

Military Virtues, Green Human Resource Management and Green Employee Engagement: An Echo from Sri Lanka Navy

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Abstract

This study aims to identify the mediating effect of green human resource management on the relationship between military virtues and green employee engagement. The sample size is 200 from the Sri Lanka Navy officers. This is a quantitative study. The unit of analysis is individual, and this cross-sectional study was completed in a non-contrived setting with minimal interference by the researcher. This study employs a partial least squares (PLS) regression model within the Smart PLS 4.0 software framework to investigate the underlying objectives. The primary focus entails a meticulous examination of the measurement model, ensuring the robustness of the questionnaire through a thorough assessment of reliability and validity. Subsequently, the study delves into a structural model, uncovering a significant partial mediation effect attributed to green human resource management in the interplay between military virtues and green employee engagement. The implications of these findings are twofold, valuable contributions to both theoretical understanding and practical applications in the domain of sustainable human resource practices. By elucidating the intricate relationships among these constructs, this research enriches the existing knowledge base and provides actionable insights for organizations seeking to foster environmentally conscious employee engagement.

Keywords: Military Virtues, Green Human Resource Management, Green Employee Engagement, Green Knowledge, Sri Lanka Navy

JEL Codes: M14, Q56, N47.

Introduction

According to *Awwad Al-Shammari et al.* (2022), environmentally, commercially, and socially sustainable practices are required in response to escalating environmental problems. When serving as military personnel, doing one's duty is vital. National security, Humanitarian Assistance and Disaster Relief (HADR), and military diplomacy are the conventional roles of the Army, Navy, and Air Force (Iddagoda et al., 2020a). The military is taking initiatives to protect Mother Nature and be eco-friendly. Sri Lanka Navy also took several initiatives to be eco-friendly through their project 'Blue-Green Project.' At the same time, the green matrix for public servants about sustainable development can determine the organization's cultural change to green management (Grigorescu et al., 2023). According to *Awwad Al-Shammari et al.* (2022), Green Human Resource Management (Green HRM) ensures that organizations grow effectively and implement greener practices. According to *Awwad Al-Shammari et al.* (2022), Green HRM is critical for business management for various reasons, including environmental benefits, employee retention, and increasing a company's appeal.

According to *Haddock-Millar et al.* (2016), green employee engagement is building a cordial employer-employee relationship through the active participation of employees in environmental concerns inside the organization. Only a virtuous person with good character will be concerned about the environment or Mother Nature. In the military context, there are military virtues. The Oxford Concise Dictionary of 1990 defines 'character' as 'the collective qualities or characteristics, especially mental and moral, that distinguish a person or thing.' Personal character is defined by Opatha (2010) as a person's moral characteristics. According to Opatha (2010), it is the character or quality of a person's moral attributes or traits. Good character is often defined as morality or civility, while bad character is defined as immorality or incivility. Virtue is regarded as a desirable habit. It is a beneficial characteristic for us. A vice manifests itself as a negative habit. It is a negative trait that is harmful to us. Virtues must be developed, increased, and, if feasible, maximized inside us. Vices must be reduced and, if possible, eliminated from our lives. According to Iddagoda et al. (2016), devoted employees are great team players, innovative, and customer-focused, speak favorably about their firm when interacting with the public, and their job performance is noticeably high. Sandin (2007) believes that virtue ethics is not new, using Aristotle's *Nicomachean Ethics* as a

starting point. Sandin (2007) further points out that tasks required of soldiers are frequently more complex than those required of members of the public. Sandin (2007) highlights that; “in the discussion of military ethics, two types of issues have traditionally been distinguished. One concerns *jus ad bellum*, or right to war, and other *jus in bello* right in war”.

The former is concerned with when war is justifiable, whereas the latter is concerned with how war is conducted. Moelker and Olsthoorn (2007) believe that the military seems contented with traditional virtues such as honor, courage, discipline, and loyalty. Nevertheless, these may no longer suffice, considering the change of dimensions in present-day roles and tasks. According to Olsthoorn (2010), conventional military values benefit colleagues and the organization more than the local community where the country’s military men are deployed. The study aims to identify the impact of military virtues on Green HRM, the impact of Green HRM on Green employee engagement, and the mediating effect of Green HRM on the relationship between military virtues and green employee engagement.

Military Virtues

According to Foot (1997), as cited in Sandin (2007), virtues are (a) beneficial attributes to an agent and others, (b) actively engage the will and are distinct from abilities, and (c) they are corrective and usually coincide with temptation. Moelker and Olsthoorn (2007) state that virtue is usually described as a character trait developed mainly through training. Similarly, Opatha (2010) believes that virtue is a worthy habit, and a vice is a harmful habit. As a result, a virtue is a good quality that benefits oneself and others. Robinson (2014), citing Plato, affirms that virtue is the state or condition that enables something to perform its proper function and applies to anything with a function.

According to Robinson (2014), citing Aristotle, every virtue leads its holders to be in a good state and fulfill their envisioned functions. According to Foot (2002), as cited in Olsthoorn (2017), virtues are unwavering character traits that are worth having and that generally function as correctives to our self-regarding enticements. As per the Oxford Concise Dictionary 1990, ‘Virtue’ is ‘moral excellence, uprightness, and goodness.’ ‘Vice’ is a ‘defect’ of character or behavior. Olsthoorn (2010) emphasizes that “according to Aristotle, virtues are acquired by and do not exist outside, performing virtuous acts. These acts should spring from a noble intention and serve a morally just cause”. Further, Olsthoorn (2017) states that many militaries currently see the Aristotelian approach to ethics as the best way to avert misconduct by military personnel, superior to

the rules or codes of conduct imposed above. According to Robinson et al. (2022), leaders and their organizations face rising risk levels and demands from the public to uphold higher moral standards.

According to *Olsthroon* (2019), virtues are typically defined as desirable, stable character attributes. According to Olsthoorn (2021), the primary mission of most military today is to handle international crises ranging from humanitarian assistance to peacekeeping, peace enforcement, and post-conflict reconstruction. Evidently, these new activities will necessitate much self-control on the part of military troops, who must fulfill their duties in generally frenetic and, at times, stressful situations. According to Olsthoorn (2021), 'which virtue military personnel need today depends at least partly on whether what makes up a military virtue is place and time-dependent.' Sison (2006) points out that 'for Aristotle to be virtuous was the ultimate pursuit of human contentment and reflected the distinction of a person's character.' According to Robinson (2014), they are referring to Plato, the modern military places a high value on discovering and nurturing good leaders.

