

Conceptual Framework for Military Personnel Cognitive Readiness in Malaysian Army

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Abstract

The purpose of this article is to develop a conceptual framework for military cognitive readiness (CR) in the Malaysian Army (MA). CR refers to military personnel who are cognitively ready to perform in military operations with military knowledge, skill, and abilities (KSAs). The military KSAs provide military personnel at each level (strategic, operational, and tactical) with capabilities to think critically, problem-solving, and decisions making effectively during military operations. The underpinning theory related to the development of cognitive readiness of military personnel has been identified which involves human resources development (HRD) theory and cognitive readiness theory. The review found that the development of military personnel's cognitive readiness is related to the relationship between factors that influence the transfer of training that occurs through military training. Conceptual frameworks and hypotheses have been formulated to be analyzed and measured by testing the relationship.

Keywords: Cognitive Readiness, Military Personnel, Military Training, Transfer of Training

Introduction

Wars may be fought with weapons but they are won by men.

George S. Patton, 1933

General Patton's quote can be referred to military personnel who are physically and cognitively prepared to succeed in military operations. The complex operating environment (COE) of military operations has become extremely complex because of combinations of asymmetric threats, the rapid advances and proliferation of technology, the condition of the environment operation (experiencing hot days, cold nights, and trips both above and below sea level), high levels of psychological stress involvement of physical and mental fatigue (Aguilera et al., 2021). Despite challenging the COE, military personnel readiness must be

maintained to execute the orders of higher commands and the assigned mission. Researchers agree on the idea of the concept of cognitive readiness (CR) to ensure that military personnel are cognitively ready to accomplish the military (Crameri et al., 2021).

The Malaysian Army (MA) has also been involved in meeting the environmental changes since its establishment in 1933 from fighting communist counter-insurgency warfare to the contemporary setting of Hybrid Warfare. Currently, the MA launched Army4NextG for future development plans stated that human resource development is part of the force development to support the Malaysian Defence White Paper (MDWP) by focusing on moral, cognitive, and physical military personnel. The MA realizes the challenges in multi-domain operations, technology, and the generation gap among military personnel to remain competent and ready for deployment. Due to these challenges, the MA identified that military personnel struggles with thinking skills, problem-solving, and decision-making during conducted military operation because of a lack of military knowledge, skills, and abilities (Malaysian Army, 2021). Hence, military personnel must not only be ready physically, but they must also be ready cognitively. Preparing for the military operation must include rigorous education and self-development, combined with military training to achieve military personnel readiness.

Military training and education are the fundamental strategies related to build up CR for military personnel (Crameri et al., 2021). However, research suggests that the application of the science of training leads to facilitating successful outcomes of military training, especially the transfer of training (Salas et al., 2012; Grossman & Salas, 2011). What remains to be done is to determine the factor that influences the transfer of training roles and significantly affects the cognitive readiness of military personnel. The conceptual framework developed here is a means to address the gap between the transfer of training and CR by offering a unifying framework to integrate the multiple theories and factors that influence the transfer of training identified.

Literature Review

This article aims to provide a conceptual framework for Military personnel's Cognitive Readiness (CR) in the MA. A key question related to military personnel readiness issues on the battlefield is why and how to prepare military personnel to meet the demands of carrying out a range of missions that require broad knowledge, skills, and abilities. Defense stakeholders now realize that the military has entered a new era of warfare involvement Multi-domain operations occur in volatile, uncertain complex, and ambiguous (VUCA) environments where our capability should adapt to changing operational environments to defend and promote national interests (Johansen et al, 2014; Beckley, 2010).

Crameri et al., (2021), explain that military personnel must possess a high degree of cognitive flexibility, be able to think, have capabilities in problem-solving, adaptability, and the ability to make decisions to perform effectively in environmental military operations that will reflect their minds, emotions, and behavior. To ensure military personnel is ready for any operational environments changing rapidly, researchers urge military organizations to invest in training and education to develop CR for military personnel who can operate effectively in the COE (Biggs & Pettijohn, 2022; Aronsson et al., 2021; Blacker et al., 2019; Ballesteros et al., 2018). This time, the MA must learn and understand the concept of CR and the science of training offered on how to prepare military personnel to adapt realities of what will work in their current fight. Concept development allows the MA to define complex problems and develop a framework to face a variety of complex scenarios of military operations. In

developing the conceptual frameworks for the military personnel's CR in the MA, factors that influence need to be identified related to the successful transfer of military training and its effect on CR to be analyzed and measured.

