RELATIONSHIP BETWEEN SAFETY MANAGEMENT PRACTICES AND SAFETY PERFORMANCE IN THE AIR DECENCE ARTILLERY REGIMENT

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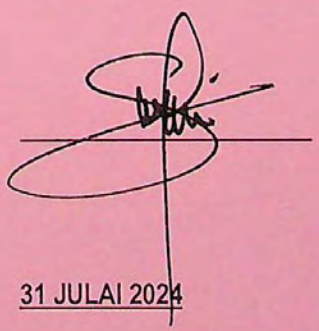

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ABSTRACT

This study investigates the relationship between safety management practices and safety performance within the Air Defence Artillery Regiment, a subject that has received limited attention in existing literature, particularly within the Malaysian Army. The organization experiences a notable but unreported accident rate not reflected in SOCSO statistics. Enhancing occupational safety within the Army poses challenges despite the existence of adequate safety legislation, as the Malaysian Armed Forces are not governed by OSHA 1994 (Act 514). Utilizing instruments developed by Vinodkumar and Bhasi (2010), this study investigated whether four key factors management commitment to safety, safety training, employee involvement in safety, and safety communication and feedback are related to the safety performance of Air Defence Artillery personnel. These independent variables were evaluated for their impact on safety performance among 343 military personnel at Bera Camp, Pahang. The analysis revealed a positive relationship between these four factors and safety performance. Each factor management commitment to safety, safety training, employee involvement in safety, and safety communication and feedback are significantly contributed to improving safety performance. The findings suggest that emphasizing these variables can enhance the safety culture within Army units, boost soldiers' safety performance, and reduce injuries and accidents.

Keywords: Safety management practices, safety performance, management commitment to safety, safety training, employee involvement, air defence artillery.

ABSTRAK

Kajian ini menyiasat hubungan antara amalan pengurusan keselamatan dan prestasi keselamatan dalam Rejimen Artileri Pertahanan Udara, satu subjek yang telah menerima perhatian terhad dalam literatur sedia ada, terutamanya dalam Tentera Malaysia. Organisasi ini mengalami kadar kemalangan yang ketara tetapi tidak dilaporkan dalam statistik SOCSO. Meningkatkan keselamatan pekerjaan dalam Tentera menghadapi cabaran walaupun terdapat undang-undang keselamatan yang mencukupi, kerana Angkatan Tentera Malaysia tidak tertakluk kepada OSHA 1994 (Akta 514). Menggunakan instrumen yang dibangunkan oleh Vinodkumar dan Bhasi (2010), kajian ini menyiasat sama ada empat faktor utama - komitmen pengurusan terhadap keselamatan, latihan keselamatan, penglibatan pekerja dalam keselamatan, dan komunikasi serta maklum balas keselamatan - berkaitan dengan prestasi keselamatan anggota Artileri Pertahanan Udara. Pembolehubah bebas ini dinilai untuk kesannya terhadap prestasi keselamatan di kalangan 343 anggota tentera di Kem Bera, Pahang. Analisis menunjukkan hubungan positif antara keempat-empat faktor ini dan prestasi keselamatan. Setiap faktor - komitmen pengurusan terhadap keselamatan, latihan keselamatan, penglibatan pekerja dalam keselamatan, dan komunikasi serta maklum balas keselamatan - menyumbang dengan ketara kepada peningkatan prestasi keselamatan. Dapatan kajian mencadangkan bahawa menekankan pembolehubah ini boleh meningkatkan budaya keselamatan dalam unit Tentera, meningkatkan prestasi keselamatan askar, dan mengurangkan kecederaan serta kemalangan.

Kata kunci: Amalan pengurusan keselamatan, prestasi keselamatan, komitmen pengurusan terhadap keselamatan, latihan keselamatan, penglibatan pekerja, artileri pertahanan udara.

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In the Name of Allah Most Gracious Most Merciful

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وَلسَّلَامُ عَلَيْكُمْ وَرَحْمَةُ اللهِ وَبَرَكَاتُهُ

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1.	ATM	:	Angkatan Tentera Malaysia
2.	ADAG	:	Air Defence Artillery Group
3.	K&KP	:	*Kesihantan dan Keselamatan Pekerja*
4.	MAF	:	Malaysian Armed Forces
5.	NCOs	:	Non-Commissioned Officers
6.	OSH	:	Occupational Safety and Health
7.	PPE		Personal Protective Equipment
8.	RAR	:	Royal Artillery Regiment
9.	SNCOs	:	Senior Non-Commissioned Officers
10.	SPSS	:	Statistical Package for Social Science

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter provides an overview of the safety management practices and current perceptions of safety performance in the Air Defence Artillery Regiment as a background of the study. The problem statement, research questions, and research objectives and significance are then presented.

1.2 Background of the Study

The Air Defence Artillery Regiment is the one of Artillery Corps in the Malaysian Army. Through the deployment of ground and specific operations abilities, the Air Defence Artillery contributes to the air space national defence objectives. The Air Defence Artillery also offers forces for peacetime missions, including as improving the national internal security response to a variety of crises like bushfires, floods, and large events. They combine material, planning expertise, and extremely powerful training systems to build teams that are specially equipped and prepared for the responsibilities that our government has assigned to them. The soldiers are the key to the organization's capabilities. Realizing that they are the most valuable resource is what makes protecting their safety, or "force protection of their people," so important to their ability to operate successfully. Almost everywhere in the globe, militaries make up professional, highly organized, hierarchical organizations with a strong focus on discipline and motivation. Because of their role and activities, soldiers are trained to lead others toward both collective and individual goals while operating in potentially fatal situations. Soldiers receive training on how to handle hazardous situations.

The first thing that military commanders should do is evaluate the assets, capabilities, and weaknesses of their forces. The next stage is to modify the Army's current safety practice, communications, and tools such that they complement the unit's management practice. It is of utmost importance to acknowledge that there is no universal solution for the common safety issues encountered. Instead, safety programs need to be customized to suit the specific conditions within each unit. Focused safety programs should take into account important factors such as deployment schedules, the average age of soldiers, the unit's operational activity, and other relevant factors. To ensure that change is implemented simultaneously from the top and the bottom, leaders and subordinates must both actively participate in the process.

Organizations, from Beer (1980) perspective, social constructions and procedures that are planned to accomplish specific goals whereas meeting the requirements of its associates. When an organization's safety programmed is built on the concept that the needs, values, and prediction of its employees are addressed, the organization's safety will increase.

For the overall reason that administration or the management is in charge of creating and implementing systems, assigning resources, setting goals, creating strategies, and setting an example by virtue of its position, the bulk of the literature identifies management commitment as a requirement for safety. This is true because management establishes and maintains the conditions in which mishaps and accidents take place. Worker safety and health are influenced by and indicate a commitment to culture. (Smallwood, 1996). An effective safety strategy is one that defines acceptable performance precisely, is widely communicated, and is internally consistent.

Everyone appreciates the vision of a establishment with a successful organization. A successful practice can function as a hidden method of coordination because everyone comprehends the organization's objectives and the strategies to attain them. The remarkable aspect of safety is its universality, applicable in any culture, including within a military organization. Nevertheless, it is important to mention that the Armed Forces have been exempt from OSHA 1994 (Act 514). Safety has traditionally been viewed as a regulatory obligation rather than an adaptable process tailored to suit a unit's specific requirements. Making safety a core priority that is embedded in every activity would necessitate shifting our perspective from one of compliance to one of inventiveness and active soldier engagement.

The ultimate goal is to cultivate a culture where everyone takes ownership of the composite risk management process and their own personal safety. Although this stage is perhaps the hardest, it also has the biggest advantages in terms of protecting the entire business. Beyond the level of a unit or soldier, a safety-centred culture is being adopted. Whether in peacetime or a time of conflict, soldiers who are regularly immersed in cultures that prioritize safety will be better prepared to handle the unique difficulties that come with life in the Army. Eventually, adherence to safety practices becomes an integral part of one's identity, underscoring the paramount importance of safety. Safety is extremely important, as demonstrated by the fact that following safety procedures eventually becomes a part of who you are. Whether they're off duty at a base or on duty in a theatre, soldiers always need to be aware of their surroundings and stay safe. Finally, the culture needs to be changed by encouraging communication among soldiers, among leaders, and throughout the hierarchy.

1.3 Problem Statement

Military organisations, such as the Air Defence Artillery Regiment, provide particular workplace safety problems. They operate in a complicated and scattered environment, which may, and frequently does, lead to a disconnect between top leaders' safety goals and real situation on the ground. Malaysian army are also exposed to intrinsically risky conditions, and it is necessary to keep soldiers engaged at all times while the organisation strives to establish a safety culture across the board. Meanwhile, the Malaysian Army has adopted numerous procedures to reduce accidents and incidents during on duty or training, particularly in the peacetime soldiering situation, but in spite of the best intentions, the incident at which soldiers are killed or injured at work still occurred. Referring statistical data collected from the Department of Human Resource at Army Headquarters, there were 996 army personnel were injured and 104 killed in line of duty since and off duty since year 2017 until 2023 as shown at Figure 1.1.

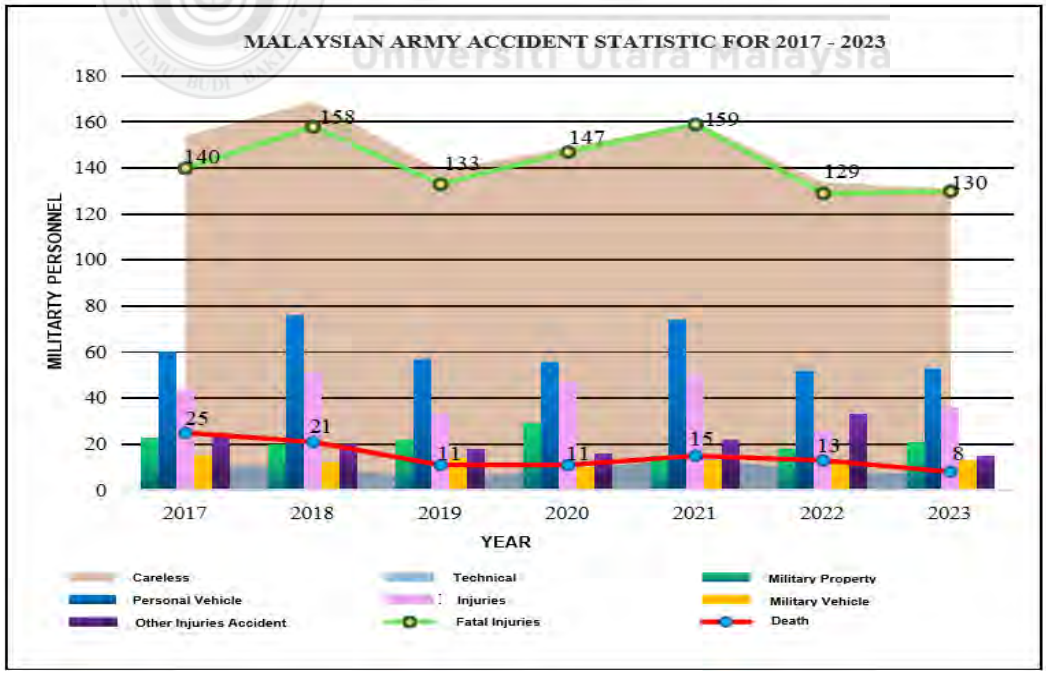

Figure 1.1

The Malaysian Army Accident Statistics for since 2017 until 2023
Source: Human Resource Department, Army Headquarters

Aside from that, it was also claimed that there were a considerable number of injury cases involving army soldiers owing to occupational illnesses or carelessness, resulting in impairments and late termination of duty due to bad health or unfitness. Accident investigations are increasingly concentrating on the actions of people who are at risk, the actions of organisations striving to control risk, and the actions of directly involved management. Safety is a top priority in the Army because it understands the importance of establishing a safety culture where everyone, from commanders to soldiers, understands their roles in planning and executing safe actions. The Army established the OHS management system (Garis Panduan Pelaksanaan Pengurusan Keselamatan dan Kesihatan Pekerjaan Tentera Darat - K&KP), which describes the systems, procedures, roles, and mindsets required to improve safety across the Army, in order to accomplish this. The K&KP is currently in compliance with Malaysian Standard 1722:2003.

In 2006, the Army published the K&KP Guidelines, which include concise Standard Operating Procedures (SOPs) for each unit to ensure safety. The OHS Policy Statement clearly outlines the essential duties of every commander and soldier and has been widely distributed throughout the company. The Army also recognizes the importance of interconnected health and safety needs across the organization to achieve a fully integrated safety outcome. Every procurement action, preservation purpose, logistics element, and wellbeing division must involve, establish, and assess safety-related objectives in order for this military organization to fully realize its safety potential. Due to the nature of the work, the Army has well known for being a highly dangerous and risk career, especially when soldiers are operating lethal weapon systems or conducting operations in challenging terrain, weather, or circumstances. Safety, however, is a non-negotiable characteristic and inescapable

virtue for military professions. It is the cornerstone of any military effort, and soldiers, governments, and the public at large anticipate it.

Existing studies on safety management practices and safety performance largely focus on industrial and civilian contexts, leaving a gap in research specifically tailored to military settings, particularly within the Malaysian Army. The unique operational environment and hierarchical structure of military organizations necessitate a distinct approach to safety management (Clarke, 2013). There is a pressing need to investigate how safety management practices influence safety performance in this context, considering factors such as leadership commitment, safety training, employee involvement, and safety communication (Vinodkumar & Bhasi, 2010).

1.4 Research Objectives

The main objectives of this research are to investigate the relationship between safety management practises and how they connect to safety performance in the Air Defence Artillery Regiment. As a result, the goals that were established were five specific research objectives were proposed for this study, as follows:

a. To determine safety performance level among the Army Personnel in the Air Defence Artillery Regiment.
b. To determine the relationship between management commitment to safety and safety performance in the Air Defence Artillery Regiment.
c. To determine the relationship between safety training and safety performance in the Air Defence Artillery Regiment.
d. To determine the relationship between employee's involvement and safety performance in the Air Defence Artillery Regiment.

e. To determine the relationship between safety communication and feedback and safety performance in the Air Defence Artillery Regiment.

1.5 Research Question

The goal of this study is to look at the link and relationship safety management practises and safety performance among army personnel in the Air Defence Artillery Regiment. The purpose of this study was to look at the performance of army personnel at any level or rank when it came to safety management during a daily routine work and exercise.

As a result of the independent and dependent variables, the following research questions (RQs) have been established in this study:

a. What is the level of safety performance in the Air Defence Artillery Regiment?
b. Is there any relationship between management commitment to safety and safety performance in the Air Defence Artillery Regiment?
c. Is there any relationship between safety training and safety performance in the Air Defence Artillery Regiment?
d. Is there any relationship between employee's involvement and safety performance in the Air Defence Artillery Regiment?
e. Is there any relationship between safety communication and feedback and safety performance in the Air Defence Artillery Regiment?

1.6 Significance of the Study

The objectives of this paper are to gather useful information from relevant respondents in order to determine the fundamental causes of safety management practice and performance. This regiment will be able to gain a better understanding of army personnel's perspectives on security training, army personnel's contribution to safety, safety communication and feedback, and management commitment to safety thanks to the study's four safety management practices. These perspectives are presently in use and improve safety performance.

Furthermore, the study's findings will provide practical information on safety management issues among the army personnel, as well as areas for improvement and action plans required for the continuous development and improvement, stretched progression, and any further change of the K & KP in the army as an overall safety management. In addition, management will be able to follow the results of this study's safety-related performance to lower accident rates, personal injury rates, and material loss. Additionally, by enhancing the working environment, management will be able to increase army personnel compliance with safety policies and participation.