According to *Cappuccio et al.* (2022), based on a virtue ethics interpretation of military traumas, moral character weakening is a particular evil induced by moral injury. Just institutions are ethically committed to defending moral character by preventing moral injury if possible. Pelser (2021) states that nurturing respect for human dignity in its members is a matter of the highest importance to the military. Rice and Selman (2022) emphasize that Artificial Intelligence (AI) identified three main categories such as ethical, operational, and strategic, with the issues of positive cognitive control equally applying to heightened or augmented individuals, with the preservation of substantive virtue an essential ethical contemplation. According to Walker et al. (2021), virtues or values are envisioned to inspire and encourage good character as the foundation for virtuous purpose and conduct, which is characteristic of virtue ethics philosophy. Syse (2021) points out that people are caught in the contention, indeed the strain between virtues and rules, between the individual and society in general. According to Iddagoda (2020c) the human character is a mix of virtues, and virtue is a noble habit that is beneficial to the world. At the same time, there is immoral behavior that is generally harmful to the world.

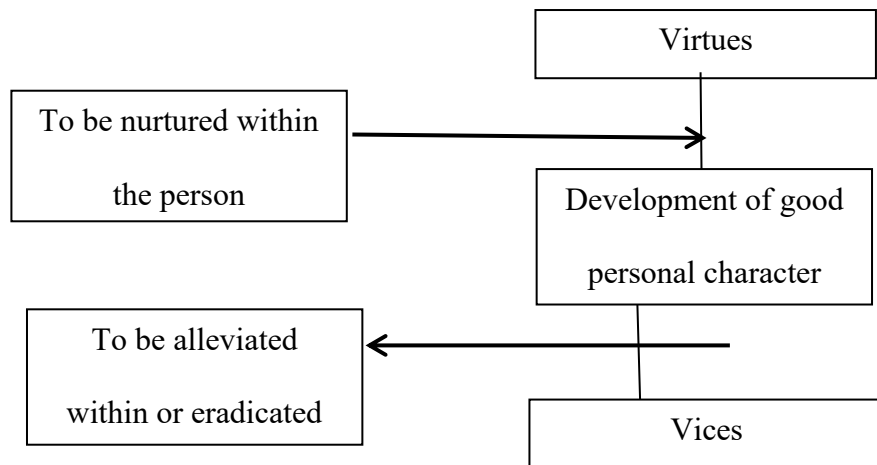


Figure 1. Virtues and Vices for the Development of Good Personal Character,

Source: Opatha (2010).

Table 1 lists the definitions of virtues as well as the comments made by the study's researchers.

Table 1. Definition of virtues

Author	Year	Definition	Comments
Olsthoorn	2017	Character traits that are worth possessing and that generally serve as correctives to our self-centered inclinations.	Characteristics that stand out. Serve as a deterrent to one's temptation.
Robinson	2014	As per Plato; (a) Virtue is the state or situation that allows anything to work properly. (b) A broad definition of virtue is one that applies to anything with a function. As per Aristotle; (c) Every virtue makes its possessors feel good and perform well in their roles.	State or condition to perform its apt function. Virtue can be applied to anything that has a function. Facilitate being in a good state and performing functions as expected.
Opatha	2010	Virtue is a healthy practice. It is a positive trait that benefits both oneself and others.	Virtue is both a good practice and a good quality. Advantageous to both oneself and others.
Moelker and Olsthoorn	2007	A virtue is commonly defined as a personality	Virtue is generally a trait.

		quality. (a) It should not be interpreted as a hereditary or God-given quality. (b) Something that can be learned, primarily via practice and training.	(a) It is not a natural or divine trait. (b) Any person can develop mainly through training and practice.
Sandin	2007	Virtues are combination of characteristics of an agent, which; (a) Beneficial characteristics for his/her own sake and others. (b) They must engage the will in order to be distinguished from skills. (c) They are corrective in the sense that they are concerned with what makes humans difficult in general. Typically corresponds with a temptation.	The identified main characteristics are; (a) Is helpful to agent and others (b) Engages the will. Different from skills (c) Is corrective

Source: Authors constructed.

The review of definitions of ‘Virtue’ noticeably suggests a shortage of substantial literature and a lack of consensus among researchers regarding the detailed meaning of ‘Virtue.’ Different researchers have defined the construct called ‘Virtue’ in more or less different ways over the years. The researchers of the study define f military virtues. This serves as the working definition of the study.

Military Virtues – Working Definition

Military virtues are moral qualities that raise the collective standards among military personnel and inspire him/her to work for the betterment of the living being.

Towards an instrument of military virtues

Set of Virtues

Vera and Rodriguez-Lopez (2004) have recognized that virtues such as humility, integrity, and honesty are essential for an organization to thrive. Similarly, Robison (2007) highlights the importance of magnanimity, honor, integrity, and prudence. Moelker and Olsthoorn (2007) state the significance of traditional military virtues such

as honor, courage, discipline, and loyalty. Opatha (2010) introduces a bundle of virtues: honesty, caring, loyalty, gratitude, patience, humility, benevolence, respect, self-discipline, and tolerance. Keppetipola and Dharmasiri (2020) provide a set of military virtues: loyalty, respect, courage, self-discipline, patience, and caring. Olsthoorn (2021) highlights the importance of military virtues such as courage, wisdom, temperance and self-discipline. Olsthoorn (2021) further points out the significance of the interconnection of a set of virtues militaries nowadays live by to be more productive.

Table 2. Set of virtues

Author	Year	Type	Virtues
Olsthoorn	2021	Military virtues	Courage, Restraint, Wisdom, Justice, Temperance
Keppetipola and Dharmasiri	2020	Military virtues	Loyalty, Courage, Caring, Respect, Self-Discipline, Patience
Maritime Doctrine of Sri Lanka	2020	Sri Lanka Navy core values	Honour, Honesty, Integrity, Loyalty, Courage
Robinson	2014	Military virtues	Justice, Temperance, Wisdom, Courage
Opatha	2010	Virtues	Honesty, Caring, Loyalty, Gratitude, Patience, Humility, Respect, Benevolence, Tolerance, Self-Discipline
Moelker and Olsthoorn	2007	Military virtues	Honour, Courage, Loyalty, Discipline
Robinson	2007	Military virtues	Magnanimity, Honour, Integrity, Prudence
Vera and Rodriguez-Lopez	2004	Virtues	Humility, Integrity, Honesty

Source: Authors constructed.