In the transfer of training literature, researchers start arguing that the outcomes of transfer of training become most important related to how individuals perform in the work environment. Essentially, the notion of the transfer of training model was developed by Baldwin & Ford, (1988). They argued that individual characteristics, training design, and work environment are the most important factors required in the process of transfer of training. The military has recognized the important role of military leaders at levels of strategic, operational, and tactical on how to train and motivate military personnel to accomplish the mission (Jha et al., 2020; Kania, 2019). Challenges to maintaining military personnel readiness, Sookermany, (2012) explained that training is paramount for military personnel to be prepared for deployment and respond effectively to a variety of missions and threats. Furthermore, the underpinning theories can be integrated with multiple theories related to establishing a conceptual framework for this research.

The Underpinning Theories

CR is a concept that focuses on the mental preparation that military personnel need to establish to perform in assigned military operations (Morrison & Fletcher, 2002; Etter et al., 2000). COE requires military personnel to deal with challenging situations on how to link cognitive processes to adaptive responses (behaviors) in operational environments especially thinking skills, problem-solving, and decision-making (Brunyé et al., 2020). Furthermore, within this context, researchers argue that the development of military personnel capabilities depends on training needs to be designed, integrated, and linked to mission objectives on how they must be trained (Cayirci et al., 2022; Sangwan & Raj 2021; Herrera, 2020; Biswas et al., 2019; Shields, 2011). Military training is a process of training through the constant and reiterated performance of the military personnel role. At the same time, there is a great deal of human resource development to focus on what is required to ensure that all levels of military personnel are cognitively ready for deployment and operations.

In the military context, human resource development (HRD) refers to the process of developing and enhancing military personnel KSAs that perform specific functions. Although there are also some important differences between military HRD and corporate, understanding the strategic concept and theories of HRD cannot be separated from the similarities in how to enhance individual performance to contribute to the organization's goals and objectives. Recognizing the CR theories and HRD theories ensures the military organization needs to define and implement a comprehensive strategy to develop military personnel CR. Thus, theory building is the process representing description, explanation, and representation of phenomena to be generated or verified related to multiple theories involving CR theory and HRD theories as shown in Table 1.0 for the development of CR military personnel.

Table 1.0:

The underpinning Theories

The Development of Cognitive Readiness Military Personnel		
Related Theories		
Cognitive Readiness	Cognitive Readiness Theory (Strategic CR theory, Operational CR theory, Tactical CR theory, Team CR theory)	Grier, (2012)
Human Resources Development	Psychology theory	Swanson, (1995)
	System theory	Weinberger, (1998)
	Economic theory	Swanson, (2001)

The concept of warfighting is changing led Etter, (2002) to propose the initial CR concept that military personnel must be cognitively ready for future military operations. The idea of CR provided an understanding that the military organization must prepare military personnel roles at a specific level (strategic, operational, and tactical) with military KSAs to deal with the COE of modern military operations. CR theory is related into four categories which are Tactical Cognitive Readiness (TCR), Operational Cognitive Readiness (OCR), Strategic Cognitive Readiness (SCR), and Team Cognitive Readiness (Team CR). The fourth category of CR is related to military KSAs as an individual and team need to establish any assigned missions, a specific operation, or potential operation that demanding to perform in the COE of military operations (Grier, 2012). This environment requires military personnel cognitive abilities such as critical thinking, problem-solving, and decision-making. At the same time, military personnel must also be prepared to assume a set of responsibilities, particularly in high-stress situations, and unpredictable events during military operations. Grier, (2012) explains that the CR of military personnel may improve with military training from day to day.

HRD believed the solution for improving human capabilities through training. Thus, the researchers (Swanson, 2001; Weinberger,1998; Swanson, 1995) emphasize the importance of psychology theory, system theory, and economic theory as the foundation of HRD that contributes human expertise to perform, grow, and adapt to the work environment. It is important to note that psychological theory is related to the mental process (brain) of humans and the determinant of human behavior. System theory applied to HRD represents the understanding of the system process that contributes to the outcomes for improving performance in the work environment (organization development and personnel training and development). The economic theory is related to investment in the development of knowledge and expertise for individuals or teams in an organization.