The study's findings and outcomes will provide valuable information about this Air Defence Artillery Regiment or other organization i.e other Malaysian Army Corps, Royal Malaysian Navy and Royal Malaysian Air Force could be used to manage and refine to their workplace safety management practice in organization.

1.7 Scope of the Study

This study's focus is on analysing the safety management practice elements that are outlined in the research goals to help the Air Defence Artillery Regiment achieve the

intended standard of safety performance. Employees involved in implementing safety management practices within this organization will be included in the participant group. The main factors being examined are the management's dedication to safety, employee involvement, safety training, safety communication, and feedback that affects safety performance. The goal of the study is to investigate how these variables affect military personnel perceptions and attitudes with regard to improving workplace safety. In terms of methodology, the study will use quantitative techniques, most likely collecting information on participant views related to safety performance through questionnaires surveys.

The respondents and unit of analysis in this study were army personnel who are serving in 34st Royal Air Defence Artillery Regiment at Camp Bera, Pahang. Data was collected through survey using questionnaires distributed among the 34st RAR AD army personnel. Simple random sampling was used to choose the sample based on corps category, ranks, and other occupational group categories such as Rank Category - Commissioned Officers, Senior Non-Commissioned Officers (SNCOs) and Non-Commissioned Officers (NCOs);

a. Traits - General (Operation and Training), Administration and Logistics;

b. Corps - Combat, Combat Support and Service Support.

The inclusion of all this element was relevant because they had difference experience, level of knowledge and working environment. This was crucial as the study's focus was on the influence and relationship of safety management practice towards their safety performance in the Air Defence Artillery Regiment. The specified variables will be investigated for links and associations using statistical approaches. There will be

limitations to the study, including time constraints, scarce resources, and participant accessibility. The ultimate goal of this study project is to provide useful information that will direct focused interventions and strategies to improve safety performance and occupational safety in general within this regiment.

1.8 Definition of Key Terms

The purpose of a term's explanation is to provide a clear and thorough knowledge of the phrase in a particular context in order to avoid any misunderstandings and guarantee clarity and accuracy in this research. The following are the definitions of terminology that will be used in this investigation.

1.8.1 Safety Performance

Safety performance indicators help in understanding the effectiveness of health and safety measures. These indicators include both lagging indicators (such as injury rates) and leading indicators (such as safety training and audits). (Health and Safety Executive, 2023)

1.8.2 Management Commitment to Safety

The level to which management is thought to place a high priority on safety and to communicate and address safety-related issues in an effective manner (Neal & Griffin, 2004). This includes the visible actions by management to support safety initiatives, allocate resources, set safety goals, and maintain open channels of communication regarding safety concerns.

1.8.3 Safety Training

Safety training refers to the educational process that organizations provide to their employees to ensure they understand workplace hazards, the importance of safety protocols, and the skills necessary to prevent accidents and injuries. Safety training is requiring to ensure worker safety. It entails avoiding risks, improving safety culture, and teaching staff members about health and safety procedures to avoid mishaps and injuries. (Raja, Prasad.,et al 2019)

1.8.4 Employees Involvement to Safety

Employee involvement in safety refers to the active participation and engagement of employees in the development, implementation, and continuous improvement of workplace safety programs. It encompasses a range of activities where employees contribute their knowledge, experience, and suggestions to enhance safety measures and foster a culture of safety within the organization.

1.8.5 Safety Communication and Feedback

Safety Communication and Feedback refer to the processes by which safety-related information is shared and discussed within an organization. Effective safety communication ensures that all employees are aware of safety policies, procedures, and hazards, while feedback mechanisms enable employees to report safety concerns, suggest improvements, and participate in the ongoing enhancement of workplace safety.

1.9 Organisation of Thesis

This research is systematically structured into five chapters to ensure a clear understanding of its content and flow. The first chapter provides an overview of the research, including its background, problem statement, objectives, scope, limitations, significance, and the structure of the thesis, concluding with a summary. The second chapter focuses on a literature review, detailing previous studies related to the subject, their findings, and methodologies, particularly those related to safety climate variables. The third chapter elaborates on the research methodology, describing the conceptual framework, study design, research tools, hypotheses, sampling techniques, data collection procedures, reliability assessment, and data analysis approach. The fourth chapter presents the data analysis results, including reliability analysis, normality tests, descriptive statistical analysis, and correlation analysis. Finally, the fifth chapter concludes the study by summarizing the discoveries and comparing them with previous studies, and offering recommendations for future research and practical improvements. This structured approach facilitates a comprehensive understanding of each facet of the study, enabling readers to systematically follow the research process and outcomes.

CHAPTER 2:

LITERATURE REVIEW

2.1 Introduction

This chapter presents a thorough literature review in the specified area, pertaining to the theoretical framework and constructs of this study. The primary emphasis of this review is on safety management practices, safety-related performance, and empirical studies investigating the connection between safety management practices and safety-related performance.

2.2 Safety Performance

Several scholars have conducted studies to define and understand safety performance in a variety of contexts, and the findings from these investigations assist companies and sectors in raising standards for health and safety. Safety performance is important because it is closely related to worker well-being, productivity, and the long-term sustainability of business operations (Zahoor et al., 2017). An essential part of managing safety and health in businesses or workplaces is safety performance. Safety performance, according to Gunduz and Laitinen (2018), is the ability to carry out safety rules and procedures in a particular organizational or workplace setting with effectiveness and proficiency.

Safety performance is an important aspect of any organization or workplace, as highlighted by Zahoor et al. (2017), and it has been a primary focus of research in the field of occupational safety and health. This includes assessing the application of safety policies, following safety procedures, reducing risks, taking preventative action,

and demonstrating other skills related to ensuring the security of workers, property, and the workplace (Gunduz & Laitinen, 2018).While goal attainment, productivity, and individual performance assessments have historically been used to measure job performance in the business and organizational domains, there has recently been a noticeable shift in emphasis towards safety performance as a crucial aspect of job performance (Andersen et al., 2018). The literature now in publication views safety performance as one aspect of job performance (Ng & Feldman, 2008; Wu et al., 2008). This implies that workplace safety matters more than just a small matter; rather, it is essential to doing a job well. This feature becomes more and more relevant in situations where operational procedures involve risks that need to be managed well (Sultana et al., 2019). According to this framework, safety is a critical factor that needs to be taken into account.

Safety performance is more than just following procedures or understanding safety concepts. It covers a larger ground. The ways in which workers behave visibly in an organizational context are how safety performance is expressed (Mullen et al., 2017). This means that safety concepts must be included into their daily operations. Stated simply, safety performance is all about how workers protect themselves and their coworkers by being alert. First, the study conducted by Gunduz and Laitinen (2018) proposed that safety performance refers to the application of a set of rules, procedures, or policies as well as initiatives meant to improve safety procedures within an organization. This suggests that a commitment to following set safety standards and implementing them in daily operations is necessary for safety performance. Second, Andersen et al. (2018)'s research indicates that people or employees themselves frequently disclose safety performance. This suggests that workers are essential to reporting and achieving safety performance. Employee self-evaluations can provide

insightful information about the actual conditions at work and the extent to which safety rules are followed. Thirdly, Zahoor et al. (2017)'s analysis emphasizes that safety performance is essentially a way to promote employee safety and wellbeing. This suggests that safety performance influences an organization's safety culture in addition to being a component in evaluation. A strong safety culture will have a positive impact on workers' adherence to safety procedures. Fourthly, as Mullen et al. (2017) suggested in their study, safety performance can be measured using indicators including accidents, fatalities, and injuries. This is a standard procedure for assessing safety performance and the effectiveness of safety procedures and policies. Lastly, Erdogan et al. (2018) clarify that the concept of safety performance also refers to patterns of accidents that may result in fatalities, serious injuries, or asset impairment.

The examination of mishaps that happen and the application of preventative actions to avoid such accidents in the future are both included in safety performance. Overall, the research defines safety performance as a broad and complex concept that encompasses reporting employee incidents, understanding safety culture, following safety procedures, and analysing accidents and injuries. This safety performance component is essential to the management of occupational safety and health because it helps companies meet higher safety standards and protect workers' health. As a result, academic research continues to focus on understanding and improving safety performance in order to ensure a safe and productive work environment for everyone. Scholarly studies that have come before have emphasized the importance of safety atmosphere in businesses. According to Zohar (1980), an organization's performance in terms of safety is directly impacted by the safety views of its personnel. There are several aspects of the safety climate that can be measured to improve employee impressions. As the cornerstone of occupational safety and health (OSH) management

inside an organization, management commitment is one important factor that academics have studied in great detail (Bayram, 2018). Academics have repeatedly emphasized that significant industrial accidents are typically caused by insufficient management commitment. Moreover, it is impossible to exaggerate the importance of safety communication in maintaining superior safety performance. According to Naji et al. (2022), good safety communication is essential to preventing misconceptions about safety issues and lowering accident rates.

Concurrently, safety perception becomes apparent as another important factor among employees, since a comprehensive knowledge of potential risks and the aftermath of accidents can reduce accident and injury rates as well as lessen the significant emotional toll that accidents can take on employees. The explanation given makes it reasonable to conduct a thorough analysis with a focus on the connection between safety management practice and safety performance. Neal and Griffin (2004) have pointed out that an organization's safety performance can be used as a predictor of future workplace accidents and injuries. Conventional efforts to prevent accidents mostly focused on improving safety records at work through adherence to industry norms and guidelines. Through their research, Christian et al. (2009) also established a connection between safety performance, safety climate, and the results that follow. By highlighting several aspects of the safety climate, such as management commitment, employee involvement, safety instruction, safety communication and feedback, and regulatory standards, their study adds to the body of literature already available on safety performance. These elements are all thought to have an impact on an organization's safety performance in terms of both safety adherence and safety involvement.

2.3 Safety Management Practice

Safety management practices are critical in enhancing safety performance within organizations. Effective safety management practices involve the systematic implementation of policies, procedures, and activities designed to identify, assess, and control workplace hazards. These practices are directly linked to improved safety performance, which includes reduced accident rates, lower injury severity, and enhanced overall workplace safety culture. Effective safety management practices are essential for ensuring a safe workplace and enhancing safety performance. These practices encompass a range of components that collectively contribute to fostering a robust safety culture. Key elements include management commitment, which involves leadership visibly demonstrating their dedication to safety by allocating necessary resources and integrating safety into organizational goals (Fernández-Muñiz, Montes-Peón, & Vázquez-Ordás, 2007; OSHA, 2021). Employee involvement is another critical component, encouraging active participation in safety committees, hazard reporting, and safety training sessions (Neal & Griffin, 2006; HSE, 2021). Continuous safety training and education are crucial for keeping employees aware of potential hazards and proper safety procedures (ILO, 2021).

Several studies highlight the positive impact of robust safety management practices on safety performance. For instance, Fernández-Muñiz, Montes-Peón, and Vázquez-Ordás (2007) found that organizations with comprehensive safety management systems tend to have better safety performance metrics, such as lower incident rates and fewer lost workdays. This relationship underscores the importance of management commitment to safety, employee involvement, continuous safety training, and effective communication of safety policies.

As to Vinodkumar and Bhasi (2010), safety management practices encompass the tactics, plans, protocols, and undertakings implemented and overseen by the board of the firm to ensure the safety of its employees. An effective safety management approach will certainly help the organisation achieve and develop strong processes for development and job assignment, best practises for safety issues in discussions, systematic accident investigation, and routine safety inspection, among other things. According to the management perspective on safety, occupational accidents are primarily caused by human error (Bottani, 2009). Furthermore, a study by Neal and Griffin (2006) highlights the importance of management practices, such as leadership commitment to safety and employee participation in safety programs, as crucial factors affecting safety performance.

These practices help in fostering a safety culture where employees are aware of hazards and are proactive in mitigating risks. The integration of safety management practices into organizational operations not only enhances compliance with safety regulations but also contributes to a sustainable safety culture. When management demonstrates a commitment to safety through consistent practices and policies, it signals to employees the importance of safety, thereby improving their attitudes and behaviors towards maintaining a safe work environment.

The Malaysian Army employs around 120,000 army soldiers in more than 17 camps and facilities across the country, making it one of the largest government departments in the country. Recognizing the need for a proactive approach to enhancing the safety and health of military personnel at these facilities and bases, the Army addressed OSHA via the K & KP, requesting direction and support in strengthening its safety and health programmed. This initiative will also help to build and/or improve safety

and health management practices. Safety management practices encompass a wide range of safety-related measures, including policies, strategies, procedures, and activities aimed at minimizing accidents and injuries in the workplace (Díaz-Cabrera, 2007). Safety management methods are made up of various safety-related components, according to Vinodkumar and Bhasi (2010) work. Management commitment, safety training, employees' involvement, and safety communication and feedback are among them. Even though the Malaysian Army is exempt from the OSH Act of 1994, it may face major difficulties in establishing a complete and structured OSH system. The army is known to be constrained by a variety of factors, including nature of work environment and equipment in their line of duty.

2.4 Management Commitment to Safety

Management commitment to safety is a foundational element in the creation and maintenance of a robust safety culture within an organization. It is the driving force that shapes the organization's approach to workplace safety and sets the tone for how safety is perceived and prioritized at all levels. This commitment is not just a statement of intent but is demonstrated through consistent actions, resource allocation, and leadership behaviors that prioritize safety above all else. There is a strong consensus that management commitment is crucial in preventing workplace accidents (Vinodkumar and Bhasi, 2010). This is because management commitment replicates the seriousness with which safety-related issues are addressed within the company, as evident through the consideration and support given to safety initiatives and projects (Hsu, 2008). When a company's leadership is dedicated to safety, they are more likely to be proactive in recognizing, dealing, and reducing hazards that could lead to accidents. Moreover, personnel who distinguish that their bosses prioritize their safety

are more inclined to take safety measures seriously. Consequently, this leads to a decrease in overall accident and injury rates (Yule, 2006). Firstly, management's commitment to safety is evident through the establishment of clear safety policies and objectives. These policies should be well-documented, communicated to all personnel, and regularly reviewed to ensure they remain relevant and effective. Management must also set realistic and measurable safety goals, providing a framework for continuous improvement in safety performance (Vinodkumar & Bhasi, 2010).

Allocating necessary resources is another critical aspect of management's commitment. This includes financial investment in safety equipment, technology, and training programs. By providing the necessary tools and resources, management ensures that employees are equipped to perform their tasks safely and effectively. Furthermore, dedicating time and personnel to safety initiatives, such as safety committees and regular safety audits, demonstrates a tangible commitment to maintaining a safe working environment (Vinodkumar & Bhasi, 2010).

Leadership behavior plays a crucial role in reinforcing safety as a core organizational value. When management visibly and consistently prioritizes safety, it sends a powerful message to employees. This can be demonstrated through regular safety walkarounds, participation in safety training sessions, and prompt responses to safety concerns raised by employees. By leading by example, management can inspire a shared commitment to safety throughout the organization (Clarke, 2013).

Communication is also a vital component of management's commitment to safety. Effective communication ensures that safety information is disseminated clearly and promptly. Regular safety meetings, clear and accessible safety documentation, and open channels for reporting safety concerns are all essential. Management should

encourage a culture where employees feel comfortable and confident in reporting hazards or unsafe conditions without fear of retaliation (Vinodkumar & Bhasi, 2010). Moreover, management's commitment to safety involves a practical approach to risk management. This means not only responding to incidents and near-misses but also actively identifying and mitigating potential hazards before they result in accidents. Implementing a comprehensive risk assessment process and continuously monitoring and reviewing safety performance are essential practices (Hofmann, Burke, & Zohar, 2017).