Military values into military virtues

According to the Maritime Doctrine of Sri Lanka (MDSL 2020), the human components of the Sri Lanka Navy (SLN) are primarily molded by the principles presented as its core, with common sense serving as the driving tenant. Therefore, the Sri Lanka Navy's core values are mentioned as Honour, Honesty, Integrity, Loyalty, and Courage. Accordingly, these values reflect (a) what the navy collectively stands for and what brings its members together, (b) what is considered acceptable and unacceptable in the naval environment and culture, (c) what are the main objectives of the navy and

therefore what we should jointly work towards, (d) how to act and interact with various levels including defense partners or the broader community, (e) what we can reasonably expect of others and what they will expect of us, (f) how to make rational decisions based on principles rather than needing a standard rule for every situation, (g) trust and understanding on its members.

Further, according to MDSL (2020), the Head of the State grants commissions and appoints commission-officers in the Armed Forces, keeping exceptional honor and trust in recommended candidates' traits such as honesty, integrity, loyalty, and courage. These expected traits are mentioned in the Commissioning Warrant. Therefore, researchers believe the Sri Lanka Navy's core values can be considered interchangeable with military virtues.

Towards a set of military virtues

In the Sri Lanka Army, the Latin motto is Pro Patria. Which means 'For the Fatherland'. Moelker and Olsthoorn (2007), Opatha (2010), MDSL (2020) acknowledged 'loyalty' as a virtue. Vera and Rodriguez-Lopez (2004), Opatha (2010), MDSL (2020) identified 'honesty' as a virtue. The motto of the Sri Lanka Army Commando Regiment is 'Nothing Impossible'. This shows the courage that they have. Moelker and Olsthoorn (2007), Keppetipola and Dharmasiri (2020), Robinson (2014), MDSL (2020), and Olsthoorn (2021) in their virtue set gave priority to the virtue called 'courage'. The vision of the Sri Lanka Army is 'A victorious Army through professionalism, credibility and respect' (Sri Lanka Army, 2024). 'Respect' is identified as a virtue by Opatha (2010) and Keppetipola and Dharmasiri (2020). According to MDSL (2020), the vision of the Sri Lanka Navy is 'To develop into a naval force capable of countering Brown, Green, and Bluewater challenges with a formidable force structure to achieve National Security Objectives and safeguard Sri Lanka's Maritime Interests.' Three prominent roles envisaged for the Sri Lanka Navy are Military, Diplomatic, and Constabulary (MDSL, 2020). Ensuring National Security through the effective employment of Air Power is the vision of the Sri Lanka Air Force (Sri Lanka Air Force, 2024). In order to achieve these visions and prominent roles, the researchers' view is that military personnel should have not only the above-mentioned virtues but also the virtues such as 'self-discipline' (Moelker and Olsthoorn, 2007; Opatha, 2010; Keppetipola and Dharmasiri, 2020), 'patience' (Opatha, 2010; Keppetipola and Dharmasiri, 2020) and 'justice' (Olsthoorn, 2021).

The seven main dimensions for the construction of military virtues are as follows:

Loyalty

The Oxford Concise Dictionary 1990 defines 'Loyalty' as 'the state of being true or faithful to duty, or obligation' and 'the state of being steadfast in allegiance to the legitimate government of one's country.' According to MDSL (2020) 'Loyalty' is being devoted and faithful to each other and to one's duty of service to the motherland. Loyalty is a mutual obligation or responsibility of our shared obligations to each other and the nation. It requires us to acknowledge the commendable effort and the knowledge that one will always support others. It promotes trust and confidence in fellow members when accepting responsibility and accountability for their actions and subordinates. Robinson (2007), Opatha (2010), and Olsthoorn (2014) identified 'Loyalty' as a virtue rather than a value. Opatha (2010) highlights that 'Loyalty' encompasses being firm and not changing in your affiliation with someone, some organization, or allegiance to your country. Felten (2011) states that loyalty is more than just a matter of working together, more than the apparent observation that people can often achieve more extraordinary things by pooling their efforts.

Honesty

The description of 'Honesty' in the Oxford Concise Dictionary 1990 is 'being fair and just in character or behaviour'. Opatha (2010) asserts that 'Honesty' is the quality of being frank. It involves freedom from deceit or fraud. It is truthfulness. MDSL highlights (2020) 'Honesty' requires us to confront our flaws. We must be honest and forthright with one another and with ourselves. Personal and professional progress is driven by honesty. A lack of honesty discourages improvement, permits ineptitude to be masked, and promotes failures to be ignored. If honest, we may serve with a clear conscience, sincerity, and selflessness. Opatha (2010) highlights two elements in the virtue of honesty. They are to tell the truth or to tell no lies (to be truthful) and to be trustworthy (to be trustworthy). Opatha (2010) further states that there is no difference between word and act of a person of honesty. The honest person states what he did and does what he stated. Stating and doing are the same. A person of this virtue does not receive blame, accusation, and discredits from society. Instead, he/she gets trust and respect. Miller (2021) highlights five kinds of behavior that are incompatible with the virtue of 'Honesty': lying, misleading, stealing, cheating, and promise-breaking. Miller (2021) suggests corresponding virtues for such incompatibles as truthfulness, respect for property, forthrightness, proper compliance, and fidelity to promises.

Courage

As per the Oxford Concise Dictionary 1990, 'Courage' is the ability to disregard fear; bravery'. Courage is the capability to control our fear in a dangerous or difficult situation and the strength of character to do what is right in the face of adversity. Courage necessitates persistent adherence to moral beliefs. Courage energizes responsibility, humility, and personal example. Courage, both physical and moral, forms the foundation upon which bravery, fighting spirit, and success depend (MDSL, 2020). MDSL (2020) further highlights that 'Physical Courage' is being prepared for tasks directly or indirectly involving lethal force while in harm's way. On the other hand, "Moral Courage" is the will to uphold moral principles despite possible public disapproval and significant personal sacrifice. The moral courage that enables one to accept responsibility, blame, and admit wrongdoing is also known as this. In that way, it improves effectiveness for the whole. According to Olsthoorn (2007), military courage is expressed as moral and physical courage. Dashlsgaard et al. (2005) emphasize 'Courage' as emotional strengths that involve the will to accomplish goals in the face of internal or external opposition, external or internal, providing examples including bravery, perseverance, and authenticity (honesty). According to Rabieh (2006), the courage of its citizens is critical to the existence of any nation, and courage is perhaps the characteristic that nations celebrate the most. According to Zavaliy and Aristidou (2014), a courageous agent seeks to alleviate or prevent harm to others while respecting the factual conditions that define the agent's likelihood of success.