It is believed that an organization's goals related to human resource management, career development, and quality improvement are the critical areas in the application of HRD that deserve to be adopted and tested to the realities of practice. Essentially, there is always a new idea to integrate psychological, system, and economic theories into disciplined thinking and action, especially the CR of military personnel. Military training is a fundamental strategy to train and equip military personnel for the military levels of war and readiness (strategic, operational, and tactical) with specific KSAs that can be applied to the battlefield environment. The process of human resources development of military personnel started from a better understanding of the selection to become a soldier, basic and advanced military training, and experience that embedded the enhancement of military personnel CR for

making quick decisions and acting effectively in dynamic and stressful environments of modern warfare.

Factors that Influence Transfer of Training

The military training issue remains unanswered on how military personnel should be trained. More importantly, the task of maintaining our military personnel readiness is becoming increasingly more difficult (Kasim et al., 2021). The complexity, risk of military operations, and Revolutions in military affairs (RMA) lead military decision-makers to focus on training transformation to enhance combat readiness (Foster & Fletcher, 2013). Military training is also an equally serious need for research on enhancing the cognitive readiness of military personnel starting with an individual who passed selection becoming a soldier (Herlihy, 2022; Herrera, 2020).

A review by researchers suggests the importance of better understanding the science of training focuses on the analysis, transfer, and evaluation of what military personnel has been trained to meet new operational challenges (Schoeb et al., 2021; Vogel-Walcutt, 2013). Research by Grossman & Salas, (2011), in this issue, reminds us that factors influencing the transfer of training need further research that contributes to the development of military cognitive readiness. To develop a conceptual framework, this research will focus on the factors of individual characteristics, training design, work environment, and military leader that need to identify the relationship between the transfer of training and cognitive readiness.

Individual Characteristics

The dynamic environments and conflicts of wars in the 21st century demand the characteristics of military personnel which may make an individual more ready on how and when to apply KSAs during military operations (Holmberg & Alvinus, 2019; Lundy, 2018; Killion et al., 2009). The psychology theory indicates that the interaction of human actions depends on the brain to acquire, process, and synthesize information (Swanson, 2001; Weinberger, 1998; Swanson, 1995). For that matter, military organizations have to prepare military personnel who can analyze the situation of military operations based on rapid changes in technology, tactics, and missions. To retain KSAs, researchers argue that military personnel depend on their cognitive ability to determine the successful process of transfer military training (Crameri, 2021; Özlen, 2014; Grier, 2011). Generally, cognitive ability is the capacity of individuals who are rapidly and fluidly involved in mental processes including reasoning, remembering, understanding, thinking, problem-solving, and decision-making. Cognitive ability has most frequently been used to show individuals' characteristic variables in an identified significant variable in training studies for human resource development (Martin et al., 2020; Hunter, 1986). From this perspective, showed that individuals with high cognitive ability significantly influenced the transfer of training and improved their cognitive readiness allowing for more rapid acquisition, application, and generalization of knowledge to new domains of the military operation. Cognitive ability was found to be one of the characteristics of military personnel for operating in the dynamic military environment to sustained focus concentration and rapid processing of information (Tracey et al., 2001).

In contrast, research has established that military personnel behavior is an important aspect of maintaining cognitive readiness in a military operation. Researchers agreed that the behavior of individuals especially their motivation to learn predicted a positive relationship between how the transfer of training occurs. Most researchers agree that individuals whose motivation to learn is high intend to complete military training that is specifically designed to

meet scenarios and mission requirements. Studies found that individuals with the motivation to learn are important determinants of learning and performance. Individuals, who succeed in performing in military operations have a high awareness of self-knowledge, self-monitoring, and self-directed behavior to sustain readiness as military personnel (Yang et al., 2020; Blume et al., 2019; Blume et al., 2010).

As noted previously, training is never-ending that why military organizations prepare military personnel readiness on how to accomplish missions in military operations. The military training strategy is the process of developing military personnel who have been trained with KSAs and applying them effectively to success in combat (Hasselbladh & Yden, 2020). Studies clearly show that individual characteristics affect the development of cognitive readiness based on KSAs to prepare the military for assigned missions (Preddy et al., 2020). To develop the next generation of military personnel's cognitive readiness, the military leader at all levels (strategic, operational, and tactical) of military organization has emphasized the importance of individual characteristics with high motivation and cognitive to optimize human performance.