Lastly, recognizing and rewarding safe behavior reinforces the importance of safety. Management should implement programs that acknowledge and incentivize adherence to safety protocols, thereby fostering a culture where safety is recognized as a key component of job performance (Clarke, 2013). In conclusion, management's commitment to safety is a multifaceted approach that requires consistent effort and dedication. It involves establishing clear policies, allocating resources, leading by example, ensuring effective communication, proactively managing risks, and recognizing safe behaviors. Through these actions, management can cultivate a strong safety culture that prioritizes the well-being of all employees and promotes a safe and productive workplace.

2.5 Safety Training

Safety training is an essential component of a comprehensive safety management system, aiming to equip individuals with the knowledge, skills, and attitudes necessary to perform their tasks safely and effectively. This training is crucial across various sectors, including industrial, healthcare, and especially in the military, where the stakes are extraordinarily high. Safety training involves several key elements such as hazard

identification, risk assessment, safe work procedures, and emergency response. Safety training's role in promoting individual personnel to safety performances has been thoroughly discussed by Vinodkumar and Bhasi (2010) and Barling (2002). Personnel who receive safety training are often employed to prevent and manage organizational catastrophes by emphasizing the need of following safety protocols, (Díaz-Cabrera, 2007; Cooper, M., 2000). Effective safety training, according to Vinod Kumar, M.N. (2010), is essential to the success of OSH programs because it enhances performance abilities, imparts pertinent knowledge and attitudes, and acts as a catalyst for accident prediction, particularly for new hires.

From a military perspective, safety training takes on additional layers of complexity and importance due to the unique and often hazardous nature of military operations. For instance, safety training in the military is intricately linked with combat readiness, encompassing rigorous drills and simulations that prepare soldiers for the physical and psychological stresses of combat, ensuring they can perform safely and effectively under extreme conditions (Bowers et al., 2017). Additionally, proper training in the handling, maintenance, and storage of weapons and ammunition is critical to prevent accidents and ensure operational readiness, involving strict adherence to protocols and regular refresher training to maintain proficiency (Vinodkumar & Bhasi, 2010). Military personnel often face diverse and challenging environments, so safety training includes survival skills, handling hazardous materials, and dealing with extreme weather conditions to minimize risks associated with these environments (Brown et al., 2019). Furthermore, military operations involve complex machinery, vehicles, and aircraft, necessitating comprehensive training on the safe operation and maintenance of these assets to prevent accidents and ensure mission success (Hofmann, Burke, & Zohar, 2017). Given the high-stress nature of military duties, training programs also

focus on mental health, stress management, and resilience building to ensure personnel can cope with the psychological demands of their roles (Clarke, 2013). Specialized training is also provided to prepare military personnel for potential chemical, biological, radiological, and nuclear (CBRN) threats, including the use of protective gear, detection equipment, and decontamination procedures (Crawford et al., 2018). Thus, safety training in the military is not just about preventing accidents; it is about ensuring that personnel can operate effectively in high-risk situations, maintain operational readiness, and ultimately achieve mission objectives safely. The rigorous and comprehensive nature of military safety training underscores its critical role in maintaining the safety and effectiveness of armed forces.

2.6 Employees Involvement

Employee participation is defined as a behaviour-based method that includes individuals or groups in an upward effective communication and decision-making process inside a corporation by Vredenburgh, A.G. (2002). Employee involvement in safety is a critical element of an effective safety management practice, promoting a proactive method to hazard identification, risk assessment, and the overall maintenance of a safe working environment. Employees that actively participate in safety procedures are more likely to follow safety procedures, offer insightful comments, and promote a safety culture across the entire company. Active employee involvement includes participation in safety committees, regular safety meetings, and safety training programs. Organizations can make sure that safety policies and procedures are applicable to the real work environment and practical by incorporating employees in their development and review. Employees who feel their input is valued

are more likely to take ownership of their safety responsibilities, leading to better compliance and proactive safety behaviors (Clarke, 2013).

In army organization, army personnel engagement may be a powerful tool for encouraging staff to follow safety procedures. There is the finest source of information for workplace safety improvements, since they are the ones that conduct job duties and activities. Because of their nature of work, the army personnel interaction tends to be less formal and more personal, allowing them to discuss directly with management their opinions and ideas regarding on safety issues. Vroom and Jago (1988) define participation as "taking part" in any manner—direct or indirect, formal or informal, done alone or in groups, and in a variety of settings. "Safety involvement" in this study refers to any actions that do not directly affect an individual's safety. Examples include helping colleagues with safety issues and participating in safety meetings (Neal and Griffin, 2006). According to Clarke and Ward (2006), involvement in safety has a high voluntary value that goes beyond a person's actual obligations inside an organization. Furthermore, Neal et al. (2000) observed that if employees participated in safety activities, their safety knowledge and motivation would grow.

The military is one high-risk profession where employee involvement in safety is critical. Because of the particular and frequently hazardous concerns they encounter, military personnel must follow safety procedures in order to safeguard themselves and their units. Regular training in weapon handling, survival skills, and emergency response protocols is part of the military's commitment to safety. These training sessions are often collaborative, with experienced personnel sharing knowledge and best practices with newer members, fostering a culture of continuous learning and improvement (Bowers et al., 2017). Furthermore, military operations require

meticulous planning and risk assessment, and involving personnel in these processes ensures that all potential hazards are considered and mitigated. This collaborative approach not only enhances safety but also builds trust and cohesion within teams, as everyone works together to achieve common safety goals (Brown et al., 2019). Moreover, military personnel are often involved in safety drills and simulations, which provide hands-on experience in dealing with emergency situations. These exercises are critical for preparing personnel to respond effectively to real-life incidents, reducing the likelihood of accidents and improving overall safety performance (Crawford et al., 2018). In conclusion, employee involvement in safety is vital for fostering a proactive safety culture and ensuring effective safety performance. In the military, where the stakes are particularly high, active participation in safety practices, training, and risk assessment is essential for maintaining operational readiness and protecting personnel. By valuing and encouraging employee involvement, organizations can significantly enhance their safety outcomes and create a safer working environment.

2.7 Safety Communication and Feedback

Safety communication and feedback have been identified as an effective strategy to improve organizational safety performance, Kines (2010). Hopkiens (2002) states that employees can be reminded of the importance of working safely and with awareness of safety laws and regulations by means of various communication channels, including sign posts, safety meetings, and frequent in-person contacts. To be effective, safety feedback and communication should be a two-way process as opposed to a top-down strategy, according to Vinodkumar and Bhasi (2010). Workers should be encouraged to advise management on matters pertaining to safety as well as to suggest ways to

enhance work practices and activities that could be made safer. Whether specified in the agreement or the individual, safety feedback acts as a reinforcement mechanism for proper behavior improvement, Prue, D.M (1981).

Safety communication and feedback are essential components of an effective safety management system, playing a vital role in preventing accidents and ensuring a safe working environment. Effective safety communication involves the clear and timely dissemination of safety information, procedures, and expectations. Feedback, on the other hand, is the process through which employees and management exchange information regarding safety practices, incidents, and improvements. Safety communication starts with the establishment of clear channels through which safety information can be shared. This includes regular safety meetings, bulletins, emails, and training sessions. The goal is to ensure that all employees are aware of the safety policies, procedures, and expectations. Effective communication also involves the use of clear and simple language to avoid misunderstandings, especially when conveying critical safety information. Visual aids such as signs, posters, and infographics can further enhance understanding and retention of safety messages.

Feedback mechanisms are equally important in fostering a proactive safety culture. These mechanisms enable employees to report hazards, unsafe conditions, and near-misses without fear of retaliation. Anonymous reporting systems can encourage more candid feedback. Regular safety audits and inspections also provide opportunities for feedback, allowing employees to share their insights and suggestions for safety improvements (Vinodkumar & Bhasi, 2010). Incorporating feedback into safety management practices demonstrates that employee input is valued and can lead to tangible changes. When employees see that their feedback leads to improvements, they

are more likely to remain engaged and committed to safety protocols. This continuous loop of communication and feedback helps in identifying potential hazards before they result in accidents, thereby enhancing overall safety performance (Clarke, 2013).

More so, in highly hazardous environments like military environments, efficient safety feedback and communication are essential. Accurate and timely communication can be the difference between life and death in complicated and dynamic conditions seen in military operations. It is imperative for military leaders to guarantee that safety procedures are elucidated and comprehended by all personnel, and that resilient mechanisms are established for notifying and resolving safety issues. A culture of continuous learning and safety enhancement is fostered by regular debriefs and after-action reviews, which offer structured chances for feedback and let staff talk about what went well and what may be improved (Bowers et al., 2017).

To sum up, safety communication and feedback are essential for preserving a secure workplace. Effective feedback systems enable ongoing safety practice improvement, while clear communication guarantees that all staff members are aware of safety protocols and expectations. In environments as dangerous as the military, these components are essential to guaranteeing personnel safety and preparedness.

2.8 Theoretical Framework

The theoretical framework serves as a conceptual model for speculating on the connections between the many characteristics that have been shown to be important to the study's subject area. The purpose of this study was to ascertain how safety management practices—that is, management commitment to safety, safety training, employee involvement in safety, and safety communication and feedback—relate to

safety performance as independent variables. As theoretical framework was expanded, and this study's framework includes four independent variables related to safety management techniques. Then, as shown in Figure 3.1, these independent variables would be assessed in connection to the dependent variable of safety performance.

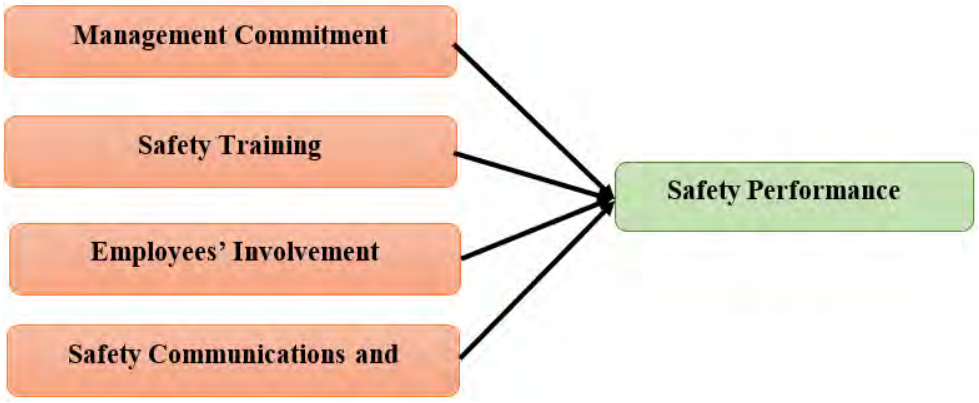

Figure 2.1
Theoretical framework

2.8.1 Relationship between Management Commitment to Safety and Safety Performance

The relationship between management commitment to safety and safety performance is strongly correlated and well-documented. When management validates a genuine commitment to safety, it sets the foundation for a robust safety culture, directly impacting safety performance. This commitment is evident through the establishment of comprehensive safety policies, allocation of necessary resources, and active involvement in safety initiatives. A committed management team prioritizes safety by providing the required training, resources, and support, ensuring that employees are well-equipped to perform their tasks safely (Vinodkumar & Bhasi, 2010). This proactive approach fosters an environment where safety is a shared value, encouraging employees to adhere to safety protocols and engage in safe behaviors.

Furthermore, management's visible dedication to safety, such as participating in safety audits and responding promptly to safety concerns, reinforces the importance of safety across all organizational levels. This leadership behavior not only boosts employee morale but also instills a sense of responsibility and accountability for safety (Clarke, 2013). The result of such commitment is a significant improvement in safety performance, characterized by reduced accident rates, lower incidence of near-misses, and overall enhancement in workplace safety (Hofmann, Burke, & Zohar, 2017). Hence, management commitment is a critical driver of effective safety performance in any organization.

2.8.2 Relationship between Safety Training and Safety Performance

The relationship between safety training and safety performance is both significant and well-established across various industries. Safety training is a fundamental component of an organization's overall safety management system, designed to impart critical knowledge, skills, and attitudes necessary for employees to perform their duties safely and effectively. This training directly influences safety performance, encompassing metrics such as incident rates, compliance with safety procedures, and overall workplace safety culture. Effective safety training programs enhance employees' ability to identify and mitigate potential hazards. By providing comprehensive training on hazard recognition, risk assessment, and the implementation of safe work procedures, organizations empower employees to proactively manage safety risks. This proactive approach reduces the likelihood of accidents and incidents, thereby improving safety performance (Vinodkumar & Bhasi, 2010). Moreover, safety training fosters a culture of safety within the organization. Regular training and updates on safety practices reinforce the importance of safety and encourage collective

responsibility for maintaining a safe working environment. This cultural shift is crucial as it leads to more consistent and rigorous adherence to safety protocols and procedures (Clarke, 2013).

In high-risk industries or organization, such as construction, manufacturing, law enforcement and the military, the relationship between safety training and safety performance is even more pronounced. In these environments, the consequences of safety failures can be severe, making effective training essential. For instance, in the military, safety training is integral to ensuring combat readiness and operational effectiveness. Rigorous and continuous training in weapon handling, survival skills, and emergency response significantly enhances safety performance by reducing the incidence of accidents and improving the overall preparedness of personnel (Hofmann, Burke, & Zohar, 2017). Furthermore, safety training programs that include components on mental health and stress management contribute to better safety performance by ensuring that employees are not only physically but also psychologically prepared to handle their tasks. This holistic approach to safety training addresses the multifaceted nature of workplace hazards and enhances overall safety performance (Brown et al., 2019).

In conclusion, the relationship between safety training and safety performance is critical and multifaceted. Effective safety training programs lead to better hazard identification and risk management, foster a strong safety culture, and are particularly crucial in high-risk industries. By investing in comprehensive safety training, organizations can significantly improve their safety performance, ensuring a safer and more productive working environment.

2.8.3 Relationship between Employees Involvement and Safety Performance

The relationship between employee involvement and safety performance is significant, showing that active participation by employees in safety initiatives enhances overall safety outcomes. Employee involvement includes activities such as contributing in safety committees, joining safety training, contributing to policy development, and engaging in hazard identification. Employee ownership and accountability for their own safety as well as the safety of their coworkers are fostered by this participation, which strengthens the safety culture (Clarke, 2013).

According to Vinodkumar and Bhasi (2010), active involvement enables employees to offer their own knowledge and expertise, which improves danger detection and produces workable solutions. This cooperative approach lowers the possibility of accidents and injuries by ensuring that safety precautions are appropriate and efficient. The relationship is even more crucial in fields with elevated risks such as the military environment because military personnel deal with special challenges their performance in safety is improved by their involvement in safety exercises, simulations, and ongoing training, which equips them to handle emergencies well (Bowers et al., 2017). Ensuring that all potential dangers are addressed through collaborative risk assessments and continuing safety training improves the safety and readiness of military operations Overall, active employee involvement in safety initiatives leads to a stronger safety culture, better hazard management, and improved safety performance.

2.8.4 Relationship between Safety Communication and Feedback towards Safety Performance

The relationship between safety communication and feedback and safety performance is crucial and well-documented. Effective safety communication ensures that all employees understand safety policies, procedures, and expectations, creating a shared understanding and commitment to safety practices. When safety information is communicated clearly and promptly, employees are better equipped to identify hazards and follow safety protocols, leading to improved safety performance (Vinodkumar & Bhasi, 2010). Feedback mechanisms are equally important, as they provide a platform for employees to report hazards, near-misses, and suggest improvements without fear of retaliation. This emphasizes a proactive approach to safety, in which potential hazards are found and fixed before they cause mishaps. Employee engagement and commitment to safety procedures are more likely to persist when they see that their feedback results in noticeable changes (Clarke, 2013).