Respect

According to the Oxford Concise Dictionary 1990, 'Respect' is 'deferential esteem felt or shown towards a person or quality'. Opatha (2010) recognizes respect as honor or esteem. According to Opatha (2010), it also entails working or behaving with importance and honor concerning specific people and objects. Opatha (2010) identifies many types of people who should be respected. They include religious leaders, priests or monks, parents, teachers, people who have made significant contributions to one's nation, language, and religion, people who are superior in personal character (moral qualities), and people who are more mature (adults). Opatha (2010) also emphasizes certain aspects that should be respected. They are a person's religion's doctrine (teaching of a religious leader), sacred books on which the religion is based (scriptures), books used for education, one's schools and universities, the status of religious leaders and significant contributors, monumental buildings and sculptures of a specific culture and history, national flag, anthem, tree, flower, etc., and other physical and natural things that were

extremely useful for a person's development. According to the British Maritime Doctrine (2011), Respect for others flows up and down the chain of command and sideways among peers. It entails respecting one another with fairness and dignity and fully acknowledging each individual's contribution. Pelser (2021) asserts the importance of fostering respect in military culture. Further, Pelser (2021) highlights the significance of respect for human dignity and institutional respect. Olsthroon (2021) states that 'Respect' is one contemporary all-encompassing virtue that some armed forces around the globe have adopted into their set of values.

Self-discipline

The Oxford Concise Dictionary 1990 defines 'Self-discipline' as 'the act of or ability to apply oneself, control one's feelings'. According to Opatha (2010), self-discipline is the ability to keep our behavior in conformity with the rules and regulations of the organization where we work. According to Opatha (2010), when people live in a society, how a nation will achieve the virtue of self-discipline is 1) by meeting established rules and regulations of behavior, 2) by protecting the organizations from illegal and harmful actions of immoral personnel, 3) to protect a person's life from illegal and harmful actions of another person or a group of other persons, and 4) to ensure peaceful and orderly working environments for the achievement of organizational goals, and 5) to encourage fairness and order in the treatment of people and the conduct of industrial and national relations. Duckworth (2009) defines self-discipline as knowing how to manage your feelings and thoughts and plan your behavior to reach your goals. Dienstmann (2021) defines self-discipline as the continuous application of self-awareness and willpower over time, a further purpose of living by your higher values and choosing behaviors that are in harmony with your long-term goals. Dienstmann (2021) further asserts that self-discipline is a virtue, and every virtue casts a shadow unless it is composed of its opposite virtues.

Patience

The description of 'Patience' in the Oxford Concise Dictionary 1990 is 'calm endurance of hardship, provocation, pain and delay' and 'tolerant perseverance or forbearance.' Opatha (2010) identifies patience as a quality of being endured or borne. According to Opatha (2010), it entails suffering a challenging, upsetting, or unpleasant event, item, or person without complaining or becoming agitated. Norling (2015) states that in innovation, 'Patience' is a virtue if one is willing to persevere during preparation, planning, and execution (program completion). Curry et al. (2007) identify that patients

are more cooperative. According to Opatha (2010), real patience is an essential virtue, and elements of real patience include bearing difficulties and impediments done by people purposefully or inadvertently; dealing with natural troubles and distresses (resulting from weather, climate, rain, etc.) bravely or even with pain; not becoming angry, not doing retaliations, oppressive responses, etc.; continuing functions which have been done so far without stopping due to difficulties. Pianalto (2016) states that a certain amount of patience, exercised at the appropriate times, is virtuous. Pianalto (2016) further asserts that the conception of patience as a calm self-possession encompasses much more than only self-possessed waiting. Ryans (2013) emphasizes that patience allows us to stay calm on the inside no matter what happens on the outside. We have faith in our ability to deal with whatever comes our way, which provides us with great peace of mind.

Justice

According to the Oxford Concise Dictionary 1990, ‘Justice’ is ‘just conduct, fairness and the exercise of authority in the maintenance of right’. Robinson (2014) asserts, ‘Although not every unit can have the best-qualified leader in the military, justice will likely be served if units have leaders who are qualified to lead and are the best qualified of those in their unit.’ Dashlsgaard et al. (2005) state ‘Justice’ as ‘Civic strengths that underlie healthy community life; examples include fairness, leadership, and citizenship or teamwork.’ According to LeBar (2002), the concept of justice as a virtue originated from an individual trait, and it still does to some extent, even if we often think of individual justice as having some (grounding) reference to social justice. Xianzhong (2007) points out that justice is also an individual ethical virtue, differing from others, for it is simultaneously a social ethic. Thus, we can call justice a “non-individual individual ethical virtue.” Olsthroon (2021) highlights that wisdom is required to be informed by justice failure, which may lead close to cunning. Vivenza (2010) states that there is a common idea of justice not only as a basis for laws but also as a virtue that implies respect for oneself and sensitivity towards others.

Elements and question statements are listed in Table 3.

Table 3: Dimensions, elements, and question statements of military virtues

Dimensions	Elements	Question Statements
Loyalty	Devoted to my duty of service	I am devoted to my duty of service to the country.
Honesty	Consistency in whatever I do	I have consistency in whatever I do, even in a situation where there is

		pressure to compromise.
Respect	With respect to physical and human resources	I have respect for the natural world, historically significant structures, sculptures, and my motherland.
		I respect and care for other people's dignity.
Courage	Prevent harmful situations	I always alleviate or prevent harm to others in a situation of potential risk.
	Do what is right	I have the courage to do what is right even though it may be unpopular and the personal cost is high.
	Prepared for responsibilities	I am always prepared for tasks that require the use of lethal force while in danger.
Self-discipline	Willingly follow laws and regulations	I abide by the laws and regulations that were willingly imposed upon me.
Patience	Maintain my composure within.	Regardless of what is occurring outside, I have the ability to maintain my composure [tranquility] within.
Justice	Concern about the fairness	I am concerned about fairness and the use of power in the upholding of rights.

Source: Authors constructed.

