census method involves obtaining and recording information on the population or sample under study. Budget and geographical constraints made it impossible to study the Marine Unit of the Royal Malaysian Customs Department hence a sample was selected using a sampling frame.

3.3 Sampling Frame

To facilitate an effective field survey exercise, a sampling frame was utilized to determine the sampling units. Cooper and Schindler (2014) argued that a sampling frame is a list of elements from which the sample is drawn and closely related to the population. The sample are from Marine Unit of the Royal Malaysian Customs Department staff working at headquarters and all 31 stations of Marine Customs in Peninsular Malaysia, Sarawak, and Sabah, including the Federal Territory Labuan.

3.4 Sampling Technique

The study adopted a non-probability sampling approach to target the most available Marine Unit of Royal Malaysian Customs Department employees working at headquarters and all 31 stations of Marine Customs in Peninsular Malaysia, Sarawak, and Sabah, including the Federal Territory of Labuan. Molenberghs (2013) defined a sampling procedure as selecting apportion of the population for investigation of a phenomenon under study.

The sample size is equal to 230 (with finite population correction). For this research project, a sample size of 230 is recommended based on the quantitative sample size recommended by Krejcie and Morgan (1970), when the population is 571.

The questionnaires have been distributed to 230 respondents in the Marine Unit of the Royal Malaysian Customs Department enforcement division's headquarters in Putrajaya and all 30 stations of the Marine Customs Royal Malaysian in Peninsular Malaysia, Sarawak, and Sabah, including the Federal Territory of Labuan.

Table 1. Respondents' Population

No.	Marine Customs Station	Management Level	Operation Level	Total
1	Putrajaya (HQ)	2	3	5
2	Kuala Perlis	1	10	11
3	Langkawi	1	7	8
4	Tg. Dawai	1	6	7
5	Pulau Pinang	1	10	11
6	Lumut	1	8	9
7	Port Klang	1	10	11
8	Lukut	1	6	7
9	Bandar Hilir	1	6	7
10	Sg. Pulai	1	9	10
11	Batu Pahat	1	6	7
12	Mersing	1	6	7
13	Muar	1	6	7
14	Sg. Rengit	1	6	7
15	Tg. Surat	1	7	8
16	Pengkalan Kubor	1	6	7
17	Kuala Terengganu	1	6	7
16	Kemaman	1	6	7
19	Kuantan	1	6	7
20	Kuching	1	6	7
21	Lawas	1	6	7
22	Limbang	1	6	7
23	Miri	1	6	7
24	Sarikei	1	6	7
25	Sibu	1	6	7
26	Bintulu	1	6	7
27	Kota Kinabalu	1	6	7
28	Lahat Datu	1	6	7
29	Sandakan	1	6	7
30	Tawau	1	4	5
31	W.P Labuan	1	4	5
Total		32	195	230
Grand Total				230

3.5 Data Collection

The type of data collection method used in a study is determined by the facilities available, the level of accuracy required for the study's competence, the length of time the study will be conducted, and the availability of other costs and resources required for data collection and analysis (Zaidatun & MohdSalleh, 2003). The data for the study was collected from the sample population using structured questionnaires, which the researcher developed. A questionnaire distribution strategy was chosen because it enables a larger sample size and a more diverse geographic distribution of the model and displays a large amount of data in a relatively short period of time (Williamson, 2000).

The questionnaire covered all variables included in the conceptual framework of this study. The questionnaire was written in English and translated into Malay. The use of the translated version improved the questionnaire's readability for the respondents. It increased the likelihood that the instrument would function in this new target culture in the same way that it had in the original culture where it was developed (Bates & Khasawneh, 2005).

In order to ensure that the questionnaires were properly reviewed, it's were submitted to the Royal Malaysian Customs Department, Customs Marine Unit Headquarters in Putrajaya. It was reviewed by Senior Assistants Customs Director II, Customs Superintendent, and a Marine Customs officer with more than five years of experience in the relevant department before being accepted. They were chosen because of their extensive knowledge and expertise in this field and their ability to evaluate the study's relevance.