It is even more vital to have safety communication and feedback in situations with elevated risks for the military. According to Bowers et al. (2017), prompt and precise communication in conjunction with organized feedback systems like after-action evaluations guarantees that safety issues are consistently recognized and resolved, improving overall safety performance. To summarize, the incorporation of efficient safety communication and feedback systems cultivates a safety culture, resulting in notable enhancements in safety performance by guaranteeing that every staff member is knowledgeable, involved, and proactive in upholding a safe working environment.

2.9 Hypotheses Development

The key component for examining the relationships between different variables is a hypothesis. Research hypotheses, in the opinion of Newman and Gough (2020), offer a preliminary framework for evaluating the possibility of meaningful correlations between various variables. To ascertain the significance of these suggested links, hypothesis testing is used. To assess the relationships between the independent factors and the dependent variable in this study, hypotheses are essential. The independent variables include in management practice dimension while the dependent variable is safety performance. The list of hypotheses that has been govern for this research as in the Table 2.1.

Table 2.1
Research Hypothesis

Hypotheses	Research Hypotheses
H_1	There is a significant relationship between management commitment and safety performance among army personnel
H_{01}	There no significant relationship between management commitment and safety performance among army personnel
H_2	There is a significant relationship between safety training and safety performance among army personnel
H_{02}	There is no significant relationship between safety training and safety performance among army personnel
H_3	There is a significant relationship between army personnel involvement and safety performance among army personnel
H_{03}	There is no significant relationship between army personnel involvement and safety performance among army personnel
H_4	There is a significant relationship between safety communication and safety performance among army personnel
H_{04}	There is no significant relationship between safety communication and safety performance among army personnel

2.10 Summary of the Chapters

To put it briefly, this chapter reviews earlier relevant research that includes the variables used in this specific study. Understanding the relationship between independent and dependent variables in the context of this study is made easier by the literature review. In this study, staff involvement, safety training, management commitment to safety, and safety communication and feedback are the independent factors, while safety performance is the dependent variable. Overall, a significant amount of research indicates a positive correlation between the independent factors under investigation and safety performance. The research approach used in this specific study will be covered in full in the following chapter.

CHAPTER 3:

METHODOLOGY

3.1 Introduction

This chapter discusses the data and information collection approach used for the previous investigation. There will be a operational definition and discussion of the dependent and independent variables. We will go into further detail on the population, units of analysis, data analysis, and instrument size of the study. This chapter describes in detail the approaches taken to comprehend the conceptual development of the research process. It covers the declaration of hypotheses, research design, population classification, sample size and sampling technique, data collection methods, calculation of variables, instrumentation and data analysis procedures. Each component plays a crucial role in ensuring the research is methodologically sound and produces reliable and valid results, providing a comprehensive overview of the entire research process.

3.2 Research Framework

According to Kumar (2014) the research framework is very important to ensure that the research process runs smoothly. A research process plan must be prepared so that each step of the research is carried out starting from the search for the research problem to the writing of the research report. Figure 3.2 shows the research framework that has been planned.

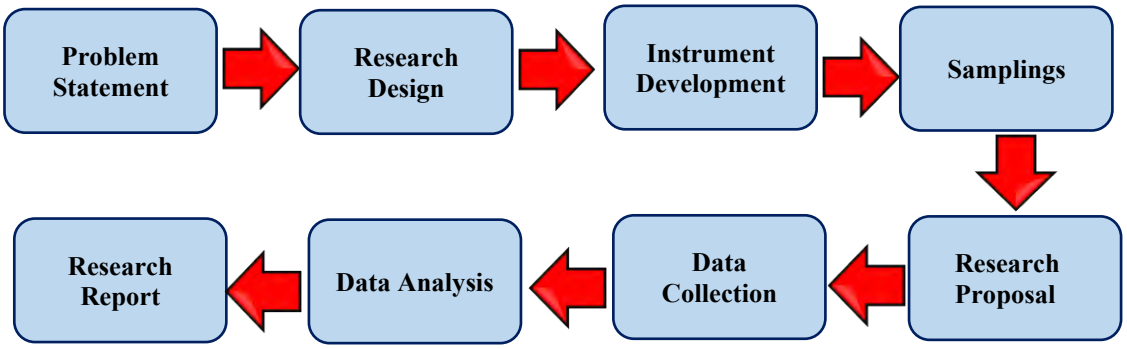

Figure 3.1
Research Framework

3.3 Research Design

In this research, a cross-sectional survey approach was used to gather data from a stratified random sample of workers in a range of industries, including high-risk ones like military organizations. Since a questionnaire survey has been the major method of data collecting in many safety climate study investigations, it was chosen (Flin et al., 2000). We will develop a systematic survey tool to collect feedback on safety performance and safety management procedures. Likert-scale items measuring the degree of management commitment, frequency of safety training, communication effectiveness, and employee involvement levels will be included in the questionnaire. These metrics will yield measurable information that can be statistically analyzed to ascertain the connections between various management techniques and safety performance (Hofmann, Burke, & Zohar, 2017). Respondents were given a five-point Likert scale to score them on, with 1 representing "strongly disagree" and 5 representing "strongly agree." It is critical to maintain content validity when deciding which items to include in the questionnaire, as this is a key indicator of the survey instrument's accuracy. The amount to which an instrument measures what it is supposed to measure is referred to as content validity (Cooper and Emory, 1995).

Data collection will involve distributing the questionnaire to a representative sample of employees in selected industries. Participants will complete the survey anonymously to encourage honest and candid responses. The Statistical Package for the Social Sciences, or SPSS, software is used to do a thorough statistical analysis on the gathered data. Descriptive statistics will be used to summarize the distribution of responses and the demographic characteristics of the sample. The information offers inferential statistics to examine the relationships between management procedures and safety performance, including multiple regression and correlation analysis. In particular, correlation analysis, will show the relative effects of each management strategy on safety performance as well as the strength and direction of associations (Vinodkumar & Bhasi, 2010). The research methodology for this study will involve problem-focused analysis, a review of pertinent literature, design of a sample, creating a research design, data collection, analysis, decision-making, and report preparation (Zikmund, 2003).

3.4 Quantitative Method Approach

A quantitative method approach in research is characterized by the systematic investigation of phenomena through the collection and analysis of numerical data. A quantitative method's main strength is the quantification of variables into numbers, which makes it easier to test the relationship between variables using various statistical approaches (Sekaran & Bougie, 2016). This methodology is based on the ideas of objectivity, repeatability, and statistical analysis, which makes it perfect for research projects that seek to find trends, validate theories, and generate predictions that may be applied broadly. A quantitative method approach provides an empirical and organized means of measuring and analysing these factors in the context of examining

the relationship between safety performance and management practices (Vinodkumar & Bhasi, 2010).

Considering it appears more suitable in this situation, this study will employ a quantitative research technique. based on the quantitative, cross-sectional, survey approach used in Creswell's (2003) study, which was chosen because of its economical design and effective data collection. It is unmanipulated, non-contrived research. The participants were asked to respond to questions based on their personal experiences for the purposes of this study.

3.5 Operational Definition

According to Newman and Gough (2020), defining keywords means offering precise definitions and clear understanding of key terms used in a study. This ensures that everyone involved comprehends the terms in the study's context, fostering a consistent and evidence-based understanding. Clear definitions also help prevent misunderstandings or misinterpretations during data collection and analysis. In this study, the operation definition of the associated with variables is clarified as follow:

3.5.1 Safety Performance

Safety performance refers to the measurable aspects of workplace safety that indicate the effectiveness of an organization’s safety management practices. It encompasses a range of indicators that collectively provide a comprehensive view of how well an organization is managing and promoting a safe working environment. The operational definition of safety performance includes both leading and lagging indicators, capturing proactive and reactive aspects of safety management. In this study, "safety

performance" is a term derived from Vinodkumar and Bhasi (2010) that describes how well an organization adheres to safe work norms. This entails employing safe equipment and reporting dangerous situations and safety incidents with a high level of awareness. Moreover, safety performance means that in the event of accidents or incidents pertaining to safety, one must actively engage in efforts to improve and follow emergency measures.

3.5.2 Management Commitment to Safety

Management commitment to safety refers to the extent to which organizational leaders and managers prioritize, support, and actively participate in the implementation and continuous improvement of safety practices and policies within the workplace. This commitment is a critical factor influencing the overall safety culture and performance of an organization. It involves prioritizing safety in every aspect of operations, dedicating resources to safety initiatives, and persistently working to enhance safety performance. Demonstrating a strong commitment to safety includes exhibiting leadership, maintaining effective communication, providing regular training, and engaging all employees in the process of identifying and addressing safety risks (Cooper, 2006).

3.5.3 Safety Training

The systematic procedure that gives staff members the education, know-how, and attitudes they need to carry out their jobs safely and successfully is known as safety training. Safety training is a program that management offers staff members to make sure they are informed of current safety concerns and are capable of responding appropriately to situations involving injuries or accidents. Effective safety training

helps reduce the rate of workplace accidents and enhances overall organizational safety (Zohar, 1980). This approach is implemented by hose manufacturing management to ensure every staff member is cognizant of all safety risks present within the company.

3.5.4 Employee involvement

Employee involvement refers to the active participation and engagement of employees in organizational safety activities and decision-making processes. This includes participation in safety committees, reporting hazards, attending safety training, engaging in safety audits, providing feedback, and adhering to safety procedures. These activities are measured by attendance records, the frequency of hazard reports, engagement in training, contributions to audits, and compliance with safety protocols. High employee involvement enhances safety culture and performance, reducing workplace incidents and injuries (Clarke, 2013; Vinodkumar & Bhasi, 2010; Hofmann et al., 2017).

3.5.5 Safety Communication and Feedback

In this study, the definition by Huang et al. (2018) characterizes safety communication as the ability to effectively convey safety-related information. This approach aims to improve understanding of safety procedures and the risks associated with high-risk activities. Effective safety communication enhances knowledge of safety protocols, helping to mitigate potential hazards and reduce accidents in the workplace. Organizations may guarantee that staff members are knowledgeable about safety procedures and equipped to manage safety hazards by promoting open and constant communication through training.

3.6 Measurement of Variable

Every variable in this study is measured using well-chosen items taken from earlier research publications. Our instrument was created at the start of the data collection phase based on instruments utilized in earlier studies. By collecting and analysing numerical data, researchers can identify patterns, test hypotheses, and make evidence-based recommendations for improving safety outcomes. This approach's emphasis on objectivity, replicability, and statistical analysis ensures that the findings are robust and reliable, contributing valuable knowledge to the field of occupational safety and health.

3.6.1 Research Instrument

This study necessitates selecting appropriate data collection instruments to ensure the acquisition of quality information. According to Kothari (2018), choosing the right instrument is essential for maintaining the validity and reliability of research data. Furthermore, to test the hypotheses outlined in Table 3.1, a robust measurement tool is required to address the research questions presented in section 1.5. Ng (2020) emphasizes that in a quantitative-oriented study like this, developing a questionnaire is crucial as the primary tool for data collection and conducting surveysFor this reason, a scaled questionnaire was selected as the primary means of gathering data for this investigation. The questionnaire comprises five comprehensive sections: safety performance, safety policy, safety training, safety communication, safety control, and demographic information. It integrates aspects from prior research based on dependent and independent variables. A overview of the number of items in each section and their references can be found in Table 3.1 below.

Table 3.1
Reference and number of items in survey questionnaire

Section	Reference	Number of items
Demographic		8
Safety Performance	Vinodkumar & Bhasi (2010)	8
Management Commitment	Vinodkumar & Bhasi (2010)	9
Safety Training	Vinodkumar & Bhasi (2010)	6
Employees involvement	Vinodkumar & Bhasi (2010)	4
Safety Communication	Vinodkumar & Bhasi (2010)	6

3.6.2 Development of survey Question

The development of a survey questionnaire is a critical step in conducting quantitative research, as it ensures that the data collected will be valid, reliable, and relevant to the research objectives. The process involves several key steps to ensure the creation of an effective and comprehensive instrument. Based on relevant factors from previous research on safety performance, management commitment, safety training, employee involvement, safety communication, and feedback in the context of safety, the survey questionnaire for this study was thoughtfully created. This questionnaire was divided into six (6) main sections: respondent demographic profile (8 questions); safety performance (8 questions); management commitment to safety (9 questions); safety training (6 questions); employees' involvement (4 questions) and safety communication (6 questions).

3.6.3 Reliability Test

In order to ensure the quality of the instrument and the consistency of the data gathered, it is crucial to assess the items' dependability before to using them in the real study.

This stage is essential to guaranteeing the correctness of the data needed to answer all of the researcher's research questions. The degree to which the study instrument can be counted on to yield consistent results over time is referred to as its reliability (Kumar, 2014). In other words, a measurement tool must be stable and consistent over time to accurately measure a particular phenomenon or variable. An instrument that produces variable answers is considered unstable and has low reliability. Therefore, to test and assess the reliability of the questions in the study questionnaire, the researcher employs Cronbach's Alpha. According to Kumar (2014), Cronbach's Alpha indicates the reliability value within a specific range. The reliability levels for Cronbach's Alpha are shown in Table 3.2 below.

Table 3.2
Cronbach Alpha Interpretation

Cronbach Alpha Score	Level of Reliability
0.91 – 1.00	Excellent
0.81 – 0.90	Good
0.71 – 0.80	Good and Acceptable
0.61 – 0.70	Acceptable
0.01 – 0.60	Non-Acceptable

3.6.4 Pilot Study

A pilot study allows researchers to test the reliability and validity of their data collection instruments, such as surveys or questionnaires. It helps ensure that the tools accurately measure what they are intended to and that the data collected will be reliable (Kothari, 2018). Ng (2020) suggests that a pilot study typically involves surveying up to 30 respondents, separate from those in the main study. This assertion is corroborated by Konting et al. (2009), who suggests that 30 respondents constitute an adequate sample size for pilot studies within the context of larger studies. For this pilot study, 30 respondents were carefully selected based on specific criteria to respond to the

questionnaire. These respondents were military personnel from the Air Defence Artillery Regiment, exhibiting operational and organizational characteristics similar to those of the primary study. Upon analyzing the gathered data using the Statistical Package for the Social Sciences (SPSS) Version 29, the Cronbach's Alpha values were documented as shown in Table 3.3 below. This outcome validates the questionnaire's reliability prior to its use in the main study.

Table 3.3
Cronbach Alpha Interpretation (Pilot Study)

Variable	Cronbach's Alpha Score
Safety Performance	0.952
Safety Commitment	0.953
Safety Training	0.970
Employees involvement	0.930
Safety Communication	0.931

3.7 Research Sampling

A crucial step in the research process is research sampling, which involves determining a selected group of participants or units to examine from a larger population. Developing assumptions about the total population from the data gathered from the sample is the aim of sampling. Proper sampling techniques ensure that the sample is representative of the population, allowing for generalizable and valid conclusions. Sampling ensures that the selected participants accurately reflect the characteristics of the larger population. This representativeness is crucial for the validity and generalizability of the study findings (Kumar, 2014). For this research, simple random sampling is used to the population at this regiment, each military personnel of the

population have an equal chance of being selected. This method is straightforward but requires a complete list of the population (Kothari, 2018).