Green Human Resource Management

Green HRM integrates HRM practices into organizational environmental sustainability goals (Iddagoda et al., 2020b). This serves as the working definition of the study. Opatha (2019) presents a Green HRM bundle that comprises job design, job analysis, human resource planning, recruitment, selection, induction, rewards management, training, performance evaluation, discipline management, labor relations, and health and safety management. The Sri Lanka Navy (SLN) is one of the country's first organizations to promote green and blue concepts. It is mainly concerned with recruiting and selecting applicants for officer and other rank openings while emphasizing green awareness, attitudes, and behaviors. Additionally, SLN promotes electronic recruitment advertising to limit paper advertisements and reduce their adverse

environmental effects. Additionally, candidates are encouraged to submit their applications online. During the interview, candidates' attitudes and behaviors toward environmental sustainability, natural environment protection, and energy conservation are evaluated. Green orientation is integral to training for newly hired sailors (recruits) during the induction period. Newly hired recruits are given educational sessions in training facilities about the SLN Green and Blue concept, green organizational culture, vision, and mission. The 'Green Base - One Plant for One Sailor' campaign is being carried out well, particularly in the training facilities. Accordingly, each sailor of the base is allowed to plant a sapling, maintain it, and hand over the responsibility of the plant to his successor when he is transferred out of the base. The new concept intends to preserve the plants and ensure their continual growth.

To lead by example, Sri Lanka Naval Dockyard influences the neighborhood and lessens the adverse effects of human activity on the environment. The Naval and Maritime Academy, the top officer training facility for the Sri Lankan Navy, is also inside the Dockyard, providing 'Green' orientation for officers under trainees. The 2019 Presidential Environmental Awards highlighted SLN's Green and Blue idea. Additionally, the Sri Lanka Navy General Hospital (Colombo - Welisara) received the highly regarded 'Carbon Neutral Operations' certificate following an evaluation by Carbon Consulting Company (Pvt) Ltd on October 15, 2019.

As part of the Naval Dockyard's designation as a Domain of Green and Blue, mangrove planting, turtle conservation, tree planting, beach cleaning, public awareness campaigns, coral replanting and conservation, energy conservation, solar power projects, water conservation, biogas projects, wastewater management, recycling of plastic and polythene, conservation of wild animals, rainwater harvesting projects and sewage treatment projects have all been undertaken. Programs for compensation and reward management have been launched in SLN. Naval personnel who make major contributions to the company's green initiatives are rewarded with additional leave. Additionally, the appropriate authority awards letters of appreciation for voluntary contributions such as beach cleaning, using recyclable glass water bottles instead of plastic bottles, support for waste management, and dedication to paperless office concepts (office correspondence, e-pay slip, etc.). On the other hand, employees who avoid such frequent tasks for unjustified reasons and are not devoted to green efforts receive negative marks in their performance reviews and are counseled to increase their dedication. In order to promote, maintain, and enhance 'Greening' within employees through rewards and punishments,

to encourage them to develop 'Greening' within SLN and stakeholders, and to utilize employees to formulate and implement environmental management programs, SLN is concerned about recruiting ideal candidates who are also keen on environmental aspects.

Green Employee engagement

Iddagoda et al. (2016) highlight employee engagement as a product of attitude and behavior. Further, Iddagoda et al. (2020a) state that there is an emerging tendency to protect the natural environment or perform duties about greening by military personnel. Sri Lanka's military consists of the Army, Navy, and Air Force. These are very significant examples of this. Green employee engagement denotes establishing a friendly employer-employee relationship by providing employees with a voice to engage in environmental issues within the organization actively (Haddock-Millar et al., 2016).

Theoretical background

According to Hameed et al. (2021), based on the Resource Based View, Green HRM methods actively identify, develop, inspire, and expand employee behavior for the organization's ongoing competitive advantage and extraordinary performance. Wright and Snell (1991) point out that input, process, and output are under general systems theory. Military virtue is an input. The reason is that it becomes an ability to be virtuous without having fewer vices. According to Wright and Snell (1991), ability and skill are inputs. Green HRM becomes a process. There are a set of activities under the processes, such as green recruitment and selection, green induction, green performance management, and green training and development. Output is green employee engagement. Resource View and general systems theory can be used to build arguments and provide several hypotheses that can be empirically tested. The hypotheses are:

H1: Green HRM has an impact on Green employee engagement;

H2: Military virtues have an impact on Green employee engagement;

H3: Military virtues have an impact on Green HRM;

H4: Green HRM has a mediating effect on the relationship between military virtues and Green employee engagement.

Methodology

This is a quantitative study. The purpose of the study, type of investigation, unit of analysis, extent of researcher interference with the study, study setting, and time horizon are the six components of the research design presented by Sekaran in 2003. The purpose of the study is hypothesis testing, the extent of the researcher's interference with the study is minimal, the type of investigation is correlational, the unit of analysis is

individual, the study setting is non-contrived, and the time horizon of the study is cross-sectional.

The researchers utilized the Partial Least Squares (PLS) model to assess reliability, validity, and relationships among latent variables. The sampling technique was non-probability convenience sampling. The study's data was collected from a sample of 200 Navy officials. They used two models: the measurement model and the structural model.

The measurement model aimed to ensure the reliability and validity of the observed variables. To assess reliability, the researchers used composite reliability, which measures the internal consistency of the observed variables. For convergent validity, they checked that each construct's Average Variance Extracted (AVE) values were higher than the recommended threshold of 0.5. This ensured that the variables used to measure a construct were related and reliable. Discriminant validity was also ensured in the measurement model. The researchers used the Fornell-Larcker criterion to compare the square root of AVE values with the inter-construct correlations. This was done to confirm that the constructs were distinct and did not overlap. Additionally, they calculated Heterotrait-Monotrait (HTMT) ratios to further evaluate the discriminant validity among the constructs. On the other hand, the structural model examined the significance of the relationships among the latent variables. This model helps to understand how different constructs influence each other. The significance of these relationships was analyzed using bootstrapping, a statistical technique that allows researchers to assess the accuracy and reliability of their results. Overall, the study used the PLS model to establish the observed variables' reliability and validity and examine the significance of the relationships among the latent variables. By doing so, the researchers gained valuable insights into the relationships between different factors and their impact in the context of navy officials.

Results

The study's analysis was conducted in two stages, following the methods proposed by Hair et al. (2019). The first stage focused on the outer model, also known as the measurement model, which aimed to assess the reliability and validity of the latent variables and their observable indicators. The second stage involved the inner or structural model, which aimed to identify the relationships between the independent and dependent latent variables.

To validate the reliability and validity of the outer model, the measurement model

was examined, encompassing the constructs and their dimensions. Initially, all 37 indicators were included for testing. The factor loadings for all indicators were above 0.4, indicating a satisfactory relationship between the latent variables and their observable indicators, as shown in Table 4. Typically, Hair et al. (2019) suggested removing factor loadings between 0.4 and 0.7 to enhance questionnaire reliability. However, removing such factor loadings would not have improved reliability in this study, so all 26 questionnaire items were retained.