Each respondent was requested to answer similar set of questions in a pre-set order. The data collected using a questionnaire consisted of 32 items. Questionnaires were distributed to respondents via an online Google form mechanism in 5 days for an answer, and the researcher monitors the progress responses from all respondent.

4. Findings

Below are table that describes the demography of the study.

Table 2. Demography of the Respondents

Gender	Frequency	Present	Valid Percent	Cumulative Percent
Male	222	98.2	98.2	98.2
Female	4	1.8	1.8	100.0
Total	226	100.0	100.0	
Age	Frequency	Present	Valid Percent	Cumulative Percent
21-30 years	36	15.9	15.9	15.9
31-40 years	73	32.3	32.3	48.2
41-50 years	85	37.6	37.6	85.8

51 years and above	32	14.2	14.2	100.0
Total	226	100.0	100.0	
Educational Level	Frequency	Present	Valid Percent	Cumulative Percent
SPM	66	29.2	29.2	29.2
STPM/Diploma	41	18.1	18.1	47.3
Competency (Deck/Engine)	78	34.5	34.5	81.9
Bachelor Degree	38	16.8	16.8	98.7
Post Graduate Degree	1	.4	.4	99.1
Others	2	.9	.9	100.0
Total	226	100.0	100.0	
Length of Service	Frequency	Present	Valid Percent	Cumulative Percent
1-5 years	33	14.6	14.6	14.6
6-10 years	26	11.5	11.5	26.1
11-15 years	62	27.4	27.4	53.5
16 years and above	105	46.5	46.5	100.0
Total	226	100.0	100.0	
Position/Designation	Frequency	Present	Valid Percent	Cumulative Percent
Support Group 1	186	82.3	82.3	82.3
Support Group 2	4	1.8	1.8	84.1
Management & Professional Group	32	14.2	14.2	98.2
Others	4	1.8	1.8	100.0
Total	226	100.0	100.0	
Department/Division	Frequency	Present	Valid Percent	Cumulative Percent
Enforcement/Marine	225	99.6	99.6	99.6
Others	1	.4	.4	100.0
Total	226	100.0	100.0	

From the demographic data, the gender breakdown of the study respondents is shown in Table 2. Males recorded the highest number of 222 people (98.2%), while women only 4 people (1.8%) these results show the majority of employees working at the Customs Marine Unit are men. This indicates that men dominates this sector of job due to the fact that the challenging working environment really fit to men rather than women.

The highest age group involved in the study were 41 to 50 years (37.6%), followed by 31 to 40 years (32.3%), 21 to 30 years (15.9%), and age group 51 years and above recorded the lowest amount of 14.2%. Majority of the respondents fall in the category of young people which comprise of 69.9% (160 respondents) in the range of 31-50 years old. This age group are talented, brave and well experience category of workforce.

This study revealed that 34.5% of personnel in the Customs Marine Unit are certified in Certificate of Competency (Deck/Engine), which is the highest level of education discovered among those employed in the unit. This is owing to a mandatory requirement imposed by the Malaysian Marine Department, which mandated that all marine professionals who worked on government-owned vessels must hold this qualification. Respondents with SPM received 29.2% of the vote, followed by STPM/Diploma with 18.1%. Bachelor's degrees represent 16.8% of the total, while postgraduate degrees count for 0.4% and other qualifications count for 0.9%.

Demographic results for the length of service of Marine Customs personnel consists of four groups of workers. The highest length of service in the enforcement unit of the Royal Malaysian Customs Department is 1 to 5 years which is 49.7%, followed by a service period 16 years and above, which is 46.5%, and the lowest percentage of services is 6 - 10 years which is 11.5%. This indicates that majority of them are in the category of 1-5 years of experience and 16 years or more experience. This showed a good blend of group of experience people combine with junior people. This provides a good training ground for young people in the workforce.

