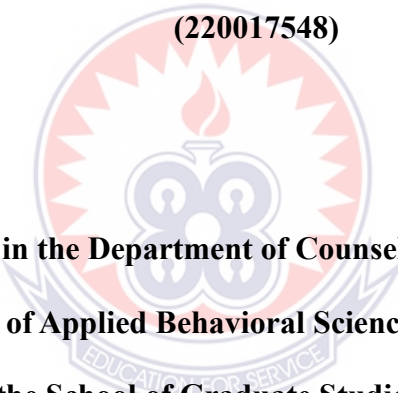


UNIVERSITY OF EDUCATION, WINNEBA

Peacekeeping-related trauma, post-traumatic stress disorder (PTSD), post-combat coping and post-traumatic growth (PTG) in the (Ghanaian) military

OLIVIA MAWUTOR KLOGO

(220017548)

The logo of the University of Education, Winneba, is a circular emblem. It features a central torch with a flame, set against a background of a rising sun with rays. Below the torch are two stylized figures. The entire emblem is encircled by a border containing the text 'UNIVERSITY OF EDUCATION, WINNEBA' and 'EDUCATION FOR SERVICE'.

**A thesis in the Department of Counselling Psychology,
Faculty of Applied Behavioral Sciences in Education,
submitted to the School of Graduate Studies in partial fulfilment
of the requirements for the award of the degree of
Master of Philosophy (Counselling Psychology)
in the University of Education, Winneba**

FEBRUARY, 2024

STUDENT'S DECLARATION

I, OLIVIA MAWUTOR KLOGO, declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE:

DATE:



SUPERVISORS' DECLARATION

We hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of thesis as laid down by the University of Education, Winneba.

PROF. HANNAH E. ACQUAYE (PhD) (Principal Supervisor)

SIGNATURE:

DATE:

PROF. PATRICIA M. AMOS (Co-Supervisor)

SIGNATURE:

DATE:



DEDICATION

I dedicate this work to my family.



ACKNOWLEDGEMENT

I am most grateful to the Most High God for seeing me through this course. My profound gratitude also goes to my gifted supervisors, Dr. Hannah E. Acquaye and Dr. (Mrs.) Patricia M. Amos whose productive pieces of advice, constructive criticisms and commitment have made this work a success. I am also grateful to the Ghana Armed Forces and the Department of Counselling Psychology in the University of Education, Winneba.



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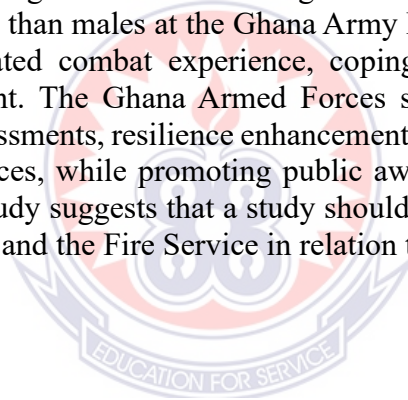
GLOSSARY

Acronym / Term	Meaning
AFCAS	Armed Forces Continuous Attitude Survey
DACOWITS	Defence Advisory Committee on Women in the Services
GAF	Ghana Armed Forces
GHQ	General Headquarters
MOD	Ministry of Defence
NCO	Non-Commissioned Officer
SNCO	Senior Non-Commissioned Officer
PTSD	Post-Traumatic Stress Disorder
PTG	Post-Traumatic Growth
YO	Young Officer



ABSTRACT

Over 75% of African nations have experienced combat over the last 30 years, with Ghanaian armed forces being a significant contributor. Post-war trauma and mental health consequences have been widespread, with Africa accounting for 88% of global death toll from conflicts. Ghana's military forces have participated in 39 missions, resulting in 131 deaths and significant casualties. Post-deployment trauma, such as PTSD, is linked to difficulties military personnel face upon returning home. Ghana must adopt transition programs to help its military troops cope with these issues. The study sought to investigate the trauma-related experiences encountered by military personnel during peacekeeping missions and to evaluate potential gender differences in coping with Post-Traumatic Stress Disorder (PTSD) and experiencing Post-Traumatic Growth (PTG) following peacekeeping deployments. A quantitative research approach was adopted for the study and a cross-sectional research design to help with the data collection. Purposive and convenience sampling technique were used to select 392 military personnel for the study. Data was entered into SPSS version 25 and descriptive statistics and correlation analysis were employed to analyse the data gathered. Excel 2019 was used to compute the tables. The study established that, there exist a lot of males in the Ghana Army Forces and they are faced with several PTSD symptoms, coping exist between both genders in the Ghana Army and females exhibited higher PTG than males at the Ghana Army Forces. The relationship among PTSD, traumatic-related combat experience, coping and PTG were positive and statistically significant. The Ghana Armed Forces should prioritize mental health through training, assessments, resilience enhancement, open discussions, peer support networks, and resources, while promoting public awareness and collaborating with psychologists. The study suggests that a study should be conducted on Ghana Police Service, Immigration and the Fire Service in relation to PTSD, PTG and Coping.