Table 4. Validity and Reliability of Questionnaire

	Factor Loading	Cronbach's alpha	Composite reliability (rho _a)	Composite reliability (rho _c)	Average variance extracted (AVE)
GEE12	0.670	0.865	0.868	0.894	0.515
GEE13	0.705				
GEE14	0.705				
GEE15	0.713				
GEE5	0.680				
GEE7	0.702				
GEE8	0.789				
GEE9	0.770				
GHRM1	0.789	0.932	0.939	0.924	0.504
GHRM10	0.616				
GHRM11	0.698				
GHRM12	0.679				
GHRM2	0.649				
GHRM3	0.753				
GHRM4	0.770				
GHRM5	0.758				
GHRM6	0.734				
GHRM7	0.731				
GHRM8	0.654				
GHRM9	0.665				
VIR10	0.691	0.812	0.811	0.865	0.519
VIR2	0.620				
VIR3	0.730				
VIR4	0.773				
VIR5	0.803				
VIR6	0.689				

Source: SMART PLS Output

The study confirmed the reliability of all constructs, as evidenced by both Cronbach's alpha and composite reliability scores exceeding the recommended threshold of 0.7. Additionally, convergent validity was established, as the average variance

extracted for all constructs surpassed the minimum value of 0.5, as per the criteria set by Fornell and Larcker (1981) (table 5). To ensure discriminant validity, the researchers employed the Fornell-Larcker criterion and HTMT ratio (table 6). According to these criteria, the square root of the average variance extracted for each construct should be greater than its highest correlation with other constructs, and the HTMT values should be below the 0.9 threshold, correspondingly (Henseler et al., 2015). The findings were further supported by cross-loading results, conclusively demonstrating the discriminant validity of the measurement model.

Table 5. Discriminant Validity- Fornell Larcker Criterion

	GEE	GHRM	VIR
GEE	0.718		
GHRM	0.341	0.710	
VIR	0.710	0.239	0.720

Source: SMART PLS Output

Table 6. Discriminant Validity- HTMT Ratio

	Heterotrait-monotrait ratio (HTMT)
GHRM <-> GEE	0.267893
VIR <-> GEE	0.839238
VIR <-> GHRM	0.172006

Source: SMART PLS Output

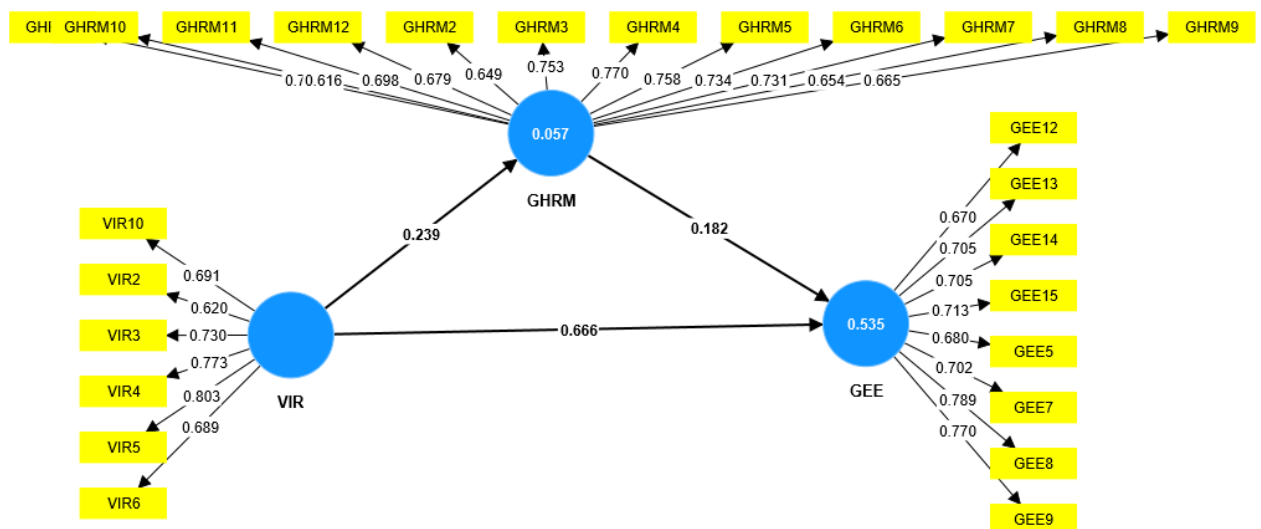


Figure 2 Structural Model

Source: SMART PLS Output

Figure 2 presents the structural model used in the study. To ensure the model's validity, the researchers initially assessed potential multicollinearity using the Variance Inflation Factor (VIF). VIF values greater than or equal to 5 in the Partial Least Squares-Structural Equations Modeling context indicate collinearity issues (Hair et al., 2019). However, in this study, all constructs showed VIF values below 5 (see Table 4 - Structural Model Results), indicating that multicollinearity was absent.

Next, the researchers estimated the path coefficients using the Bootstrap resampling approach to evaluate the significance of direct paths and determine standard errors (Hair et al., 2011). The coefficient of determination (R^2 value) for the direct effect of Virtues on Green Employee Engagement was found to be 0.535, while the coefficient of determination for the indirect effect of Virtues on Green Employee Engagement, mediated by Green HRM, was 0.10. Both R^2 values exceeded the threshold of 0.10, indicating the model's in-sample solid predictive power (Falk & Miller, 1992). Effect sizes were also examined to understand the contributions of the predicting variables to the R^2 value of the endogenous variables. Virtues had a significant effect on Green HRM and a moderate effect on Green Employee Engagement, while Green HRM had a minor effect on Green Employee Engagement. Moreover, Green Employee Engagement was found to predict Green HRM.

To assess the model's predictive power beyond the sample, the researchers analyzed the Model's Stone-Geisser Q^2 value (Geisser, 2017; Stone, 1974). A Q^2 value greater than zero for any endogenous latent variable in the structural model indicates that the path model is useful in predicting the dependent construct. Green HRM and Green Employee Engagement estimates yielded Q^2 values > 0 (see Table 2, Panel A), confirming the model's predictive relevance for the endogenous constructs.