Military Leader

Military organizations know they must prepare military personnel to face uncertainty across the range of military operations. Knowing why, when, and how to deploy, fight, and sustain military operations is key to maintaining military personnel readiness. In the context of military readiness, military organizations especially commanders are aware of the performance of military personnel issues in performing military operations. In this study, the term military leaders specifically addresses one of the factors related to the successful transfer of military training those same factors 'supervisors' have been used in civilian organizations (Yaghi & Bates, 2020). The military organizations needed military leaders to understand new ways to train and organize military personnel on how to fight and win on the battlefield. The complexity of modern warfare and the current strategic environment need military leaders as "thinkers" ability to solve problems, improvise solutions, new methods, and concepts in the science and art of how to prepare for and conduct war (Nielsen & Liebert, 2021; Schatz et al., 2012; Shields, 2009).

Rapidly changing technologies and the COE of military operations make military leaders emphasize relevant methods that will make military personnel more adaptive and innovative in developing cognition of military personnel (Scaduto et al., 2008). Theories and learning principles are analogous to military training. The combination of art in the science and art of war approach in designing the cognitive readiness of military personnel for fighting and conducting war. This will require an investment that needs a military leader to learn the science of training on how the process of training occurs. Ensuring military personnel are trained and equipped with KSAs is the challenge that military organizations face. Military leaders need to consider the science of training in the development of training program strategies more holistically. The science of training is related to the process of designing, delivering, and implementing a training program. Training is a systematic process that matters before, during, and after training. Furthermore, can be concluded that training clearly shows two things: (a) training works and (b) the way training is designed, delivered, and implemented matters which allow organizations to adapt, compete, excel, innovate, produce, be safe, improve service, and reach goals (Salas et al., 2012; Grossman & Salas, 2011).

Training needs analysis is concerned with mitigating these issues whether training is needed and, if so, how it can be made most meaningful, improved, and effective for the

people involved (Brown, 2002; Anderson, 1994; Moore & Dutton, 1978). Future conflicts involve multi-domain operations that require enhancing military personnel readiness for deployment. To maintain readiness, the military organization must ensure that military leaders learn and develop the best information science has to offer about what to train, how to train, and how to implement and evaluate training that impacts the cognitive readiness of military personnel to execute modern warfare. Modern warfare depends on military personnel who can be the processing of information, and solve problems that are used to analyze, evaluate, judge, compare, and contrast for decision-making. For the transfer of training to occur, there must be intent, action, feedback, and reflection. Traditionally, military leaders with rank Lieutenant colonels and colonels have been expected to maintain the quality of training. They are the training managers to set the standard, supervise, guide, and manage the resources and facilities to train military personnel. Therefore, military leaders must focus on training design to develop the cognitive readiness of military personnel to execute the mission in the military operation.

Training Design

Military training policy and directive at the strategic level is to maintain the combat readiness of military personnel. The training system is the process of an integrated set of perceptual, cognitive, and psychomotor skills with supporting knowledge that permits abilities an individual to perform a set of tasks or a job. Evidence shows that the successes of military operations rely on training design for actual combat emphasizing designing varieties of training approaches (O'Toole & Talbot, 2011). Training designs are intended to develop military personnel on how to learn, be improved, and practice, the KSAs' skills needed to execute military missions. Researchers suggested that the current approach to improving the readiness of military personnel needs to focus on the training design to face the challenges and opportunities in maintaining combat readiness to support the full spectrum of deployed operations as shown in Table 1.1 (Cayirci et al., 2022; Havenetidis et al., 2022; Diaz-Piedra et al., 2021; Smid et al., 2020; Bergman et al., 2019; Looi et al., 2016; Adler et al., 2015; Due et al., 2015; Green & Bavelier, 2015; Wildman et al., 2014; Thompson & McCreary, 2006; Mertens, 1993; Halff et al., 1986).

