



BOOSTING OFFICER CADET EXCELLENCE: HARNESSING SAFETY AND HEALTH AWARENESS AT THE NATIONAL DEFENCE UNIVERSITY OF MALAYSIA

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Article Info:

Article history:

Received date: 10.10.2024

Revised date: 24.10.2024

Accepted date: 12.11.2024

Published date: 12.12.2024

To cite this document:

Salam, M. H. A., Sukeman, M. A. M., Saudi, N. S. M., Zainol, N. A. M., Ismail, A., & Wahab, I. A. (2024). Boosting Officer Cadet Excellence: Harnessing Safety And Health Awareness At The National Defence University Of Malaysia. *International Journal of Law, Government and Communication*, 9 (38), 86-95.

DOI: 10.35631/IJLGC.938007

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Abstract:

Occupational Safety and Health (OSH) is essential for safeguarding employees, enhancing productivity, and reducing costs associated with workplace incidents. This study examines the impact of OSH awareness on the performance of officer cadets at the National Defence University of Malaysia (NDUM), within the framework of Malaysia's Occupational Safety and Health Act 1994. Through a quantitative analysis of questionnaire data, the study reveals that both occupational safety and health awareness positively influence cadet performance. These findings are crucial for enhancing training programs, offering the university a pathway to produce higher-quality graduates and ensure a safer, healthier environment for future cadets. Key recommendations include promoting OSH awareness, implementing daily safety routines, and providing compliance guidelines in line with the OSH Act 1994. Harnessing OSH practices not only boost cadet excellence but also support broader organizational benefits such as reduced disruptions, lower turnover, and enhanced economic growth. This focus on OSH aligns with the United Nations Sustainable Development Goal (SDG) 3: "Good Health and Well-being," by fostering a safe and healthy environment conducive to the well-being of cadets. It also supports SDG 8: "Decent Work and Economic Growth," by contributing to the development of a stable, healthy workforce, which is crucial for sustainable economic growth. Prioritizing OSH practices at NDUM thus not only enhances cadet performance but also aligns with global efforts to promote health, safety, and economic resilience.

Keywords:

Officer Cadets, OSH Awareness, Performance, Safety and Health

Introduction

Recognizing the critical importance of Occupational Safety and Health (OSH) is imperative for all stakeholders across industries to ensure the well-being and safety of employees. A secure and supportive work environment mitigates the risk of accidents and illnesses, enhancing overall workplace efficiency. Failure to address these concerns can lead to accidents, occupational diseases, increased health costs, and work disruptions. Hence, it is essential to have a thorough understanding of occupational safety and health to address these issues effectively and create a safe, healthy, and productive work environment. All parties, including employers, employees, and regulatory bodies, must be engaged in fostering this awareness.

An effective Occupational Safety and Health (OSH) system is necessary to safeguard production processes and work environments, ensuring the safety of workers and others within the workplace (Gbadago et al. 2017). Promoting knowledge and understanding of OSH not only reduces risks but also enhances employee productivity. Workers who are assured of their safety are likely to perform better, as a robust OSH system alleviates concerns about their well-being, leading to improved performance (Dedi et al. 2020). The National Defence University of Malaysia (NDUM), a premier defense institution, prioritizes OSH awareness among officer cadets to ensure their optimal performance. The academic and training success of officer cadets is vital, as they are expected to excel in their studies while undergoing rigorous military training. Ensuring their safety and welfare is crucial for maintaining their physical fitness and overall effectiveness. Various activities pose risks to their well-being, necessitating stringent safety measures.

Organizations responsible for cadet safety must implement the most effective precautions, providing necessary instructions, training, and supervision (Watoni, 2019). Safety practices encompass the strategies and processes designed to protect staff, making them crucial for the cadets' performance in their official duties. Maintaining high morale and enthusiasm is essential for their training success, directly impacting their individual and collective performance. This study at NDUM, which offers military training in fields such as engineering, administration, science, technology, and medicine, aims to explore how OSH awareness affects cadet performance. A comprehensive examination of this issue is anticipated to yield valuable insights and favorable outcomes.