3.7.1 Research Population

Each member of individuals, objects, or topics that the researcher wishes to study is referred to as the "population". It is the group of people, events, or topics of interest for which the researcher intends to draw conclusions from sample data. Because a survey approach provided the best opportunity of swiftly and efficiently getting a cross section of opinions, values, and performances in different trades and appointments, it was selected to gather data on the safety performance of the organization. In order to evaluate the safety performance model and determine the effects of safety culture on safety performance in the Army, a questionnaire survey is used to collect data. Roughly about 120,000 army men serve in the Malaysian Army at any given time. There are now 17 Corps or Regiments in the Malaysian Army. The Combat Element, the Combat Support Element, and the Support Elements are the three primary components. The population of 34st Royal Artillery Regiment (RAR) is 343 people, with a variety of personalities. Occupational group criteria such as ranks, traits, and corps category were used to choose the sample using stratified proportional random sampling. i.e., The Officers, Senior Non-Commissioned Officers (SNCOs), Non-Commissioned Officers (NCOs), and Privates; Traits – General (Operation and Training), Administration, and Logistics; Corps – Combat, Combat Support, and Service Support. As a result, the population of this study was limited to army troops from several Corps, including combat unit, combat support, and service support.

3.7.2 Sample Saiz

A total of 181 regular army members were randomly selected to take part in the survey to assure accuracy as recommended by Krejcie and Morgan (1970). This study focuses on eight working characteristics that are common in the Army's combat support unit. 34st Royal Artillery Regiment in Bera Camp, Pahang was chosen to offer the replies because 34st RAR is not only an operational unit, but also a combat support unit requiring several trades and organizational structure. Based on data base obtained from the operation management of regiment, the current filled position is 343 military personnel. Referring to Table 3.5, the required sample size to yield reliable study results is 181 individuals, based on a population of 340 of population.

Table 3.4
Table for determining Sample Siza of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

Source: Krejcie & Morgan 1970

3.8 Data Collection

In this study, data is gathered using the questionnaire survey research technique, which involves asking respondents to provide answers to a series of questions. Before the study began, a formal letter requesting authorization to conduct the poll was sent to the 34st RAR's commanding commander. To complete the survey, all required responders must be gathered on a predetermined day. All respondents received the questionnaires and completed them. A set amount of time was allotted to respondents to complete the surveys. The survey's objective is to learn people's opinions regarding the influence OHS management features have on their OSH performance. In addition, secondary data has been acquired via the Internet and a library containing the relevant materials.

3.9 Data Analysis

SPSS version 29.0 will be used for statistical analysis in order to get the required result. SPSS version 29.0 will be the software used for statistical analysis in order to get the intended findings. The data will be streamlined and summarized using descriptive methods. The relationship between safety performance and the four elements of safety management practice will be investigated using correlation analysis. The degree of safety that respondents perceive in their workplace will be evaluated using standard deviations, reliability tests, and correlation analyses between the variables. The study intends to provide a thorough understanding of how safety management practices impact safety performance and find opportunities for development by studying these factors (Kumar, 2014).

3.10 Summary

From Army personnel perspectives in the military organization environment, this study empirically explores safety culture and its influence on safety performance. The impact of the safety management practice among military personnel on safety performance in this regiment is investigated in this study. The reliability analysis was used to measure the variables. Throughout the reliability assessment, each factor's internal consistency was examined using Cronbach's alpha. A reliability coefficient called Cronbach alpha shows how strongly items in a collection are positively connected with one another. Research on this regiment has the potential to improve operational effectiveness and safety, particularly given the hazardous nature of the jobs performed by the troops.

CHAPTER 4

ANALYSIS AND RESULT

4.1 Introduction

In this chapter, the results of the research, which were based on the data collection procedure described are explained in detail. Then, using the Statistical Package for the Social Sciences (SPSS) Version 29, the gathered data is examined and the results of the analysis are also outlined.

4.2 Response Rate

Within the scope of this research, the demographic under scrutiny includes 343 military personnel stationed at the 34th Air Defence Artillery Regiment. According to the guidelines stipulated by Krejcie and Morgan (1970), a sample size of at least 181 participants is required to adequately represent this population. Over an extensive two-week survey, 138 employees voluntarily participated as respondents. Although the number of respondents falls short of the recommended sample size, the data collected still provides valuable insights into the perceptions and views of the personnel regarding safety management practices and safety performance. The responses collected, as documented in Table 4.1, offer a detailed overview of the response rate and the demographic characteristics of the participants.

Table 4.1
Response Rate

Item	Total	Percentage
Survey Distribution	181	100%
Survey Collected	138	76.2%
Survey Not Returned	41	23.7%
Survey Unusable	2	0.01%

As appears from the data in Table 4.1 above that the current study reached an excellent response rate of 76.2%. This observation indicates a significant degree of participant involvement in the study. The results are consistent with the research conducted by Johnson and Wislar (2012), which suggests that higher response rates generate more accurate results and better represent the target population of the study. Finally, it can be said that this study has a very good response rate, which increases trust in the accuracy of the information gathered. The results of this survey are thought to provide a more accurate representation of the viewpoints and views held by the target group because of the significant level of interaction.

4.2.1 Data Review

Data review is conducted to ensure the accuracy, alignment with the study's theoretical framework, reliability, and usability of all collected data before advancing to more complex analysis procedures. Accordingly, a descriptive analysis was performed to verify the appropriateness of all 138 survey forms and to confirm the absence of any data discrepancies (Kumar, 2014).

4.3 Reliability Test

Konting et al. (2009) underscore the importance of Cronbach's alpha as a key statistical tool for ensuring the reliable measurement of constructs through scales or questionnaires. A high alpha coefficient signifies strong intercorrelation among scale items, indicating robust internal consistency, while a low coefficient raises concerns about reliability. They emphasize the need to interpret Cronbach's alpha within the study's specific context and construct nature. Sekaran and Bougie (2010) suggest that

reliability coefficients nearing 1.0 indicate high quality, with values above 0.80 being highly satisfactory and those below 0.60 indicating poor performance.

In this study, Cronbach's alpha was used to evaluate the internal consistency of the variables. The results, detailed in Table 4.2, demonstrate satisfactory reliability for both independent and dependent variables, meeting predefined standards.

Table 4.2
Cronbach Alpha Coefficients for Research Variable

Variables	Numbers of items	*Cronbach Alpha Coefficients, s= 138*
Safety Performance	8	0.967
Management Commitment	9	0.970
Safety Training	6	0.969
Employees involvement	4	0.962
Safety Communication	6	0.957

Upon examination of Table 4.2, it is clear that the Cronbach's alpha values for the variables under investigation on safety performance, management commitment to safety, employee involvement, safety training, and safety communication and feedback are 0.967, 0.970, 0.969, 0.962, and 0.957, respectively. These values indicate a high level of reliability across all variables, signifying strong internal consistency in measurement. The results suggest that all constructs measured in this research exceed the established reliability threshold, demonstrating commendable consistency. This provides confidence in the integrity of the data collected for this study (Konting et al., 2009).

4.4 Normality Analysis

Normality analysis is essential in evaluating collected respondent data, as it determines whether the data distribution is normal. Ensuring the normality of the dataset is crucial for the reliability of the results. According to Berawi (2017), three main types of normality tests are commonly used in statistical analysis: the Kolmogorov-Smirnov test (Kolmogorov, 1956; Smirnov, 1936), the Shapiro-Wilk test (Shapiro & Wilk, 1965), and tests for skewness and kurtosis. These tests aim to confirm the normal distribution of data, which is vital for conducting parametric analyses such as correlation tests. In this study, skewness and kurtosis tests were employed to assess data distribution suitability. Skewness provides insights into the asymmetry of the distribution graph relative to the data mean, while kurtosis measures the peak of the distribution graph.

Table 4.3
Normality Analysis for Skewness and Kurtosis

Variables	*Skewness*	*Kurtosis*	*Distribution Explanation*
Safety Performance	-0.034	0.083	Normal
Management Commitment	0.082	-0.083	Normal
Safety Training	-0.001	-0.102	Normal
Employees involvement	0.057	0.104	Normal
Safety Communication	-0.029	0.192	Normal

The safety performance dependent variable has a skewness value of -0.034 and a kurtosis value of 0.083 in the normality assessment domain. Furthermore, safety management commitment to safety has a skewness value of -0.082 and a kurtosis value of -0.083. On the other hand, the safety training aspect shows a kurtosis value of -0.102 and a skewness value of -0.001. A skewness value of 0.057 and a kurtosis value

of 0.104 are found for the employee's involvement variable. The kurtosis value is 0.192 and the skewness value is -0.029 for the safety communication variable. Newman and Gough (2020) highlight those acceptable values for skewness and kurtosis, indicating a normal distribution, fall within the range of -1.96 to +1.96. Typically, this analysis is conducted at a significance level of 0.05. If values exceed the range of -2.58 to +2.58, the analysis is generally performed at a significance level of 0.01. Based on these parameters, the researcher can confidently conclude that all variables examined in this study exhibit data distribution characteristics consistent with normality requirements, as outlined by Hair et al. (1998). These findings enhance confidence in the precision of the data analysis conducted in this investigation.

4.5 Descriptives Analysis

4.5.1 Analysis of Demographic Information

The main objective of this demographic analysis is to provide comprehensive statistical information on the number and proportion of various socio-demographic characteristics of participants employed at this regiment. This investigation meticulously outlines key socio-demographic attributes including age, rank, level of educational, years of service, and trade background. By examining these variables, the study aims to paint a detailed picture of the military personnel composition. The demographic details, presented in Table 4.4, offer valuable insights into the diverse characteristics of the participants. This data is crucial for understanding the demographic profile of the workforce within the scope of this study, allowing for more targeted and effective organizational strategies and interventions. Additionally, it helps in identifying any demographic trends or patterns that could influence the study's outcomes, thereby enriching the overall analysis and interpretation of the research

findings. This detailed demographic overview underscores the importance of considering socio-demographic factors in organizational research and their potential impact on various operational aspects.

Table 4.4
Demographic Analysis

Demographic	*Frequency*	*Percentage*
Age		
20 - 29 years old	108	77.9
30 - 39 years old	27	20.0
40 - 49 years old	3	2.1
Rank		
Major/ Capt.	0	0
Lieutenant/Second Lieutenant	2	1.4
Warrant Officer I/ Warrant Officer II	0	0
Staf Sergeant/Sergeant	14	10.1
Bombardier/Las Bombardier	66	47.8
Gunner/Privert	56	40.6
Level of Education		
Degree	2	1.4
Diploma	3	2.2
SPM/SPMV/STPM	130	94.2
Others	3	2.2
Tred/ Department		
Management	7	5.1
Gun	50	36.2
Radar	19	13.8
Communication	19	13.8
Transportation	23	16.7
Others	20	14.5
Years of Service		
5 years and below	78	56.5
6 - 10 years	39	27.9
11 - 15 years	13	10.0
16 - 20 years	0	0
21 years and above	8	5.8

The socio demographic attribute categorization for 138 individuals is provided in Table 4.4 above. In relation to categories of age, Figure 4.1 indicates that the largest percentage of responders (108, or 77.9%) are between the ages of 20 and 29. The age group of 30 to 39 years old has 27 persons (20%), and the age group of 40 to 49 years old has 3 individuals (2.1%).

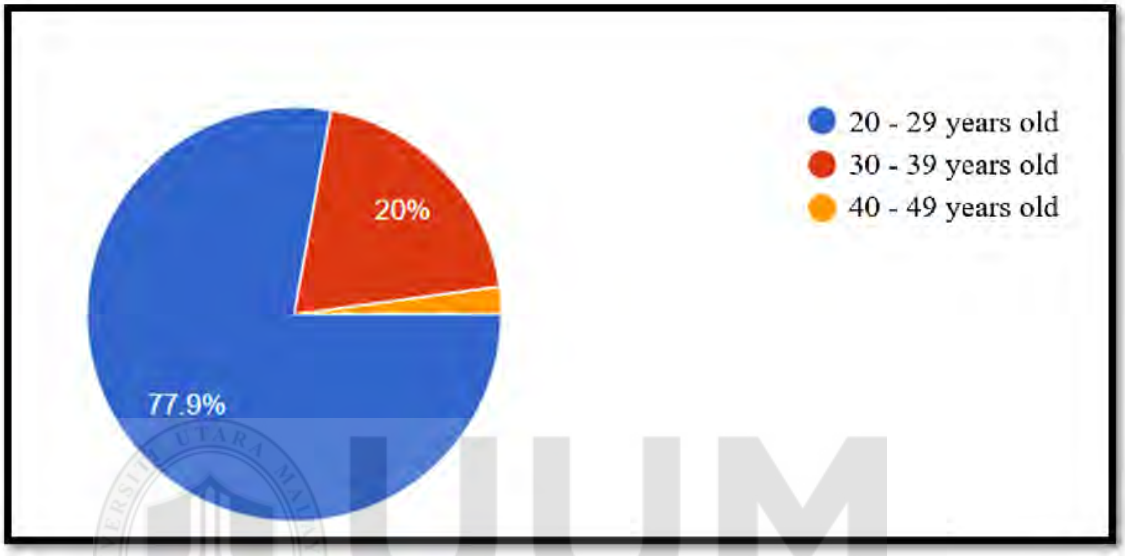

Figure 4. 1
Count of Age

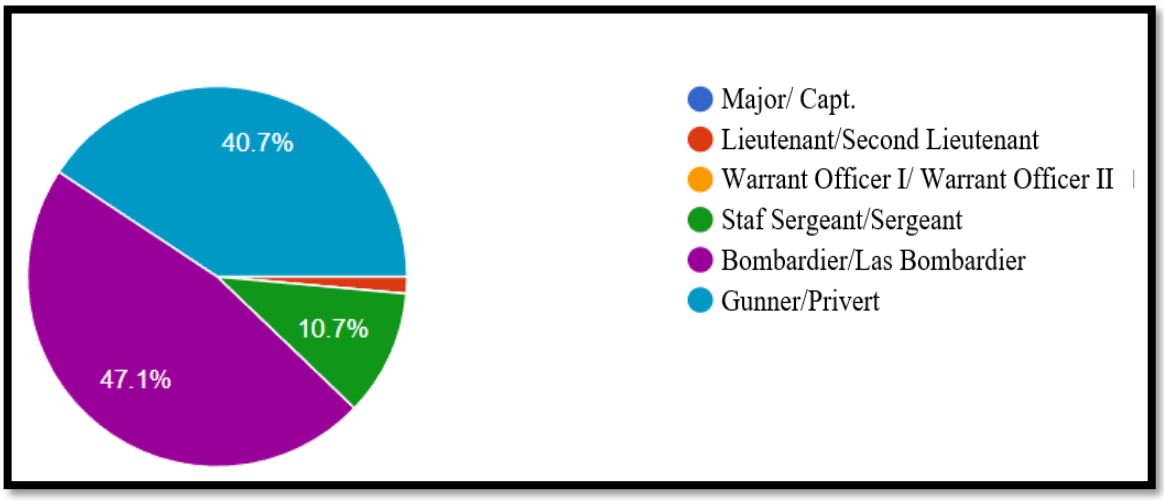

Figure 4. 2
Distribution of Rank

The dataset further illuminates the distribution of rank based on Figure 4.2, with a majority rank as bombardier/Las Bombardier (Corporal/ Lans Corporal), totalling 66 personnel (47.8%) as subordinate or employees at each department. In contrast, there are 14 personnel (10.1%) rank as Staf Sergeant/Sergeant acting as supervisor or in charge for their department. Therefore, 2 personnel (1.4 %) as army officers appointed as commander of Troop or Battery.