The study's Hypotheses Tests and their results are presented in Figure 1 and Table 4, Panel B, which display the path coefficients for Virtues, Green HRM, and Green Employee Engagement. Hypothesis 1, suggesting that Green HRM positively influences Green Employee Engagement, was fully supported, as leadership significantly enhanced Green Employee Engagement ($\beta = 0.182$, $t = 2.715$, $p < .05$). Similarly, Hypothesis 2, predicting a positive relationship between Virtues and Green Employee Engagement, was also supported, with Virtues significantly increasing Green Employee Engagement ($\beta = 0.666$, $t = 14.118$, $p > .05$). Hypothesis 3, proposing that Virtues positively impact Green

HRM, was fully supported as well, with Virtues significantly improving Green HRM ($\beta = 0.239$, $t = 2.479$, $p < .05$). For more detailed results, refer to Table 7, Panel B.

Table 7. Structural Model Results

	Predictive Ability		F Squared		Variance Inflation Factor	
Panel A	R2	Q2	GEE	GHRM	GEE	GHRM
GEE	0.535	0.473				
GHRM	0.10	0.039	0.067		1.061	
Virtues			0.900	0.061	1.061	1
Panel B						
Path Coefficients	β	t-statistic	P Value	95%Confidence Interval		Support
GHRM -> GEE	0.182	2.715	0.007	0.067	0.310	Yes
VIR -> GEE	0.666	14.118	0.000	0.569	0.754	Yes
VIR -> GHRM	0.239	2.479	0.013	0.138	0.445	Yes

Source: SMART PLS Output

Hypothesis 4 has received support, indicating that Green HRM is a mediator in the relationship between Virtues and Green Employee Engagement. Table 8 provides further evidence to substantiate this hypothesis. The results show a significant total effect of Virtues on Green Employee Engagement ($\beta = 0.710$, $t = 2.715$, $p < .05$). When the mediator, Green HRM, was introduced into the model, the direct effect still showed a positive relationship ($\beta = 0.666$, $t = 14.118$, $p < .05$). Additionally, the indirect effect, considering the mediator in the analysis, was also found to be significant ($\beta = 0.044$, $t = 1.995$, $p < .05$). Consequently, the findings suggest that Green HRM plays a partial mediator role in the relationship between Virtues and Employee Engagement.

Table 8. Results of Mediation

	Coefficient	t-value	Lower	Upper	Mediation
Total Effect	0.71	2.715			
Direct Effect	0.666	14.118			
Indirect effect	0.044	1.995			
Percentile bootstrap					
95% CI			0.023	0.111	

VIR-> GHRM -> GEE					Yes
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Source: SMART PLS Output

Conclusion

This study has delved into the role of green human resource management as a partial mediator in the connection between military virtues and green employee engagement. Conducted exclusively within the Sri Lanka Navy officer cohort, the study's cross-sectional design, carried out in a minimally intervened real-world setting, offers insights into the studied relationships. By utilizing the PLS regression model through SMART PLS 4.0, the study meticulously examined and ensured the robustness of the measurement model. Subsequent exploration of the structural model revealed a significant finding—green human resource management's partial mediating effect. This underscores the significance of environmentally conscious management practices in fostering engaged employees within a military context. It is essential to acknowledge the study's limitations, mainly its exclusive focus on Sri Lanka Navy officers, which restricts the generalizability of outcomes. The study's cross-sectional nature offers associations but precludes causal inferences and temporal dynamics. Despite these constraints, the study bears both theoretical and practical implications. This research extends the existing knowledge base by advancing our understanding of the relationship between military virtues, green human resource management, and green employee engagement. Furthermore, it guides military organizations, and potentially others, toward environmentally conscious strategies to enhance employee engagement. In summary, this study's cross-sectional investigation of green human resource management's partial mediating role among Sri Lanka Navy officers contributes valuable insights. While limitations warrant caution, the study underscores the importance of sustainable practices in nurturing employee engagement within military contexts. Future research could further explore these dynamics and expand the scope to broader populations and longitudinal designs.

Data statement: The data were collected by informing the subjects about the survey's aim and the use of the results. Written consent was not obtained from participants. Data collected and analyzed are anonymous, and individual participants cannot be identified. In such cases, consent is unnecessary as there is no potential harm or breach of privacy. Data is available on request.

References:

- Awwad Al-Shammari, A. S., Alshammrei, S., Nawaz, N., & Tayyab, M. (2022). Green human resource management and sustainable performance with the mediating role of green innovation: A perspective of new technological era. *Frontiers in Environmental Science*, 10, 901235.
- British Maritime Doctrine 2011: JDP 0-10, Ministry of Defence, UK (<https://assets.publishing.service.gov.uk/media/5a82d74440f0b62305b94a14>).
- Cappuccio, M. L., Galliot, J. C., & Alnajjar, F. S. (2022). A Taste of Armageddon: A Virtue Ethics Perspective on Autonomous Weapons and Moral Injury. *Journal of Military Ethics*, 21(1), 19-38.
- Curry, J. P., & Schmidt, O. (2007). The feeding ecology of earthworms—a review. *Pedobiologia*, 50(6), 463-477.
- Dahlsgaard, K., Peterson, C., & Seligman, M. E. (2005). Shared virtue: The convergence of valued human strengths across culture and history. *Review of general psychology*, 9(3), 203-213.
- Dienstmann, G. (2021). *Mindful Self-Discipline: Living with Purpose and Achieving Your Goals in a World of Distractions*. LiveAndDare Publications.
- Duckworth, A. L. (2009). Self-discipline is empowering. *Phi Delta Kappan*, 90(7), 536.
- Falk, R. F., & Miller, N. B. (1992). *A primer for soft modeling*. University of Akron Press.
- Felten, E. (2011). *Loyalty: The vexing virtue*. Simon and Schuster.
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39. <https://doi.org/10.2307/3151312>
- Foot, P. (1997). Virtues and vices. *Virtue ethics*, 163-177.
- Foot, P. (2002). *Virtues and vices and other essays in moral philosophy*. Oxford University Press.
- Geisser, S. (2017). Predictive inference: An introduction. *Predictive Inference: An Introduction*, 1–264. <https://doi.org/10.1201/9780203742310/PREDICTIVE-INFERENC-SEYMOUR-GEISSER>
- Grigorescu, A., Munteanu, I., Dumitrica, C.-D., Lincaru, C. (2023) Development of a Green Competency Matrix Based on Civil Servants' Perception of Sustainable Development Expertise. *Sustainability*. 2023; 15(18):13913. <https://doi.org/10.3390/su151813913>
- Haddock-Millar, J., Sanyal, C., & Müller-Camen, M. (2016). Green human resource management: a comparative qualitative case study of a United States multinational corporation. *The International Journal of Human Resource Management*, 27(2), 192-211.
- Hameed, Z., Naeem, R. M., Hassan, M., Naeem, M., Nazim, M., and Maqbool, A. (2021). How GHRM Is Related to Green Creativity? A Moderated Mediation Model of Green Transformational Leadership and Green Perceived Organizational Support. *Int. J. Manpow.* ahead-of-p(ahead-of-print). doi:10.1108/IJM-05-2020-0244.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., Black, W. C., & Anderson, R. E. (2019). *Multivariate Data Analysis*.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a Silver Bullet. <https://doi.org/10.2753/MTP1069-6679190202>, 19(2), 139–152. <https://doi.org/10.2753/MTP1069-6679190202>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>