Problem Statement

The primary obstacle that officer cadets must overcome in today's world is maintaining their physical and mental well-being so that it does not impact their performance in training. The vast majority of officer cadets will be required to participate in a variety of demanding military drills, on both the mental and physical fronts. Because of this, a person's safety and health at work should be handled seriously because performance is directly related to a person's ability to be healthy and safe in the workplace. Workers who are aware of their job's health and safety standards and procedures, as well as the tools they utilize, are able to operate more effectively and efficiently, resulting in improved employee performance (Hudson, 2012). As a result, it is of the utmost importance to emphasise the necessity of increasing occupational safety and health

knowledge in order to improve the performance of officer cadets. It is anticipated that a comprehensive understanding of this occurrence will allow for the development of a powerful strategy that will boost the proficiency of officer cadets at NDUM. According to the findings of the study, there is a connection between the effects of workplace safety and health awareness and the degree of performance achieved by officer cadets. To achieve a deeper comprehension of this matter, additional research with a wider scope is required to be carried out. The study aims to assess the levels of occupational safety awareness, occupational health awareness, and the performance of officer cadets, and their interrelationships and impact on cadet performance.

Literature Review

This section of the literature review will focus on several essential aspects in the area of NDUM regarding the impact of occupational safety and health awareness that influence the performance of officer cadets. Additionally, it will outline the literature review, which consists of claims or evidence supporting the study's goals and the subject under investigation. Effect of Occupational Safety and Health on Performance: An Empirical Investigation. A study titled "Effect of Occupational Safety and Health on Performance: An Empirical Investigation" was undertaken in Iskanto et al. (2020) indicated that the variable of work safety has a notable impact on performance, while also highlighting the important influence of occupational health variables on performance. Furthermore, it may be inferred that the combination of occupational safety and health factors has a substantial impact on performance factors.

(Djaelani et al. 2021) focused on strengthening the culture of occupational safety and health as a contributor to the formation of construction project performance. The research was carried out via a questionnaire and a sample of 100 specifically chosen respondents. The study confirmed that the culture of occupational safety and health has a direct impact on the performance of building projects. In another study, Watoni (2019), did a study on the impact of occupational safety and health as well as work discipline on employee performance in the environmental services of Yogyakarta City. The research was carried out utilising a questionnaire and a sample of 135 respondents who were randomly chosen to represent personnel of the Sanitation Division in the Environmental Services of Yogyakarta City. The study findings indicate that there are certain factors related to occupational safety and health, as well as work discipline, that have an impact on employees' performance. Therefore, it is anticipated that by upholding occupational safety and health standards and promoting work discipline, there will be a sustained enhancement in employees' performance. Sabrina et al. (2021) conducted a study at PT Sarana Bandar Nasional to determine if occupational safety, health, and the work environment impact employee performance. The research concluded that both occupational safety and health, as well as the work environment, have a direct influence on employee performance. Moses and Yeboah (2022) examined the impact of Occupational Safety and Health (OSH) on the performance of Ghanaian construction employees. The study found that OSH policies significantly improved employee performance and aligned with international best practices. It also concluded that management efforts were more crucial than employee actions in ensuring safety and health in the construction sector, challenging Heinrich Domino's theory.

Recent literature highlights the critical role of Occupational Safety and Health (OSH) in military training environments, particularly for cadets. Studies emphasize that OSH awareness and practices are essential in reducing occupational injuries, managing stress, and enhancing overall performance. For instance, Jansen et al. (2021) found that OSH interventions

significantly reduced injury and illness rates among U.S. Navy recruits, while Beck et al. (2022) demonstrated that improved OSH protocols could mitigate stress and boost performance among Swiss military academy cadets. Additionally, Murray et al. (2021) and Meeker et al. (2020) stress the importance of fitness and fatigue management in preventing injuries, underscoring the need for effective OSH practices in training programs. These findings align with broader public health perspectives that advocate for robust OSH measures to maintain the well-being and readiness of military personnel (Bachynski & Burke, 2020). Integrating these practices not only enhances cadet performance but also contributes to long-term institutional efficiency and resilience.