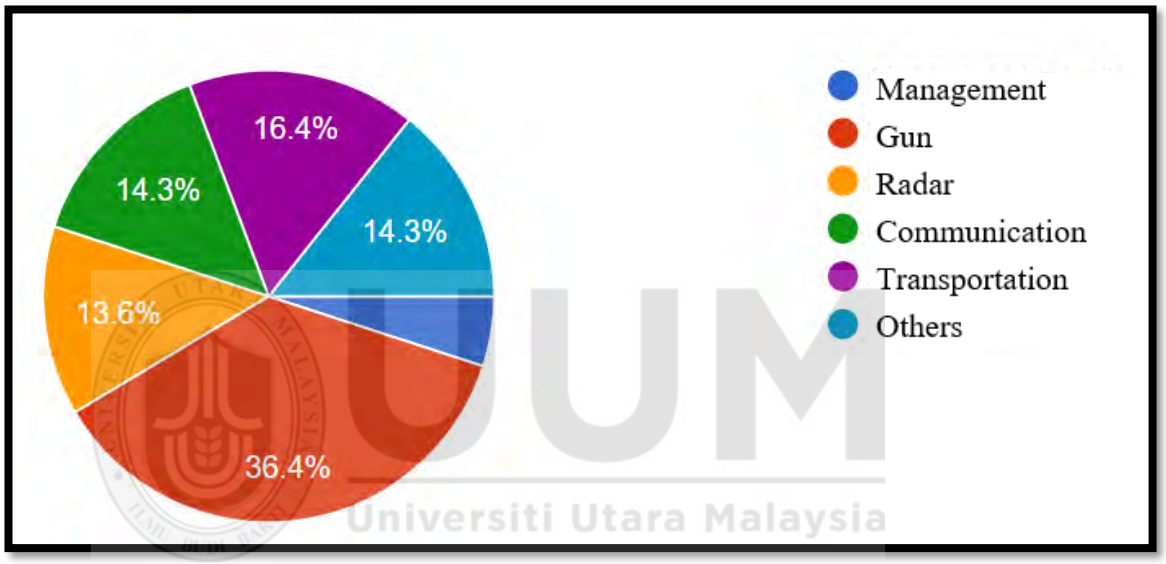

Figure 4. 3
Distribution of Department/Tred

The dataset provides more clarification on the participants from military personnel designation as seen in Figure 4.3. The majority were assigns as gun operators with the 50 personnel (36.4%). On the other hand, both radar and communication trade have 19 personnel (or 13.6%) whilst 20 personnel (14.3%) in other category which may assign in workshop, ordinance and service trade. Thus, there were 7 people (5.1%) who assign supervisor and commander of departments, troops or battery.

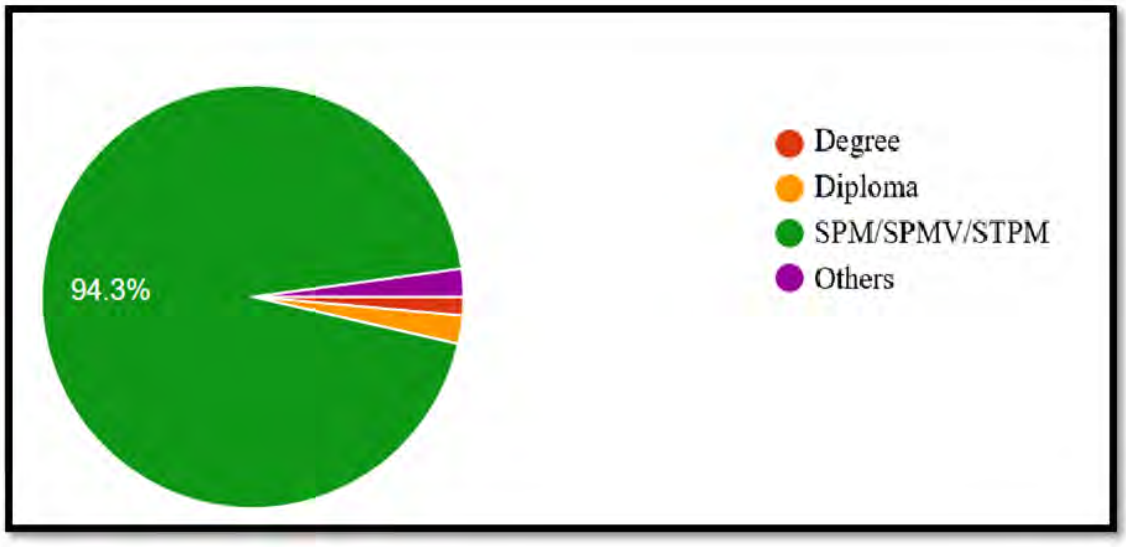

Figure 4. 4
Highest level of Education

As far as the respondents' educational achievements are concerned, Figure 4.3 and Table 4.4 show a range of qualifications, including diplomas, bachelor's and master's degrees, and the Malaysian Certificate of Education (PMR), (SPM), (SPVM), and Malaysian Higher School Certificate (STPM). The largest percentage, 130 personnel (94.3 %), have a Malaysian Higher School Certificate (STPM), Malaysian Certificate of Education (PMR) and Malaysian SPM as their highest education. There are also 3 personnel (2.2%) with a diploma, 2 personnel (1.4%) with a bachelor's degree. The educational profiles of the respondents to this survey offer valuable insights into their academic backgrounds.

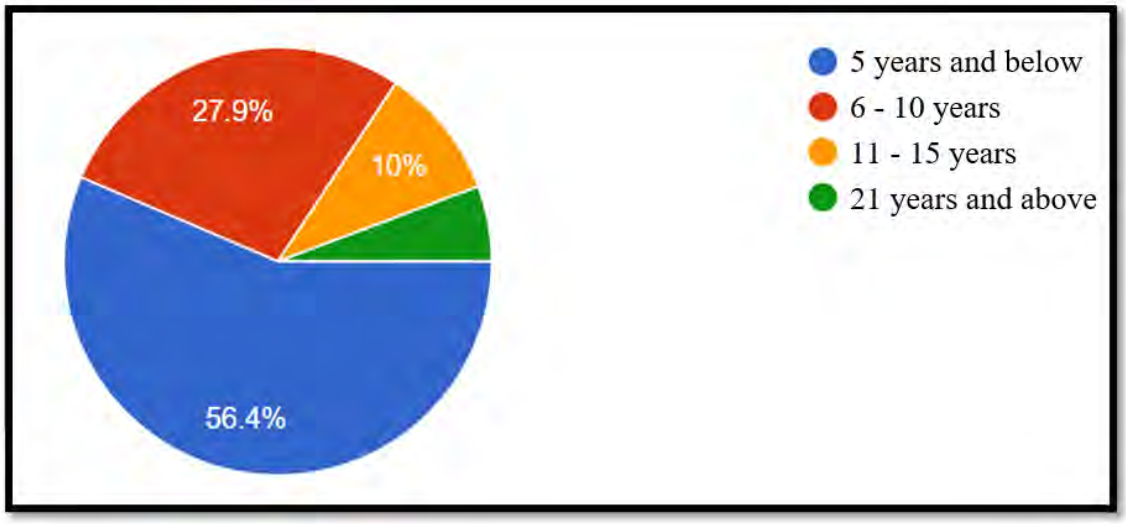

Figure 4. 5
Years of Service

Regarding the respondents' years of service in this regiment, as shown in Figure 4.4, 78 personnel (or 56.4%) have worked there for fewer than five years. This shows commitment and effort in this regiment to recruit and train new subordinate every year. Of the respondents, 39 individuals (27.9%), have a tenure spanning from six to ten years, while 13 individuals (10%) have a tenure of eleven to sixteen years. Finally, eight people (5.8%) have service in this regiment 21 years and above. Noticing that there is none of respondent years of service between fifteen to 20 years duration they have been posting out to other regiment or terminate their service after fifth teen years of contract service The variety of experiences among the respondents is highlighted by these facts.

4.6 Descriptive Analysis of Dependent Variable

According to Sekaran and Bougie (2010), descriptive statistical analysis aims to elucidate the quantification of variable elements by explaining statistical measures such as mean, median, mode, range, and standard deviation for each variable. Descriptive statistics provide an overview of the essential characteristics of the

collected data, aiding in understanding the data distribution concerning central tendency and dispersion (Trochim & Donnelly, 2001).

Given the substantial sample size and normal distribution of the data in the current study, the mean score serves as a more appropriate indicator of central tendency. The mean represents the average value assigned to each variable; a higher mean value indicates a relatively higher level for that variable, while a lower mean value indicates a relatively lower level. In this study, a five-point Likert scale was used. Mean values close to 5 indicate high values, while those closer to 0 are considered low. Consequently, Table 4.5 presents the means and standard deviations for safety performance examined in this study.

Table 4.5
Mean value and Standard Deviation for Safety Performance

Variables	Mean Value	Standard DeviationValue
Safety Performance	4.17	.50

The standard deviation values for every variable are close to zero and stay below the 1.0 limit. Since none of the variables are suppressed from 1.0 standard deviation, the variability around the mean value is moderate. Therefore, the information gathered during this study falls under the category of typically dispersed information. This implies that there is an exceptionally high degree of consistency in the answers given by the study participants.

4.7 Correlation Analysis

Researchers can determine the strength of the relationship between two sets of variables using correlation analysis, a commonly employed technique for assessing the degree of association between variables (Sekaran & Bougie, 2016; Kumar, 2014). This study utilizes the Pearson Correlation test to validate hypotheses and achieve its objectives. Statistically, the Pearson correlation coefficient (r) ranges between -1 and 1. According to Benesty et al. (2009), variables are considered uncorrelated when (r) = 0. The closer (r) is to 1, the stronger the positive correlation between the two variables. Conversely, the closer (r) is to -1, the stronger the negative correlation. A perfect positive correlation is indicated by (r) = 1, while a perfect negative correlation is indicated by (r) = -1. According to Pallant (2020), the magnitude and direction of (r) can be classified based on the categories outlined in Table 4.6 below:

Table 4.6
The value and level of the Pearson correlation coefficient

Pearson correlation coefficient	Strength
(r) = ±0.01 to ±0.29	Weak
(r) = ±0.30 to ±0.49	Moderate
(r) = ±0.50 to ±1.00	Strong

Following correlation analysis between all independent factors and safety performance, the study's dependent variable, the values of the Pearson correlation coefficients are displayed below in Appendix D and Table 4.7.

Table 4.7
Correlation Analysis

Independent Variable	Pearson correlation coefficient
Management Commitment to Safety	0.842**
Safety Training	0.872**
Employees involvement	0.839**
Safety Communication	0.881**

The findings of the analysis suggest that there is a significant positive correlation between safety performance and all four independent variables. Among these variables, safety communication demonstrated the strongest correlation with safety performance, with a correlation score of (r = 0.881), indicating a robust relationship. On the other hand, employee's involvement showed a slightly lower correlation score of (r = 0.839) compared to safety communication, yet still suggesting a strong relationship.

4.7.1 Relationship Between Management Commitment to Safety and Safety Performance

Table 4.8 below shows the results of the correlation analysis between the management commitment to safety variable and safety performance.

Table 4.8
Relationship between Management Commitment to Safety and Safety Performance

		Management Commitment to Safety
Safety Performance	Pearson Correlation	0.842**
	Sig.	<0.001
	N	138

Based on the data in Table 4.8, the Pearson correlation coefficient is 0.842**, indicating a significant relationship between management commitment to safety and safety performance. This relationship is positive and has a strong level of strength, with (r) = 0.842 and a p-value of 0.01. Therefore, referring to Table 4.9, this analysis also indicates that hypothesis 1 in this study is accepted.

Table 4.9
Hypothesis between Management Commitment to Safety and Safety Performance

Hypothesis	Hypothesis Statement	Result	Strength
H_1	There is a significant relationship between management commitment to safety and safety performance	Accepted	Strong

4.7.2 Relationship Between Safety Training and Safety Performance

Table 4.10 below shows the results of the correlation analysis between the safety training variable and safety performance

Table 4.10
Relationship between Safety Training and Safety Performance

		Safety Training
Safety Performance	Pearson Correlation	0.872**
	Sig.	<0.001
	N	138

Based on the data in Table 4.10, the Pearson correlation coefficient is 0.872**, indicating a significant relationship between safety training and safety performance. This relationship is positive and has a strong level of strength, with (r) = 0.872and a p-value of 0.01. Therefore, referring to Table 4.11, this analysis also indicates that hypothesis 2 in this study is accepted.

Table 4.11
Hypothesis between Safety Training and Safety Performance

Hypothesis	Hypothesis Statement	Result	Strength
H_2	There is a significant relationship between safety training and safety performance	Accepted	Strong

4.7.3 Relationship Between Employee Involvement and Safety Performance

Table 4.12 below shows the results of the correlation analysis between the employee involvement variable and safety performance

Table 4.12
Relationship between Employee Involvement and Safety Performance

		Employee Involvement
Safety Performance	Pearson Correlation	0.839**
	Sig.	<0.001
	N	138

Based on the data in Table 4.12, the Pearson correlation coefficient is 0.839** indicating a significant relationship between the employee involvement and safety performance. This relationship is positive and has a strong level of strength, with (r) = 0.839 and a p-value of 0.01. Therefore, referring to Table 4.13, this analysis also indicates that hypothesis 3 in this study is accepted.

Table 4.13
Hypothesis between Employee Involvement and Safety Performance

Hypothesis	Hypothesis Statement	Result	Strength
H_3	There is a significant relationship between employee involvement and safety performance	Accepted	Strong

4.7.4 Relationship Between Safety Communication and Safety Performance

Table 4.14 below shows the results of the correlation analysis between the employee involvement variable and safety performance

Table 4.14
Relationship between Safety Communication and Safety Performance

		Employee Involvement
Safety Performance	Pearson Correlation	0.881**
	Sig.	<0.001
	N	138

Based on the data in Table 4.10, the Pearson correlation coefficient is 0.881** indicating a significant relationship between the employee involvement and safety performance. This relationship is positive and has a strong level of strength, with (r) = 0.881 and a p-value of 0.01. Therefore, referring to Table 4.15, this analysis also indicates that hypothesis 4 in this study is accepted.

Table 4.15
Hypothesis between Safety Communication and Safety Performance

Hypothesis	Hypothesis Statement	Result	Strength
H_4	There is a significant relationship between safety communication and safety performance	Accepted	Strong

4.8 Conclusion

The chapter begins with a discussion on data quality and preparation. It emphasizes the importance of data cleaning, alignment with the theoretical framework, and the reliability of the data collected. Descriptive statistics were used to verify the suitability of the 138 survey forms and to ensure there were no discrepancies in the data.

Normality tests, including skewness and kurtosis, were performed to confirm the normal distribution of the data, essential for conducting parametric analyses (Kumar, 2014; Newman & Gough, 2020). Following with an assessment of the data's reliability, the data was assessed using Cronbach's alpha to ensure the internal consistency of the measurement scales. The results indicated high reliability across all variables, with alpha values well above the acceptable threshold. Subsequent assessments comprise tests for the normality of the data distribution, a description of the participant demographics, an in-depth descriptive analysis, and a comprehensive analysis using Pearson correlation analysis. This analysis helped validate the hypotheses and provided insights into the relationships among safety performance, management practices, and other related factors (Benesty et al., 2009; Sekaran & Bougie, 2016). The aim of these assessments is to respond to the research questions mentioned in Section 1.3. The results of this study will be discussed in more detail in the following chapter. The research findings will be interpreted theoretically and practically, the study's limitations will be assessed, and recommendations for future research projects will be highlighted.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Introduction

The primary aim of this chapter is to delve into the significance of the results obtained, examining how they align with or diverge from previous research in the field of safety management practices and safety performance. This chapter bridges the gap between the empirical results and the broader theoretical framework, offering insights into the implications of the study's findings and their relevance to existing literature. This reflective analysis will provide a basis for recommendations aimed at improving future studies in this area. By identifying areas for further investigation, this chapter seeks to contribute to the ongoing discourse in safety management research and promote continuous improvement in safety practices.