Table 3. Demography of Respondents in the Category of Position / Designation and Department or Division

Position/Designation	Frequency	Present	Valid Percent	Cumulative Percent
Support Group 1	186	82.3	82.3	82.3
Support Group 2	4	1.8	1.8	84.1
Management & Professional Group	32	14.2	14.2	98.2
Others	4	1.8	1.8	100.0
Total	226	100.0	100.0	
Department/Division	Frequency	Present	Valid Percent	Cumulative Percent
Enforcement/Marine	225	99.6	99.6	99.6
Others	1	.4	.4	100.0
Total	226	100.0	100.0	

Demographic Position/designation of marine customs personnel are divided into four groups of workers. The results of the analysis found a total of 226 people. A total of 186 people, or 82.3 per cent of those who responded, are employed in Support Group 1. In comparison, 32 people or 14.2 per cent of those who responded are employed in the Management & Professional Group. Support Group 2 and other employees have shared the same percentage of 1.8 per cent or four people.

Analytical results showed that most respondents were 226 people (99.6%) are comprised of those currently serving in the marine customs enforcement unit of the Royal Malaysian Customs Department. Meanwhile, only one-person (0.4%) respondents respectively are comprised of customs employees from another department.

5. Discussion

The management the Marine Customs Enforcement Unit of the RMCD is also found committed to creating a safe working environment for employees and generated positive employee attitudes toward complying with safety rules and SOPs, and adhering to their challenging working environment.

The best way to increase employee awareness is to disseminate safety policies and regulations on a regular basis; this is done in order to prevent employees from receiving inaccurate information.

There is evidence to suggest a strong relationship between safety culture with the level of safety awareness in the Marine Customs Enforcement Unit of RMCD.

6. Conclusion

Employee involvement in safety is a behaviour-oriented approach that involves a bottom-up flow of communication and decision-making (Saharani et al., 2017). When it comes to improving safety performance, employee involvement in safety is the key to achieving results. This is a list of significant advantages associated with employee participation in safety and health procedures. Workers' participation in health and safety decision-making provides significant benefits, which actively justify efforts by organizations to promote worker participation in health and safety decision-making.

Employee involvement in safety and health ensures that useful information obtained by lower-level employees is passed up the hierarchy, resulting in improved knowledge distribution and acquisition. According to Smith (2006), sociologists and behavioural scientists have extensively discussed the motivational effects of employee involvement, particularly in terms of increased commitment and job satisfaction. Furthermore, employee participation in decision-making has the potential to result in a greater level of understanding on the part of the employees involved.

The employee involvement elements include the workers' continued participation as well as their own personal motivation and attitude toward their jobs (Aksorn & Hadikusumo, 2008). According to Aksorn and Hadikusumo (2008)'s research, the degree of employee participation in safety-related programmes or activities, such as participating or taking part in workplace safety activities, reporting and eliminating hazards under their operation, and analyzing regular hazards within each step of a task or process, can increase the level of workers' motivation toward workplace safety. According to the International Chamber of Shipping and the International Shipping Federation (1996), it allows people within the organization to feel more motivated in terms of safety awareness because they actively participate in forming methods that govern the fight for more safe working conditions the maritime industry.

The safety of the workplace has an impact on every employee, and employers have a humanitarian obligation to ensure that some level of input from the workforce is enabled consistently. Employee involvement practices are a method of lowering indirect costs associated with lost time, decreased efficiency, lower quality and quantity of production, absenteeism, high turnover of employees, and increased labour unrest. Employee involvement practices, such as those designed to improve the

management of health and safety risks, can benefit a company's economic performance if the benefits gained outweigh the costs associated with putting them in place.