Table 1.1:

Training Design for Cognitive Readiness

	Training Design	To develop expertise
The History of Warfare/ Domain Operations - Theory and the nature of war	Multi- Classroom Seminar Conferences	Military Knowledge Military Deployment Develops important critical thinking skills
Expertise in adapting to uncertainty - The ability to adapt a plan to meet a new crisis or capitalize	Scenarios Planning Simulation Cognition Training Situational training exercises (STXs)	Thinking Skill Problem-Solving Decision-Making
Expertise in the environment, weapon systems, and equipment	Effectively shoot, move, and communicate in a variety of environments Virtual training Video game Field training exercises (FTXs)	Develop personnel skill Leadership Teamwork

Although everyone acknowledges the importance of training design for the development of individuals in organizations. Researchers believe that integrated training design significant impact on the cognitive readiness of military personnel in enhancing military KSAs (Seibert et al., 2019; Foster & Fletcher, 2013). The concept of military training has been widely accepted and used in most fighting methods. The traditional type of military training generally focuses on honing the abilities of military personnel for actual operations. Military personnel involved in operations are seen as tough, hard to educate, and difficult to teach. These require a well-trained officer and well-trained non-commissioned officer (NCO) to engage in a wide variety of training. All of these varieties of training are designed to provide for the military personnel to succeed in the assigned task. This type of success requires not only physical and moral but also cognitive preparation for deployment in military operations.

Work Environment

Why do military personnel fight? The military personnel fight because of their responsibility to defend their country from internal and external towards achieving their assigned mission. The military organization sees the concept of CR as an idea to enhance military personnel in the wider military context which needs to be considered in the organization's goal and strategies so they are cognitively ready for military deployment. Shields, (2009) explains that military personnel with an expeditionary mindset should first, be mentally prepared to deploy on short notice anywhere in the world. The nature of the work environment, especially in military operational situations involves geographically spread over a large area of territory combat operations (Hughes et al., 2020). To be effective military personnel must be trained to understand military KSA's requirements and the operating environment of the battlefield.

From a human performance perspective, arguably one of the most important considerations for military personnel is the emphasis on cognitive development. Human resource professionals in military organizations must also keep in mind the demands of the training (predeployment) environment and actual (deployed) mission demands in preparing military personnel for unexpected operations. When planning training for military personnel, starting to be seen as part of the process for military personnel to learn things they do not know and also be about building on what is already known with KSAs needed for military operations (Nevin, & Jones, 2022; McDonald III, 2021; Wibowo et al., 2020; Farina et al., 2019). It is also important to recognize the fact that military training is about the development of military personnel to become competent and effective in military operations. It means training is not something that only happens in a training environment but is an opportunity to use in the work environment through transfer training.

Transfer of Training as Mediator

Military personnel involved in COE related to the VUCA environment in the military operation. It is important to determine what type of military personnel readiness must be developed to perform the task in the military operation. In defense and security domains, readiness has typically been studied in the context of the capability of military organizations to prepare combat readiness as the foundation of military readiness. Moral, cognitive, and physical related to the human dimension of soldiering need to be developed. To perform well in COE settings, cognitive readiness is required to be implemented in the military organization but as yet remains arguably by researchers (Grier, 2012). However, cognitive readiness is not solely about mental preparation. It also relates to military KSAs, particularly how to perform in demanding COE military operation settings.

Baldwin & Ford, (1988) mentioned that the transfer of training related to the application, generalization, and maintenance of KSAs can be applied to the work environment. It's important to identify, that the transfer of training itself can also influence the extent to which CR occurs. KSAs including military knowledge, critical thinking, problem-solving, decision-making, and being able to learn new roles are important to enhance military personnel to maintain performance in military operations through the transfer of military training. Review and findings from the literature review indicate that the cognitive readiness of military personnel significant impact on performance during military operations (Cramer et al., 2021). Is the transfer of training mediating factors that contribute to the development of CR military personnel?

Referring study by researchers indicate that transfer of training has been identified as a mediator in several different relationships; organizational citizenship behavior (Nik Nazli & Sheikh Khairudin, 2018) firm-specific learning (Wang et al., Chen, 2010) and learning culture and organization innovation (Bates & Khasawneh, 2005). Due to the potential ability of the transfer of training to act as a mediator, this study will examine the mediating effect of the transfer of training on the relationship between the factors that influence the transfer of training (individual characteristics, military leader, training design and work environment) and CR. By considering the transfer of training and the factors that influence it, military personnel's cognitive readiness can be developed from the outcomes of military training.