5.2 Discussion of Research Finding

The discussion of research findings highlights the significant relationships identified between management commitment to safety, employee involvement, safety training, and safety performance. The results indicate that higher levels of management commitment and effective safety communication are strongly correlated with improved safety outcomes. Employee involvement and comprehensive safety training programs were also found to enhance safety performance, emphasizing the importance of a proactive safety culture. These findings align with existing literature, reinforcing the critical role of integrated safety management practices in fostering a safe working environment and reducing workplace incidents. The study's results provide valuable

insights for both theoretical understanding and practical application in safety management.

5.2.1 Relationship Between Management Commitment to Safety and Safety Performance in Air Defence Artillery Regiment.

The study reveals a very strong positive relationship between management commitment to safety and safety performance in the air defence artillery regiment. This high coefficient signifies that as management's dedication to safety increases, there is a corresponding significant improvement in safety performance within the regiment. This suggests that effective management commitment to safety is closely associated with enhanced safety performance. In practical terms, initiatives and actions taken by management to prioritize safety result in noticeable improvements in safety outcomes, such as reduced accidents and fewer safety incidents. Given the strength of this relationship, it is evident that enhancing management's commitment to safety can lead to substantial improvements in safety performance. Practical measures may include implementing comprehensive safety policies, investing in safety training programs, providing adequate resources for safety equipment, and establishing a culture where safety is a paramount concern.

The findings highlight the need for management to integrate safety as a core component of organizational strategies. By embedding safety into the fabric of the organization, from top leadership to all levels of staff, the regiment can achieve better safety outcomes. While the strong correlation provides significant insights, further research could be beneficial to explore causation and identify specific management practices that most significantly impact safety performance. Additionally, examining

if similar correlations exist in other military contexts or different organizational settings could provide broader insights into the generalizability of these findings. In conclusion, the strong positive correlation between management commitment to safety and safety performance underscores the importance of prioritizing safety at the management level. By adopting comprehensive safety strategies and fostering a safety-conscious culture, significant improvements in safety performance can be achieved within the air defense artillery regiment.

The analysis confirms a significant relationship between management commitment and safety performance among army personnel. The study shows that higher levels of management commitment, manifested through clear safety policies, resource allocation, and active participation in safety initiatives, correlate with improved safety performance. This aligns with existing literature emphasizing management's crucial role in fostering a robust safety culture (Clarke, 2013; Vinodkumar & Bhasi, 2010). Effective safety communication and reinforcement by management significantly enhance safety outcomes. Thus, enhancing management commitment to safety can substantially improve safety performance within military contexts.

5.2.2 Relationship Between Safety Training and Safety Performance in Air Defence Artillery Regiment.

The analysis supports the hypothesis that there is a significant relationship between safety training and safety performance among army personnel. Data indicate that comprehensive safety training correlates with improved safety performance. This finding aligns with existing research emphasizing the role of safety training in fostering a culture of safety (Vinodkumar & Bhasi, 2010). A Pearson correlation

coefficient indicates that the study's findings indicate an extraordinarily strong positive association between safety performance and safety training in the air defense artillery regimen. This high coefficient suggests that there is a substantial improvement in safety performance within the regiment as the scope of safety training rise. Strong positive connection, as indicated by a Pearson correlation suggests a close relationship between improved safety outcomes and thorough and effective safety training. In practical terms, this means that efforts to improve safety training result in appreciable drops in incidents and accidents. This high degree of significance emphasizes the validity of the result and emphasizes how important safety training is in affecting safety performance.

The culture within the military may significantly influence this strong relationship. Military organizations typically emphasize discipline, adherence to procedures, and a chain of command, all of which can enhance the effectiveness of safety training programs. The regimented nature of military culture ensures that safety protocols are followed diligently, and training is taken seriously, contributing to better safety performance. The inherent structure and discipline within the military can amplify the positive effects of safety training, making it more impactful compared to other organizational contexts.

Given the strength of this relationship, it is evident that enhancing safety training can lead to substantial improvements in safety performance. Practical measures may include implementing comprehensive and regular safety training programs, ensuring that all personnel receive up-to-date and relevant training, and providing resources and support for continuous learning and improvement in safety practices. The findings highlight the need for management to prioritize safety training as a core component of

organizational strategies. By embedding safety training into the fabric of the organization, from top leadership to all levels of staff, the regiment can achieve better safety outcomes. Key strategies could involve regular safety audits, continuous monitoring and improvement of safety training programs, and fostering an environment where continuous learning about safety is encouraged and supported.

To capitalize on this relationship, management should focus on several critical areas: ensuring that all personnel receive thorough and ongoing safety training; providing sufficient resources for the development and delivery of safety training programs; regularly evaluating the effectiveness of safety training to identify and address potential gaps; and building and maintaining a culture where safety training is seen as a vital component of overall safety performance. While the strong correlation provides significant insights, further research could be beneficial to explore causation and identify specific aspects of safety training that most significantly impact safety performance. Additionally, examining if similar correlations exist in other military contexts or different organizational settings could provide broader insights into the generalizability of these findings.

In conclusion, the very strong positive correlation between safety training and safety performance underscores the importance of prioritizing safety training at all levels of the organization. By adopting comprehensive safety training strategies and fostering a culture of continuous learning, significant improvements in safety performance can be achieved within the air defense artillery regiment. The disciplined and structured nature of military culture likely enhances the effectiveness of these training programs, making their impact on safety performance even more pronounced.

5.2.3 Relationship Between Employees Involvement and Safety Performance in Air Defence Artillery Regiment.

The data indicate a positive correlation between active employee participation in safety practices and enhanced safety performance as indicated by a Pearson correlation coefficient test result. This high coefficient signifies that increased employee involvement correlates with significant improvements in safety performance within the regiment. This involvement includes engaging in safety committees, reporting hazards, and participating in safety training, which fosters a proactive safety culture. These findings align with existing literature, emphasizing that when employees are actively involved, they are more likely to adhere to safety protocols and contribute to a safer work environment (Clarke, 2013). A Pearson correlation coefficient test result reflects a robust positive correlation, suggesting that greater employee engagement is closely associated with enhanced safety outcomes. In practical terms, this implies that initiatives aimed at increasing employee involvement can lead to noticeable improvements in safety performance, including reduced accidents and fewer safety incidents.

The strong level of significance of this correlation highlights the importance of fostering a culture of involvement and active participation among employees. In a military context, where hierarchical structures and discipline are paramount, employee involvement can take various forms, such as involving soldiers in safety decision-making processes, encouraging feedback on safety practices, and promoting a sense of ownership over safety protocols. The structured nature of the military, combined with the emphasis on teamwork and unit cohesion, can amplify the positive effects of employee involvement on safety performance.

Previous research supports these findings. For instance, a study by Zohar and Luria (2003) found that higher levels of worker participation in safety practices were associated with better safety performance outcomes in various high-risk industries. Additionally, research by Morrow, Koves, and Barnes (2014) demonstrated that employee involvement in safety initiatives led to a reduction in safety incidents and improvements in safety culture within a military setting. These studies provide empirical evidence that employee involvement is a critical factor in enhancing safety performance, aligning with the findings in the air defense artillery regiment.

Given the strength of this relationship, it is evident that enhancing employee involvement can lead to substantial improvements in safety performance. Practical measures may include implementing programs that encourage open communication about safety issues, involving employees in the development and review of safety procedures, and recognizing and rewarding proactive safety behavior. The findings highlight the need for management to prioritize employee involvement as a core component of organizational safety strategies. By embedding a culture of involvement into the fabric of the organization, from top leadership to all levels of staff, the regiment can achieve better safety outcomes.

To capitalize on this relationship, management should focus on several critical areas: ensuring that all personnel have opportunities to participate in safety discussions; providing platforms for sharing safety concerns and suggestions; regularly evaluating the effectiveness of employee involvement initiatives; and building and maintaining a culture where involvement in safety is seen as everyone's responsibility. While the strong correlation provides significant insights, further research could be beneficial to explore causation and identify specific aspects of employee involvement that most

significantly impact safety performance. Additionally, examining if similar correlations exist in other military contexts or different organizational settings could provide broader insights into the generalizability of these findings.

In conclusion, the strong positive correlation between employee involvement and safety performance underscores the importance of fostering a culture of active participation at all levels of the organization. By adopting comprehensive strategies to enhance employee involvement and fostering a culture where safety is a shared responsibility, significant improvements in safety performance can be achieved within the air defense artillery regiment. The collaborative and disciplined nature of military culture likely enhances the effectiveness of these involvement initiatives, making their impact on safety performance even more pronounced.

5.2.4 Relationship Between Safety Communication and Safety Performance in Air Defence Artillery Regiment.

The study reveals an exceptionally strong positive relationship between safety communications and safety performance in the air defense artillery regiment, as indicated by a Pearson correlation coefficient test result. This high coefficient signifies that improvements in the clarity, frequency, and quality of safety communications are associated with significant enhancements in safety performance within the regiment. This analysis result suggesting that effective safety communications are closely linked to better safety outcomes. Practically, this means that initiatives to improve safety communications can lead to noticeable reductions in accidents and incidents.

In a military context, where precision, clarity, and adherence to protocols are paramount, effective safety communications are crucial. The structured nature of

military operations requires clear and unambiguous communication to ensure that safety protocols are understood and followed. Regular and effective safety communications can include briefings, safety drills, clear dissemination of safety protocols, and open channels for reporting safety concerns. The disciplined environment of the military can enhance the impact of these communications, leading to better safety performance.

Previous research supports these findings. For example, a study by DeJoy et al. (2004) found that clear and frequent safety communications significantly improved safety performance in various high-risk environments. Additionally, research by Barling, Loughlin, and Kelloway (2002) demonstrated that effective communication of safety procedures was linked to a reduction in workplace injuries and an overall improvement in safety culture within military and paramilitary organizations. These studies provide empirical evidence that effective safety communications are critical in enhancing safety performance, aligning with the findings in the air defense artillery regiment.

Given the strength of this relationship, it is evident that improving safety communications can lead to substantial improvements in safety performance. Practical measures may include implementing regular safety briefings, ensuring that safety protocols are clearly communicated and easily accessible, fostering an open environment for reporting and discussing safety concerns, and using multiple communication channels to reinforce safety messages. The findings highlight the need for management to prioritize safety communications as a core component of organizational safety strategies. By embedding a culture of clear and continuous safety communication into the fabric of the organization, from top leadership to all levels of staff, the regiment can achieve better safety outcomes.

To capitalize on this relationship, management should focus on several critical areas: ensuring that all personnel receive clear and consistent safety messages; providing platforms for regular safety briefings and discussions; encouraging an open dialogue about safety issues; and building and maintaining a culture where safety communication is seen as a vital component of overall safety performance. While the strong correlation provides significant insights, further research could be beneficial to explore causation and identify specific aspects of safety communications that most significantly impact safety performance. Additionally, examining if similar correlations exist in other military contexts or different organizational settings could provide broader insights into the generalizability of these findings.

In conclusion, the very strong positive correlation between safety communications and safety performance underscores the importance of prioritizing clear and effective communication at all levels of the organization. By adopting comprehensive strategies to enhance safety communications and fostering a culture where safety is a shared responsibility, significant improvements in safety performance can be achieved within the air defense artillery regiment. The disciplined and structured nature of military culture likely enhances the effectiveness of these communication initiatives, making their impact on safety performance even more pronounced.

5.3 Study's Contribution

The contribution of the study is to indirectly reveal the inherent relationship between safety performance and independent variables. Previous research has been conducted in a variety of sectors and industries; however, by applying a similar methodology to observe the validity of the relationship between management commitment to safety, safety training, safety communication, and safety

communication, this study offers a novel viewpoint on military organization. This study stands apart in that it chooses organizational competence to carry out the extensive independent variable outcomes that are described here with the goal of enhancing safety performance. The quantitative analysis's results confirm a strong correlation between management commitment to safety, safety performance, safety training, and safety communication, which in turn determines the achievement of workplace safety excellence. In addition, this research is about to start a new chapter in the literature on management commitment to safety, safety communication within an organizational framework, safety training, and safety communication. Additionally, this study addresses important aspects of safety performance that highlight compliance and safety conversion as essential components. This is vital for dropping the number of workplace accidents, but it's also important for preventing injuries and having a beneficial impact on the organization's general safety standards. Furthermore, this study addresses important aspects of safety performance that highlight compliance and safety conversion as essential components. This is crucial for lowering the number of workplace accidents, but it's also important for preventing injuries and having a beneficial impact on the organization's general safety standards. In essence, this study explores the complexities of occupational safety in great detail and provides invaluable advice for improving safety performance throughout different military organizations.

5.4 Constrains and Recommendation

This research faced several constraints that may affect the generalizability and depth of the findings. The sample size of 138 respondents, although valuable, fell short of the recommended 181, potentially limiting the broader applicability of the results (Krejcie & Morgan, 1970). Response bias could also be a factor, as participants in a

military setting may provide socially desirable answers. The cross-sectional design of the study, capturing data at a single point in time, confines the ability to create causality between safety training, management commitment, employee involvement, and safety performance (Kumar, 2014). Additionally, the focus on the 34th Air Defence Artillery Regiment may not represent other military units, and reliance on self-reported questionnaires introduces biases like recall bias and limits the depth of understanding.

To address these limitations, future research should aim to include a larger sample size and expand to multiple regiments or branches of the military for a more comprehensive view. Conducting longitudinal studies would help establish causality by observing changes over time, providing deeper insights into the long-term impacts of the studied variables (Kumar, 2014). Incorporating qualitative methods, such as interviews or focus groups, could offer richer data and a better understanding of the attitudes and motivations regarding safety practices (Trochim & Donnelly, 2001). Expanding the scope to different military units would also help understand the impact of varying environments and organizational cultures on safety performance. Based on the findings, it is recommended to develop comprehensive safety training programs tailored to military personnel's specific needs, encourage active involvement in safety practices, and establish continuous monitoring and evaluation mechanisms to ensure effective implementation and adherence to safety protocols. By addressing these constraints and implementing these recommendations, future research can build on this study's findings to further enhance safety performance among army personnel.

5.5 Conclusion

The present study investigates the correlation between management commitment to safety, safety training, safety communication, and safety communication with safety

performance within the military personnel in 34th Air Defence Artillery Regiment. The four independent variables examined in this research have been recognized as the most influential aspects in this specific organizational setting, displaying robust associations and notable effects on safety performance. Furthermore, all the hypotheses put forward in this study have been validated. It is anticipated that this research will offer to this regiment a valuable insight into the safety outlook of its military personnel, thereby functioning as a manual for enhancing safety performance within the institution. Additionally, the outcomes of this study will augment in this regiment a comprehension of safety performance. Furthermore, this study is poised to be advantageous to a variety of stakeholders, encompassing individuals engaged in scholarly investigations, students, end-users, and professionals within the realm of safety performance management. Armed with a deeper understanding of this correlation, they can implement suitable measures to fortify workplace safety, consequently fostering a more secure and efficient environment.

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APPENDIX A: QUESTIONNAIRE FORM

"Relationship between Safety Management Practice and Safety Performance in Air Defence Artillery Regiment"

Prepared By:

Mej Wan Muhammad Awis bin Wan Sallam

(827949)

Othman Yeop Abdullah Graduate School of Business,

Universiti Utara Malaysia

2024

To whom it may concern,

DISTRIBUTION OF SURVEY FORM

1. Please be informed that I, Mej Wan Muhammad Awis bin Wan Sallam (3010425), as the Battery Commander at 34th Royale Artillery Regiment Air Defence, I am currently in my final semester of studies for the Master of Science in Occupational Safety and Health Management at the Othman Yeop Abdullah Graduate School of Business, Universiti Utara Malaysia.