References

- Aksorn, T., & Hadikusumo, B. H. W. (2008). *Critical success factors influencing safety program performance in Thai construction projects*, 46, 709-727. <https://doi.org/10.1016/j.ssci.2007.06.006>
- Ali, H., Azimah Chew Abdullah, N., & Subramaniam, C. (2009). Management practice in safety culture and its influence on workplace injury: An industrial study in Malaysia. *Disaster Prevention and Management, An International Journal*, 18(5), 470-477. <https://doi.org/10.1108/09653560911003660>
- Andrei, D., Grech, M., Crous, R., Ho, J., Mcilroy, T., Griffin, M., & Neal, A. (2018). Assessing the determinants and consequences of safety culture in the maritime industry. *A report based on the findings of research grant LP130100215*.
- Bates, R., & Khasawneh, S. (2005). Organizational learning culture, learning transfer climate and perceived innovation in Jordanian organizations. *International Journal of Training and Development*, 9(2), 96-109. <https://doi.org/10.1111/j.1468-2419.2005.00224.x>
- Bell, J. (1999) *Doing Your Research Project* (3rd ed.). Buckingham: Open University Press.
- Bloor, M., Thomas, M., & Lane, T. (2000). Health risks in the global shipping industry: An overview. *Health, Risk & Society*, 2(3), 329-340. <https://doi.org/10.1080/713670163>
- Cooper, R. D., & Schindler, S. P. (2014). *Business Research Methods*. Boston: Irwin McGraw Hill.
- European Maritime Safety Agency. (2019). *Annual Overview of Marine Casualties and Incidents 2019*.
- Graham, E. (2015). Maritime Security and Threats to Energy Transportation in Southeast Asia. *The RUSI Journal*, 160(2), 20-31. <https://doi.org/10.1080/03071847.2015.1031522>
- Heinrich, H. W. (1931). *Industrial accident prevention: A scientific approach*. New York. McGraw-Hill.
- Hetherington, C., Flin, R., & Mearns, K. (2006). Safety in shipping: The human element. *Journal of Safety Research*, 37(4), 401-411. <https://doi.org/10.1016/j.jsr.2006.04.007>
- Hovden, J., Abrechtsen, E., & Herrera, I. A. (2010). Is there a need for new theories, models and approaches to occupational accident prevention? *Safety Science*, 48(8), 950-956. <https://doi.org/10.1016/j.ssci.2009.06.002>
- Hvold, J. I. (2010). Safety culture and safety management aboard tankers. *Reliability Engineering & System Safety*, 95(5), 511-519. <https://doi.org/10.1016/j.res.2010.01.002>
- International Chamber of Shipping and International Shipping Federation. (1996). *Guidelines on the application of the IMO International Safety Management (ISM) Code*. London: International Chamber of Shipping and International Shipping Federation.
- International Maritime Organization (2014a). *Council 112th session: Summary of decisions* (19-20, Rep.). London, UK: IMO.