Methodology

Theoretical Framework

Maslow's theory refers to the Hierarchy of Needs introduced by Abraham Maslow, a leading psychologist. This theory describes a five-level hierarchy of human needs, where each level forms a ladder of needs that must be met sequentially. Maslow's hierarchy of needs is a psychological theory that explains human motivation. It consists of a five-tier model of requirements, which are frequently represented as tiers within a pyramid. Maslow's theory been met. According to Maslow's theory, one does not feel the second need until the demands of the first have been satisfied or the third until the second has been satisfied (Jerome, 2013). In this theory, the second level pertains to the matter of safety, which requires significant emphasis. Security is a crucial component among the five levels of human needs. It is imperative to treat it with the utmost seriousness, particularly with regard to personal safety. Considering the circumstances, it is crucial to prioritise the personal safety of the officer cadets since it can have an impact on their professional performance. Occupational Safety and Health (OSH) procedures enhance the psychological well-being of officer cadets by addressing their need for safety and alleviating their anxiety and tension related to potential hazards. Cadets exhibit a greater inclination to engage in open communication, undertake calculated risks, and explore novel skills or knowledge when they perceive the operational environment to be psychologically secure. This can significantly enhance both the cadets' performance and the learning outcomes.

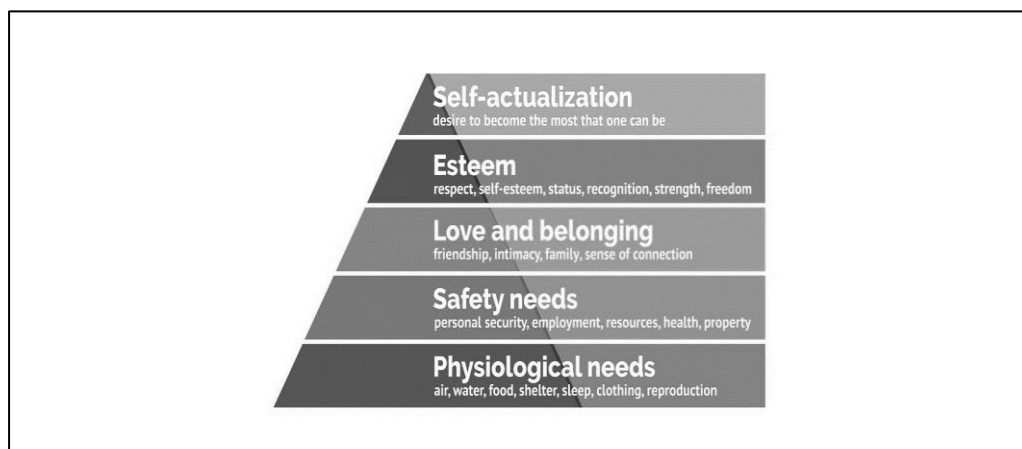


Figure 1: Maslow's Hierarchy of Needs

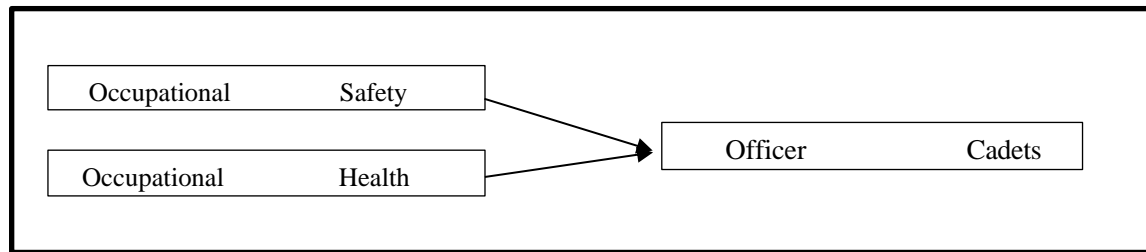


Figure 2: Conceptual Framework

Research Instrument and Measurement

The study aims to assess the level of occupational safety awareness, occupational health awareness, and performance of officer cadets, examine the relationship between these factors, and evaluate the extent to which occupational safety and health awareness influence the performance of officer cadets, encompasses descriptive analysis, measurement on a scale, and inference. A multiple linear regression analysis was applied to ascertain the extent to which the independent variables, namely occupational safety awareness and occupational health awareness, contribute to explain the dependent variable, which is the performance of officer cadets. The collected questionnaire from the survey was processed and recorded, and the data was subsequently analysed using Statistical Package for Social Science (SPSS) Version 26.0 to assess and investigate the outcomes. The objective is to evaluate the hypothesis. Analysis encompasses descriptive analysis, measurement on a scale, and inference. A multiple linear regression analysis was applied to ascertain the extent to which the independent variables, namely occupational safety awareness and occupational health awareness, contribute to explaining the dependent variable, which is the performance of officer cadets.