- Iddagoda, A., Opatha, H. H. P., & Gunawardana, K. (2016). Towards a Conceptualization and an Operationalization of the Construct of Employee Engagement. *International Business Research*, 9(2).
- Iddagoda, Y. A., Bulińska-Stangrecka, H., & Abeysinghe, R. (2020a). Greening of military personnel. *Bezpieczeństwo Obronność Socjologia*, (13/14), 102-121.
- Iddagoda, Y. A., Abraham, R., & Chinta, R. (2020b). The Effects of Green Energy on Economic Development, And Green Human Resource Management on Nongreen Work Outcomes in Sri Lanka. *Journal of International Finance and Economics*, 4(20), 13-28.
- Iddagoda, Y. A. (2020c). The Employee's Personal Character and its Imperative in the Post-Covid-19 Pandemic World. *Labor et Educatio*, (8), 37-51.
- Keppetipola, M., & Dharmasiri, A. S. (2020). Military virtues: conceptualization and operationalization.
- LeBar, M. (2002). Justice as a Virtue.
- Maritime Doctrine of Sri Lanka 2020*: Sri Lanka Navy BR 1, Naval Printing Unit, Welisara, Sri Lanka (https://www.navy.lk/assets/img/doctrine/br_01/mobile/index.html).
- Miller, C. B. (2021). *Honesty: The philosophy and psychology of a neglected virtue*. Oxford University Press.
- Moelker, R., & Olsthoorn, P. (2007). Virtue ethics and military ethics. *Journal of Military ethics*, 6(4).
- Norling, P. M. (2009). In Innovation, Is Patience a Virtue?. *Research-Technology Management*, 52(3), 18-23.
- Olsthoorn, P. (2010). *Military ethics and virtues: An interdisciplinary approach for the 21st century*. Routledge.
- Olsthoorn, P. (2017). Situations and dispositions: How to rescue the military virtues from social psychology. *Journal of Military Ethics*, 16(1-2), 78-93.
- Olsthoorn, P. (2019) 'Military Values and Moral Relativism' in: Michael Skerker, David Whetham & Don Carrick (eds) *Military Virtues* (Howgate Publishing).
- Olsthoorn, P. (2021). *Military Virtues for Today*. Ethics and Armed Forces, 2021(2).
- Opatha, H. H. D. N. P. (2010). *Personal Quality*. Sri Lanka: Author.
- Pelser, A. C. (2021). Fostering Respect in the Military. *Journal of Military Ethics*, 20(3-4), 281-292.
- Pianalto, M. (2016). *On patience: Reclaiming a foundational virtue*. Rowman & Littlefield.
- Rabieh, L. R. (2006). *Plato and the Virtue of Courage*. JHU Press.
- Rice, G., & Selman, J. (2022). Sola dosis facit venenum: The Ethics of Soldier Optimisation, Enhancement, and Augmentation. *Journal of Military Ethics*, 1-19.
- Robinson, J. (2014). Plato and the Virtues of Military Units. *Journal of Military Ethics*, 13(2), 190-202.
- Robinson, K., McKenna, B., & Rooney, D. (2022). The relationship of risk to rules, values, virtues, and moral complexity: What we can learn from the moral struggles of military leaders. *Journal of Business Ethics*, 179(3), 749-766.
- Ryan, M. J. (2013). *The power of patience: How this old-fashioned virtue can improve your life*. Mango Media Inc..
- Sandin, P. (2007). Collective military virtues. *Journal of Military Ethics*, 6(4), 303-314.
- Sarstedt, M., Ringle, C. M., Smith, D., Reams, R., & Hair, J. F. (2014). Partial least squares structural equation modeling (PLS-SEM): A useful tool for family business researchers. *Journal of Family Business Strategy*, 5(1), 105–115. <https://doi.org/10.1016/J.JFBS.2014.01.002>
- Sekaran, U., 2003. *Research methods for business*. Hoboken. NJ: John Wiley & Sons. The Journal of Management Development, 14(3), pp.3-13.
- Sison, A. J. G. (2006). Leadership, character and virtues from an Aristotelian viewpoint. In

Responsible leadership (pp. 108-121). Routledge.

Sri Lanka Air Force Vision (2024, January 12), https://www.airforce.lk/pages.php?pages=mission_vision

Sri Lanka Army Vision (2024, January 12), <https://www.army.lk/history>.

Stone, M. (1974). Cross-Validatory Choice and Assessment of Statistical Predictions. *Journal of the Royal Statistical Society: Series B (Methodological)*, 36(2), 111–133. <https://doi.org/10.1111/J.2517-6161.1974.TB00994.X>

Syse, H. (2021). Character or Institution? Virtues or Rules?. *Journal of Military Ethics*, 20(3-4), 161-162.

Vera, D., & Rodriguez-Lopez, A. (2004). Strategic virtues:: humility as a source of competitive advantage. *Organizational dynamics*, 33(4), 393-408.

Vivenza, G. (2010). Justice as a Virtue—Justice as a Principle in Adam Smith's Thought.

Walker, D. I., Thoma, S. J., & Arthur, J. (2021). Assessing ethical reasoning among junior British Army officers using the Army Intermediate Concept Measure (AICM). *Journal of Military Ethics*, 20(1), 2-20.

Wright, P. M., & Snell, S. A. (1991). Toward an integrative view of strategic human resource management. *Human Resource Management Review*, 1(3), 203–225.

Xianzhong, H. (2007). Justice as a virtue: An analysis of Aristotle's virtue of justice. *Frontiers of Philosophy in China*, 2(2), 265-279.

Zavaliy, A. G., & Aristidou, M. (2014). Courage: A modern look at an ancient virtue. *Journal of Military Ethics*, 13(2), 174-189.