Effect Transfer of Training on Cognitive Readiness

In the field of security and defense, military training is considered one of the elements to enhance the KSAs of military personnel. There is an important issue related to the effect of

transfer of training besides focusing on the factors that influence the transfer of training. This study is to bridge the gap between the transfer of training and its effect on CR of Military personnel that becoming potential added value in the MA. The concept of cognitive readiness was established to focus on research and assessment of military personnel readiness. Performance in the area of military operations depends on military personnel who are cognitively ready. Morrison & Fletcher (2002), defines CR as the mental preparation (including skills, knowledge, abilities, motivations, and personal dispositions) of military personnel that require to sustain and be competent to perform in complex military operations. This definition provides an emerging concept of CR for use in a military context that involves environmental conditions to perform cognitively demanding tasks. Environmental military operations require military personnel capabilities in designing a course of action plan to execute the mission by combining the human mind and intelligent machine. Critical thinking, problem-solving, and decision-making are essential elements in the development of CR military personnel.

War is a clash of wills between two thinking enemies until coming who are victorious and defeated. The growing literature on cognitive readiness started by Morrison and Fletcher (2002), explained the character of factors include (1) trainable skills, knowledge, and attitudes (KSAs); (2) dynamic functional states; and (3) stable, trait-like characteristics ranging contributing to cognitive ability to working memory and learning styles on how to sustain professional performance. Today's complex operating environment of military operations requires military personnel's ability to think critically. The military organization needs to be creative and deliberate on what and how the transfer of training to develop critical thinking is an element of CR. Critical thinking enables military personnel to analyze the battlefield environment leading opportunities to assess emerging trends and identify potential vulnerabilities or threats. By critically analyzing the nature of war, military personnel can gain insight to improve future planning and problem-solving processes to find effective solutions to complex challenges.

Preparing military personnel for war requires elements of problem-solving as part of CR needs to establish as a critical pillar in military training. The COE of military operations demands military personnel to adapt and overcome challenges effectively by delving into multifaced aspects of problem-solving to find an effective solution that aligns with the overall strategic goals. Moreover, problem-solving skills allow military personnel to mitigate resource allocation, potential threats, minimize risks accordingly by evaluating needs, and assess priorities to achieve mission success. In military operations, problem-solving is crucial for military personnel to provide the foundation for effective decision-making to select the most appropriate course of action based on the situation at hand.

In combat situations, military personnel often encounter uncertain situations and unpredictable threats that require effective decisions in the COE. Decision-making plays a pivotal role as part CR component to ensure military personnel readiness and optimal performance in military operations. Enhance military personnel's decision-making abilities through intensive training exercises, simulation, and a variety of training scenarios that provide the foundation readiness for military personnel. This ability enables military personnel to develop the cognitive flexibility necessary for effective decision-making in a high-pressure and rapidly changing environment.

CR is paramount in preparing military personnel in the COE to enhance operational effectiveness. Continued development of military personnel CR in military knowledge, skill, and abilities by equipping military personnel with cognitive abilities (critical thinking,

problem-solving, and decision-making) to ensure they are prepared to face the challenges of war with confidence, and competence and ultimately achieve mission success on the battlefield.

Conceptual Framework and Hypotheses Development

The findings of the literature review suggested that individual characteristics, training design, work environment, and military leader have a significant relationship with the transfer of training. Furthermore, transfer of training has been discussed as a mediator variable related to cognitive readiness as the dependent variable to measure whether there is a significant relationship based on hypothesis development as illustrated in figure 1.0.