Estimation model of the multiple regression method for this study is as follows:

$$Y = b_0 + b_1(X_1) + b_2(X_2)$$

Where:

Y = Performance officer cadets

b₀= Constant

b₁= Regression Coefficient

X₁= Safety awareness

X₂= Health awareness

Empirical Findings

The Descriptive analysis for variables has been tested and all the data were clean, refer Table 1. Next the empirical findings indicated the Pearson correlation between Safety Awareness (X₁) with Performance Officer Cadets (Y) reported with a value of $r = 0.935$, and $p\text{-value} = 0.000$, $\alpha = 0.05$, refer Table 2. Based on the results, the $p\text{-value}$ is less than α value. This shows that there is a correlation between the safety awareness with performance officer cadets. Hence the first hypothesis is accepted with a positive significant relationship. While the correlation between the health awareness (X₂) and performance officer cadets (Y) with a value of $r =$

0.931, and p -value = 0.000, α = 0.05. Based on the results, the p -value is less than α value. This shows that there is a correlation between the health awareness with performance officer cadets. The second hypothesis is accepted because there is a positive significant relationship between the health awareness (X2) and performance officer cadets (Y) because of the p value less than 0.05 to obtain a positive correlation relationship, refer Table 3. Based on the regression method based both two variables were found to be significant to explain the performance of officer cadets $F = 971.228$, refer Table 4. Both two independent variables were found to be significant in explaining the dependent variable Y (performance of officer cadets) which is (X1) safety awareness ($t = 5.860$, $p = 0.000$), (X2) health awareness ($t = 4.505$, $p = 0.000$). The estimated coefficient value for b_0 is 0.207, b_1 is 0.547 and b_2 is 0.408. Therefore, the estimation model of the multiple regression method for this study is as follows:

$$Y (\text{performance officer cadets}) = 0.207 + 0.547(X1) + 0.408(X2)$$

The findings of regression are as follows:

$$Y = 0.207 + 0.547(X1) + 0.408(X2)$$

The importance of occupational safety and health awareness for cadet excellence and performance is well-supported in the literature. Beck et al. (2022) highlight that managing stress and ensuring safety significantly impact cadet performance and well-being. Bachynski and Burke (2020) discuss how effective safety measures contribute to better performance and fewer injuries from a public health perspective. Murray, Johnstone, and Miller (2021) emphasize the role of physical fitness and injury prevention strategies in enhancing performance and preventing injuries. Morrison and Sherwood (2022) demonstrate that resilience and effective health and safety practices are crucial for optimal performance and safety outcomes. Additionally, Meeker, Gregory, and Erwin (2020) show that proper safety and health management can significantly improve military training performance and safety. Together, these studies underscore the critical role of safety and health awareness in achieving cadet excellence.