- International Maritime Organization. (2012). *International Shipping Facts and Figures - Information Resources on Trade, Safety, Security, Environment: International Maritime Organization*.
- International Maritime Organization. (2017). *STCW: Including 2010 Manila amendments: STCW Convention and STCW Code: International Convention on Standards of Training, Certification and Watch-keeping for Seafarers*.
- International Transport Workers' Federation (ITF). (2017). *STCW A GUIDE FOR SEAFARERS Taking into account the 2010 Manila amendments*.
- Ivancevich, J. (2001). *Human Resource Management*. Singapore: Mc-Graw Hill.
- Jiang, L., & Probst, T. M. (2016). Transformational and passive leadership as cross-level moderators of the relationships between safety knowledge, safety motivation, and safety participation. *Journal of Safety Research*, 57, 27-32. <https://doi.org/10.1016/j.jsr.2016.03.002>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*. <https://doi.org/10.1177/001316447003000308>
- Lützhöft, M., Grech, M. R., & Porathe, T. (2011). Information environment, fatigue, and culture in the maritime domain. *Reviews of Human Factors and Ergonomics*, 7(1), 280-322. <https://doi.org/10.1177/1557234X11410391>
- McSween, T. M. (2003). *The values-based safety process: Improving your safety culture with behavior-based safety* (2nd ed.). Hoboken, NJ: Wiley.
- Mullen, J., Kelloway, E. K., & Teed, M. (2017). Employer safety obligations, transformational leadership and their interactive effects on employee safety performance. *Safety Science*, 91, 405-412. <https://doi.org/10.1016/j.ssci.2016.09.007>
- Nagalingam, K., & Anuar, H. S. (2020). Chemical Warehouse Operations: Experience from SWIFT Integrated Logistics Sdn. Bhd. *Global Business Management Review*, 12(2), 65-80. <https://doi.org/10.32890/gbmr2020.12.2.5>
- Neal, A., Griffin, M. A., & Hart, P. M. (2000). The impact of organizational climate on safety climate and individual behavior. *Safety Science*, 34, 99-109. [https://doi.org/10.1016/S0925-7535\(00\)00008-4](https://doi.org/10.1016/S0925-7535(00)00008-4)
- Roberts, S. E., & Marlow, P. B. (2002). Casualties in dry bulk shipping (1963-1996). *Marine Policy*, 26(6), 437-450. [https://doi.org/10.1016/S0308-597X\(02\)00024-6](https://doi.org/10.1016/S0308-597X(02)00024-6)
- Ruchlin, H. S., Dubbs, N. L., Callahan, M. A., & Fosina, M. J. (2004). The Role of Leadership in Instilling a Culture Of Safety: Lessons From The Literature. *Journal of Healthcare Management*, 49(1), 47-59. <https://doi.org/10.1097/00115514-200401000-00009>
- Saleh, J. H., Marais, K. B., Bakolas, E., & Cowlagi, R. V. (2010). Highlights from the literature on accident causation and system safety: Review of major ideas, recent contributions, and challenges. *Reliability and System Safety*, 95, 1105-1116. <https://doi.org/10.1016/j.res.2010.07.004>
- Shuang, D., Qin, Y., & Heng, L. (2015). Positive Safety Participation and Assessment by Integrating Sharing Technology with Virtual Reality. *Procedia Engineering*, 123, 125-134. <https://doi.org/10.1016/j.proeng.2015.10.069>

- Smith, V. (2005). Worker Participation: Current Research and Future Trends. *Research in the Sociology of Work*, xi-xxiii. [https://doi.org/10.1016/S0277-2833\(2005\)16](https://doi.org/10.1016/S0277-2833(2005)16)
- Syed Mohamed, M. S., & Ideris, H. (2012). Managing Risks in a Manufacturing Environment: A Perspective from Reason's Accident Causation Model. *Universal Journal of Management and Social Sciences*, 2(8), 38-46.
- Vinodkumar, M. N., & Bhasi, M. (2010). Safety management practices and safety behaviour : Assessing the mediating role of safety knowledge and motivation. *Accident Analysis and Prevention*, 42(6), 2082-2093. <https://doi.org/10.1016/j.aap.2010.06.021>
- Weick, K. E., & Sutcliffe, K. M. (2001). *Managing the unexpected: Assuring high performance in an age of complexity*. Jossey-Bass.
- Williamson, O. E. (2000). The New Institutional Economics Taking Stock, Looking Ahead. *Journal of Economic Literature*, 38, 595-613. <https://doi.org/10.1257/jel.38.3.595>
- Zaidatun, T., & Abu, M. S. (2003). *Analisis data berkomputer SPSS 11.5 for Windows*. Kuala Lumpur: Venton Publishing.
- Zakaria, N. H., Mansor, N., & Abdullah, Z. (2012). Workplace accident in Malaysia: most common causes and solutions. *Business Management Review*, 2, 75-88.
- Zohar, D. (2002). The effects of leadership dimensions, safety climate and assigned priorities on minor injuries in work groups. *Journal of' Organizational Behavior*, 23(1), 75-92. <https://doi.org/10.1002/job.130>