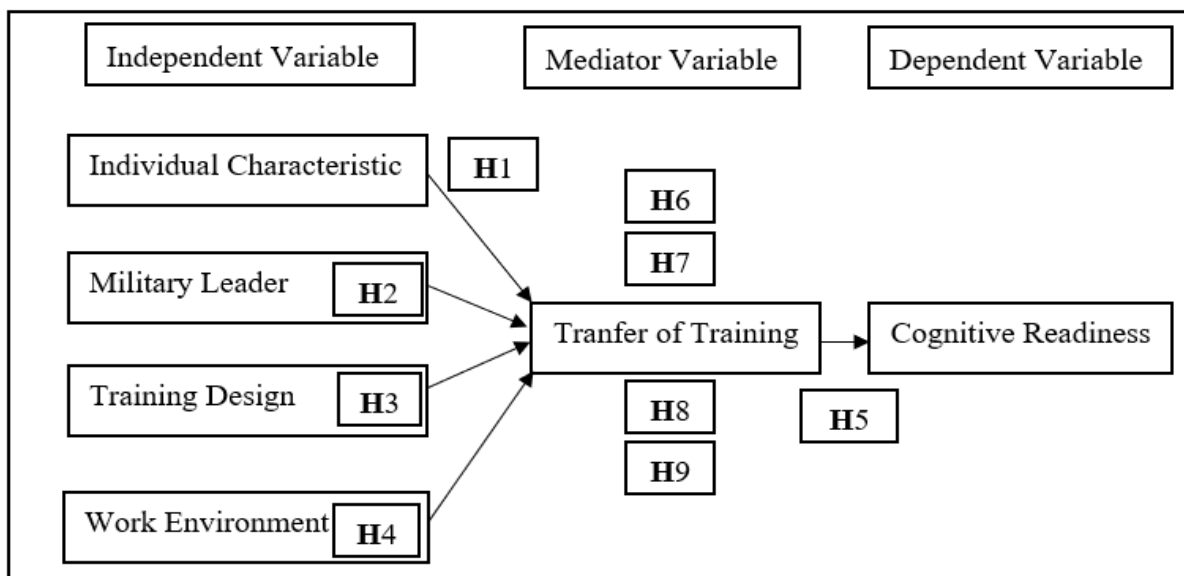


Figure 1.0: Conceptual Framework and Hypothesis Development

Therefore, based on figure 1.0 the hypothesis are as follows:

Hypothesis 1: There is a significant relationship between individual characteristics and the transfer of training.

Hypothesis 2: There is a significant relationship between military leader and the transfer of training.

Hypothesis 3: There is a significant relationship between training design and the transfer of training.

Hypothesis 4: There is a significant relationship between the work environment and the transfer of training.

Hypothesis 5: There is a significant relationship between the transfer of training is significantly related to cognitive readiness.

Hypothesis 6,7,8, and 9: There is a significant relationship transfer of training mediates the relationship between individual characteristics, military leader, training design, and work environment related to cognitive readiness.

Research Methodology

This study employs a quantitative research method. The context of the study is explained through theory testing and hypotheses are developed based on a literature review. The research questions are also built based on the research objective. A survey questionnaire will be used to test the hypotheses developed. Based on the population, the sample will be

selected using a purposive sampling approach in MA involving combat organizations. A purposive sampling will be made based on three types of infantry units, which are the Royal Malay Regiment, Royal Ranger Regiment, and Border Regiment. In this study, a sample size of 379 will be used based on Krejcie and Morgan's (1970) table of sample size specifying a 5% margin of error.

This study targets multiple informants (Wagner et al., 2010) to increase validity including officers and non-commission officers (NCO) with rank Corporal until Lieutenant colonel at the unit level who has the command function, responsible and involved in the process relating to the training management function. Structural Equation Modeling Partial Least Square (SEM-PLS) will be utilized as a primary data analysis technique. SEM-PLS will be used as it is capable of examining the entire model simultaneously and assessing measurement errors (Hair et al., 2014). Given this consideration, SEM-PLS, therefore, serves as an appropriate data analysis tool for the data analysis technique.

Conclusion

Personnel in many professions must remain "cognitively ready" to perform in situations of risk, challenge, danger, and adversity. Managing individual and team capability is a common goal for decision-makers and organizational leadership. Military personnel require a range of cognitive capabilities to meet the demands military profession for mission requirements. Modern warfare has highlighted the need for military personnel CR to fight and win. CR concept is significant and fundamental for preparing military personnel for the battlefield to accomplish the mission. Military organizations are unique characteristics of military life and culture that require newly recruited military personnel to undergo some early training to prepare them for positions in operational military units. With the current and emerging threats, it is increasingly clear that military organizations have to ensure the optimal human performance of military personnel. Developing a conceptual framework for military cognitive readiness is essential to maintain a higher level of readiness in our military personnel as a central ingredient for motivating and sustaining challenging tasks under stressful conditions in military operations. The key findings were focused on the development of the CR model for MA. Finally, the model CR will contribute to the solution and potential development of strategies and transformation of training systems to prepare military personnel who are "cognitively ready" to deploy and fight in the COE of military operations. The MA requires a serious investment in research covering CR of military personnel as an important area to address human optimization.

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