Table 1: Descriptive Test for All Variables

Analysis Descriptive	Variables		
	(Y)	(X1)	(X2)
Mean	4.5	4.46	4.54
Median	4.8	4.8	5.0
Variance	0.37	0.35	0.37
Std. Deviation	0.60	0.59	0.61
Minimum	3.00	2.20	2.60
Maximum	5.00	5.00	5.00
Range	2.00	2.80	2.40

InterquartileRange	1.00	1.00	1.00
Skewness	-1.09	-1.23	-1.32
Percentile			
25	4.00	4.00	4.00
50	4.80	4.80	5.00
75	5.00	5.00	5.00
90	5.00	5.00	5.00

Table 2: The relationship between Safety Awareness, Health Awareness with Performance Officer Cadets using Pearson correlation coefficient (r)

		Safety Awareness	Health Awareness	Performance
Safety Awareness	Pearson Correlation	1	.972**	.935**
	Sig. (2-tailed)		.000	.000
	N	260	260	260
Health Awareness	Pearson Correlation	.972**	1	.931**
	Sig. (2-tailed)		.000	.000
	N	260	260	260
Performance	Pearson Correlation	.935**	.931**	1
	Sig. (2-tailed)		.000	.000
	N	260	260	260

Table 3: Regression Analysis

Performance Officer Cadets	B (Unstandardized Coefficients)	Std. Error	Beta (Standardized Coefficients)	T	P-Value
Constant	.207	.098		2.109	.036
Safety Awareness	.547	.093	.535	5.860	.000
Health Awareness	.408	.091	.411	4.505	.000

Findings and Recommendation

Based on the research findings, it is evident that awareness of occupational safety and health plays a crucial role in enhancing the performance of officer cadets at NDUM. Consequently, the empirical findings evidence a strong relationship of that awareness of occupational safety and health is instrumental in enhancing the performance of officer cadets at the NDUM. The university must prioritize these factors as part of a strategic effort to elevate cadet performance and overall institutional excellence.

Integration of OSH Awareness into Training Programs:

The Occupational Safety and Health Act 1994 (OSHA 1994) in Malaysia mandates that employers, including educational institutions like NDUM, ensure the safety, health, and welfare of their employees, which in this context includes officer cadets. By embedding OSH principles into the training curriculum, NDUM can not only comply with these legal requirements but also foster a safer and more efficient learning environment, ultimately enhancing cadet performance. The suggestions are as follows:

Strategic Emphasis on Continuous Improvement:

While the current performance of NDUM cadets is satisfactory, the study highlights significant potential for further improvement. Strategically, the university should leverage the insights from this research to implement continuous improvement processes, particularly focusing on enhancing safety and health awareness. This approach aligns with the objectives of OSHA 1994, which encourages proactive measures to prevent accidents and occupational illnesses, thereby contributing to the holistic development of cadets.

Cultivation of a Safety-First Culture:

NDUM should aim to cultivate a culture where safety and health are intrinsic values shared by all cadets and staff. This culture, supported by adherence to OSHA 1994 standards, would not only reduce risks but also empower cadets to perform at their best, knowing that their well-being is a top priority.

Strategic Alignment with National Safety Standards:

Aligning NDUM's training programs with national OSH standards, as outlined in OSHA 1994, will ensure that the university remains at the forefront of military education in Malaysia. This strategic alignment not only enhances the university's reputation but also ensures that cadets

are well-prepared to meet the safety and health challenges they may encounter in their military careers.

Conclusions

The research underscores the critical importance of occupational safety and health (OSH) awareness in enhancing the performance of officer cadets at the National Defence University of Malaysia (NDUM). By embedding OSH principles in accordance with the Occupational Safety and Health Act 1994 (OSHA 1994) into its training programs, NDUM not only ensures regulatory compliance but also cultivates a safer and more efficient learning environment. This strategic emphasis aligns with the United Nations Sustainable Development Goals—specifically SDG 3 (“Good Health and Well-being”) and SDG 8 (“Decent Work and Economic Growth”)—by fostering well-being and supporting economic growth through the reduction of accidents, improved cadet preparedness, and long-term institutional efficiency. As a result, NDUM is better equipped to develop high-performing cadets, thereby contributing to both national security and broader economic resilience. In conclusion, NDUM’s commitment to enhancing safety and health awareness, in line with Malaysia’s OSHA 1994, will be a critical driver of cadet performance and overall excellence.

Acknowledgements

We acknowledge to Military Training Academy for giving permission to do this survey towards cadets students and the research encourage by National Defence University of Malaysia (NDUM).

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