2. The distribution of this survey form is intended to complete my research and thesis entitled "Relationship between Safety Management Practice and Safety Performance in Air Defence Artillery Regiment".

3. This study aims to determine the relationship between safety management practice and safety performance effectiveness in the air defence artillery regiment.

4. The request for the implementation of this survey session has been submitted through the Othman Yeop Abdullah Graduate School of Business and has been approved by the Commanding Officer of 34th Royale Artillery Regiment Air Defence.

5. Therefore, I kindly request the cooperation of all recipients to share relevant information honestly and openly. All information shared will be kept confidential, and there is no need to write your name on this survey form.

Your cooperation is greatly appreciated. Thank you for your time and cooperation.

Best regards,

Mej Wan Muhammad Awis bin Wan Sallam, Battery Commander, T Bty, 34 RAR
Master of Science Candidate in Occupational Safety and Health Management
Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia

This Survey Form consist of 6 Sections/*Borang Kaji Selidik ini mengandungi 6*

Section A: Background of Research Respondent
Bahagian A: Latar Belakang Responden Kajian.

Please tick (√) on the appropriate box.
Sila tandakan (√) pada petak yang berkenaan.

1. **Gender**/*Jantina*

- ☐ **Male** / *Lelaki*
- ☐ **Female** / *Perempuan*

2. **Age** / *Umur*

- ☐ **20 - 29 Years** / *20 - 29 Tahun*
- ☐ **30 - 39 Years** / *30 - 39 Tahun*
- ☐ **40 - 49 Years** / *40 - 49 Tahun*
- ☐ **50 Years and above**/ *50 Tahun ke atas*

3. **Rank** / *Pangkat*

- ☐ **Major/ Capt** / *Mejar/Kapt*
- ☐ **Lieutenant**/ *Leftenan*
- ☐ **Warrant Officer** / *Pegawai Waren*
- ☐ **Sergent** / *Sarjan*
- ☐ **Bombardier** / *Bombadier*
- ☐ **Gunner**/*Perajurit Muda*

4. **Trade** / *Tred*

- ☐ **Management** / *Pengurusan*
- ☐ **Gun** / *Meriam*
- ☐ **Radar** / *Radar*
- ☐ **Radioman** / *Semboyan*
- ☐ **Transport** / *Pemandu*
- ☐ **Others** / *Lain-lain*

5. Education Level
Tahap Pendidikan

- ☐ **Master Degree** / *Ijazah Sarjana*
- ☐ **Bachelor Degree** / *Ijazah Sarjana Muda*
- ☐ **Diploma** / *Diploma*
- ☐ **SPM/SPMV/STPM**
- ☐ **Others** / *Lain-lain*

6. Years of Service/
Tempoh Perkhidmatan

- ☐ **5 Years below** / *5 Tahun Ke Bawah*
- ☐ **6 - 10 Years** / *6 - 10 Tahun*
- ☐ **11 - 15 Years** / *11 - 15 Tahun*
- ☐ **16 -20 Years** / *16 -20 Tahun*
- ☐ **21 Years above** / *21 Tahun Ke Atas*

SECTION B: SAFETY PERFORMANCE

BAHAGIAN B: PRESTASI KESELAMATAN

Considering only your perception, please circle the most appropriate answer to you based on the scale below:

Dengan hanya mengambil kira pandangan anda, bulatkan jawapan yang paling tepat kepada anda berpandukan pada skala jawapan di bawah:

1	2	3	4	5
Strongly Disagree ***Sangat Tidak Setuju***	Disagree ***Tidak Setuju***	Moderate ***Moderasi***	Agree ***Setuju***	Strongly Agree ***Sangat Setuju***

	Question / *Soalan*	**Jawapan**				
1.	**I use all the necessary safety equipment provided to me.** *Saya menggunakan semua peralatan keselamatan yang diperlukan yang diberikan kepada saya.*	**1**	**2**	**3**	**4**	**5**
2.	**I carry out the work assigned to me in a safe manner** *Saya menjalankan kerja yang diberikan kepada saya dengan cara yang selamat*	**1**	**2**	**3**	**4**	**5**

	Question / *Soalan*	**Jawapan**				
3.	**I follow proper safety procedures and rules while doing my job** *Saya mengikuti prosedur dan peraturan keselamatan yang betul semasa menjalankan kerja saya*	**1**	**2**	**3**	**4**	**5**
4.	**I ensure a high level of security when I conduct my career** *Saya memastikan tahap keselamatan yang tinggi apabila saya menjalankan kerjaya saya*	**1**	**2**	**3**	**4**	**5**
5.	**I will make a complaint to the team if I become aware of a security issue in my organization** *Saya akan membuat aduan kepada pihak pasukan jika menyedari terdapat perkara yang berkaitan dengan keselamatan dalam organisasi saya*	**1**	**2**	**3**	**4**	**5**
6.	**I put more effort into improving security in the organization** *Saya meletakkan usaha yang lebih untuk meningkatkan keselamatan dalam organisasi*	**1**	**2**	**3**	**4**	**5**
7.	**I voluntarily carry out tasks or activities that help improve safety in the organization** *Saya secara sukarela menjalankan tugas atau aktiviti-aktiviti yang membantu meningkatkan keselamatan dalam organisasi*	**1**	**2**	**3**	**4**	**5**
8.	**I encourage my colleagues to work safely** *Saya menggalakkan rakan sekerja saaya untuk bekerja dengan selamat*	**1**	**2**	**3**	**4**	**5**

SECTION C: MANAGEMENT COMMITMENT TO SAFETY

BAHAGIAN C: KOMITMENT PENGURUSAN TERHADAP KESELAMATAN

Considering only your perception, please circle the most appropriate answer to you based on the scale below:

Dengan hanya mengambil kira pandangan anda, bulatkan jawapan yang paling tepat kepada anda berpandukan pada skala jawapan di bawah:

1	2	3	4	5
Strongly Disagree ***Sangat Tidak Setuju***	Disagree ***Tidak Setuju***	Moderate ***Moderasi***	Agree ***Setuju***	Strongly Agree ***Sangat Setuju***

	Question / *Soalan*	**Jawapan**				
1.	**Management gives high priority to safety** *Pihak pasukan memberi keutamaan yang tinggi kepada keselamatan*	**1**	**2**	**3**	**4**	**5**
2.	**Safety rules and procedures are strictly followed by the regiment management** *Peraturan dan prosedur keselamatan dipatuhi dengan tegas oleh pihak pasukan*	**1**	**2**	**3**	**4**	**5**
3.	**Corrective action is always taken by the regiment when unsafe behavior is reported** *Tindakan pembetulan sentiasa diambil oleh pihak pasukan apabila tingkah laku tidak selamat dilaporkan*	**1**	**2**	**3**	**4**	**5**
4.	**At my workplace, officers and branch leaders show interest in the safety of members** *Di tempat kerja saya, pegawai dan ketua cawangan menunjukan minat terhadap keselamatan anggota*	**1**	**2**	**3**	**4**	**5**
5.	**Regiment management considers safety as important as work results** *Pihak pasukan mengambil kira keselamatan seperti sama penting dengan hasil kerja*	**1**	**2**	**3**	**4**	**5**

	Question / *Soalan*	**Jawapan**				
6.	**The top management attended the security meeting** *Pemerintah atasan menghadiri mesyuarat keselamatan*	**1**	**2**	**3**	**4**	**5**
7.	**I do not feel that the team is willing to compromise on security issues in order to improve work results** *Saya tidak merasakan pihak pasukan sanggup berkompromi terhadap isu keselamatan demi meningkatkan hasil kerja*	**1**	**2**	**3**	**4**	**5**
8.	**When there is a situation that almost causes an accident, the management takes corrective action immediately** *Apabila terjadi situasi yang hampir menyebabkan kemalangan, pihak pengurusan mengambil tindakan penyelesaian dengan segera*	**1**	**2**	**3**	**4**	**5**
9.	**My organization provides adequate safety protection equipment to the members** *Organisasi pasukan saya menyediakan peralatan perlindungan keselamatan secukupnya kepada anggota*	**1**	**2**	**3**	**4**	**5**

SECTION D: SAFETY TRAINING

BAHAGIAN D: LATIHAN KESELAMATAN

Considering only your perception, please circle the most appropriate answer to you based on the scale below:

Dengan hanya mengambil kira pandangan anda, bulatkan jawapan yang paling tepat kepada anda berpandukan pada skala jawapan di bawah:

1	2	3	4	5
Strongly Disagree ***Sangat Tidak Setuju***	Disagree ***Tidak Setuju***	Moderate ***Moderasi***	Agree ***Setuju***	Strongly Agree ***Sangat Setuju***

	Question / *Soalan*	**Jawapan**				
1.	**My organization provides comprehensive training to members on workplace safety** *Organisasi saya memberi latihan komprehensif kepada anggota tentang keselamatan di tempat kerja*	**1**	**2**	**3**	**4**	**5**
2.	**New members are adequately trained on safety rules and procedures** *Anggota baharu dilatih dengan secukupnya tentang peraturan dan prosedur keselamatan*	**1**	**2**	**3**	**4**	**5**
3.	**Safety issues are given priority in the training program while at the regiment or at the training center.** *Isu-isu keselamatan diberi keutamaan dalam program latihan semasa di pasukan atau di pusat latihan.*	**1**	**2**	**3**	**4**	**5**
4.	**I am adequately trained to respond to emergency situations at my workplace** *Saya dilatih dengan secukupnya untuk bertindak balas terhadap situasi kecemasan ditempat kerja saya*	**1**	**2**	**3**	**4**	**5**
5.	**The team encourages all levels of members to attend the safety training program** *Pihak pasukan menggalakkan semua peringkat anggota untuk menghadiri program latihan keselamtan*	**1**	**2**	**3**	**4**	**5**
6.	**The safety training I have been given is sufficient to enable me to control hazards at work** *Latihan keselamatan yang diberikan kepada saya adalah mencukupi untuk membolehkan saya mengawal bahaya di tempat kerja*	**1**	**2**	**3**	**4**	**5**

SECTION E: EMPLOYEES INVOLVMENT

BAHAGIAN D: **PENGLIBATAN ANGGOTA**

Considering only your perception, please circle the most appropriate answer to you based on the scale below:

Dengan hanya mengambil kira pandangan anda, bulatkan jawapan yang paling tepat kepada anda berpandukan pada skala jawapan di bawah:

1	2	3	4	5
Strongly Disagree ***Sangat Tidak Setuju***	Disagree ***Tidak Setuju***	Moderate ***Moderasi***	Agree ***Setuju***	Strongly Agree ***Sangat Setuju***

	Question / *Soalan*	**Jawapan**				
1.	**The regiment management encourages member involvement in safety related issues** *Pihak pasukan menggalakkan penglibatan anggota dalam isu berkaitan keselamatan*	**1**	**2**	**3**	**4**	**5**
2.	**The safety and health committee at my team consists of representatives from the regiment administration. officers and members** *Jawatankuasa keselamatan dan kesihatan di pasukan saya terdiri daripada wakil daripada pihak pentadbiran pasukan. pegawai dan dan anggota*	**1**	**2**	**3**	**4**	**5**
3.	**Regiment management always welcomes input from all levels of members before making final decisions on safety-related matters** *Pihak pengurusan pasukan sentiasa mengalu-alukan pendapat daripada semua peringkat anggota sebelum membuat keputusan muktamad mengenai perkara berkaitan keselamatan*	**1**	**2**	**3**	**4**	**5**
4.	**All levels of members are really helpful in identifying safety related issues** *Semua peringkat anggota benar-benar membantu dalam mengenal pasti isu-isu berkaitan keselamatan*	**1**	**2**	**3**	**4**	**5**

SECTION E: SAFETY COMMUNICATION AND FEED BACK

BAHAGIAN D: KOMUNIKASI KESELAMATAN DAN MAKLUMBALAS

Considering only your perception, please circle the most appropriate answer to you based on the scale below:

Dengan hanya mengambil kira pandangan anda, bulatkan jawapan yang paling tepat kepada anda berpandukan pada skala jawapan di bawah:

1	2	3	4	5
Strongly Disagree ***Sangat Tidak Setuju***	Disagree ***Tidak Setuju***	Moderate ***Moderasi***	Agree ***Setuju***	Strongly Agree ***Sangat Setuju***

	Question / *Soalan*	**Jawapan**				
1.	**Security-related information is constantly updated** *Maklumat berkaitan keselamatan sentiasa dikemas kini*	**1**	**2**	**3**	**4**	**5**
2.	**I know a lot of information about security** *Saya mengetahui banyak maklumat tentang keselamatan*	**1**	**2**	**3**	**4**	**5**
3.	**Safety communication makes me pay attention to safety** *Komunikasi keselamatan membuatkan saya memberi perhatian tentang keselamatan*	**1**	**2**	**3**	**4**	**5**
4.	**The regiment administration and my officials often discuss safety issues with me** *Pihak pentadbiran pasukan dan pegawai saya sering berbincang isu keselamatan dengan saya*	**1**	**2**	**3**	**4**	**5**
5.	**I will be given constructive reprimand if I work in an unsafe manner** *Saya akan diberi teguran yang membina jika saya bekerja dengan cara yang tidak selamat*	**1**	**2**	**3**	**4**	**5**
6.	**Security information is always emphasized by officers and branch heads to me** *Maklumat keselamatan sentiasa ditekankan oleh pegawai dan ketua cawangan kepada saya*	**1**	**2**	**3**	**4**	**5**

TERIMA KASIH ATAS KESUDIAN YBHG TUAN/PUAN MELUANGKAN MASA MENJAWAB KAJI SELIDIK INI

APPENDIX B: Reliability Test

1. Safety Performance

Reliability Statistics

Cronbach's Alpha	N of Items
.967	8

2. Management Commitment to Safety

Reliability Statistics

Cronbach's Alpha	N of Items
.970	9

3. Safety Training

Reliability Statistics

Cronbach's Alpha	N of Items
.969	6

4. Employees Involvement

Reliability Statistics

Cronbach's Alpha	N of Items
.962	4

5. Safety Communication and feedback

Reliability Statistics

Cronbach's Alpha	N of Items
.957	6

APPENDIX C: Normality TestStatistics

Statistics

		meanSP	meanMC	meanST	meanEI	meanSC
N	Valid	138	138	138	138	138
	Missing	0	0	0	0	0
Skewness		-.034	.082	-.001	.057	-.029
Std. Error of Skewness		.206	.206	.206	.206	.206
Kurtosis		.083	-.083	-.102	.104	.192
Std. Error of Kurtosis		.410	.410	.410	.410	.410

APPENDIX D: Correlation Analysis

Correlations

		meanSP	meanMC	meanST	meanEI	meanSC
meanSP	Pearson Correlation	1	.842**	.872**	.839**	.881**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	138	138	138	138	138
meanMC	Pearson Correlation	.842**	1	.924**	.926**	.885**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	138	138	138	138	138
meanST	Pearson Correlation	.872**	.924**	1	.932**	.946**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	138	138	138	138	138
meanEI	Pearson Correlation	.839**	.926**	.932**	1	.924**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	138	138	138	138	138
meanSC	Pearson Correlation	.881**	.885**	.946**	.924**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	138	138	138	138	138

**. Correlation is significant at the 0.01 level (2-tailed).