CHAPTER ONE - INTRODUCTION

1.0 Introduction

This chapter explores the correlation between peacekeeping missions, post-traumatic stress disorder (PTSD), coping mechanisms after combat, and post-traumatic growth (PTG) among members of the Ghanaian military. It delineates the problem that underpins the research, presents the conceptual framework guiding the study, outlines the study's objectives, formulates research questions, and considers other important variables such as delimitations and the organization of the study.

1.1 Background to the Study

The world is undergoing a tremendous transformation, and a shift towards a more multipolar international order is outlined in the New Agenda for Peace, which also notes a waning of the unity of purpose that defined member states in the early 1990s. This change has resulted in heightened competition, a lack of respect for international law, and a decline in trust, which raises questions about how to reach an agreement on multilateral crisis management and future peace operations. The United Nations has conducted more than 120 peace operations since 1948, proving its adaptability and efficiency in a variety of conflict situations. They have been able to stay relevant as the nature of conflict has changed because of their flexibility. Hansen (2025) reveals that peace operations are an economical multilateral instrument for managing international security risks, averting armed conflict, and maintaining peace.

Today's peacekeeping efforts prioritize breaking the vicious cycle of insecurity and underdevelopment. The "multidimensional" mandates of peacekeeping operations extend beyond merely containing violence; they also aim to foster

conditions for economic recovery (Bove, Salvatore & Elia, 2022). However, the increasingly complex environments in which peacekeepers operate present unique challenges. Peacekeepers often face direct violence, including being shot at, ambushed, or witnessing injuries and deaths among civilians they are meant to protect (UNITAR, 2019).

Additionally, peacekeeping missions confront substantial health challenges. Peacekeepers are exposed to traumatic experiences similar to those in conventional warfare, along with “physical risks and psychological stressors related to post-traumatic stress disorder (PTSD)” (Carmona, Camilo, Carvalho & Chambel, 2024; Doody et al., 2022; Wach et al., 2021). Carmona et al., (2024) have identified more individual than contextual factors influencing PTSD. While some mission-related stressors, such as combat exposure, are unavoidable, others—like coping strategies, deployment duration, and social support—can significantly mitigate PTSD risks.

“PTSD, depression, and anxiety” are urgent issues in military contexts. These conditions often occur together, complicating treatment (Giorgi et al., 2017). While many individuals can manage these issues with peer support, cumulative stress from armed conflict can overwhelm normal coping mechanisms (Farrell et al., 2017). Trauma is a leading global cause of mortality, resulting in approximately 4.4 million deaths annually (WHO, 2021). It significantly contributes to “morbidity and disability, with road injuries ranking high in years of life lost (YLL) and disability-adjusted life years (DALYs) in 2019” (WHO, 2020).

Although guidelines from the American College of Surgeons propose developing integration partnerships, the American College of Surgeons primarily focuses on embedding military teams into civilian trauma centers within the U.S. healthcare system, which has not proven to enhance the nationwide distribution of

trauma resources (Knudson et al., 2020). Extensive research highlights high rates of PTSD and major depression among war survivors (Hoppen et al., 2021). Post-war trauma remains a pressing issue for military personnel involved in peacekeeping in Iraq and Afghanistan (Fel et al., 2022).

The health challenges faced by UN peacekeepers reflect global health issues with complex, cross-border risk factors. Effective strategies should encompass multi-phase (before, during, and after deployment), multi-disciplinary (including public health, medicine, and politics), and multi-level (involving the UN, host countries, and troop-contributing nations) approaches (Yuan et al., 2024). During missions, military personnel may also encounter morally injurious experiences (PMIEs), such as being unable to intervene due to limited mandates. Such experiences can lead to moral injury in combat veterans (de Goede et al., 2024). For example, Dutch peacekeepers during the Srebrenica genocide reported that higher PMIE exposure correlated with worse mental health outcomes 25 years later (de Goede et al., 2024).

While the prevalence of mental health issues among Chinese military personnel remains relatively low, many individuals still face mental health challenges. It is essential for military units and society to prioritize the mental well-being of soldiers and enhance mental health care services (Jing et al., 2024). Brazilian peacekeepers in Haiti noted that negative emotions before deployment increased their risk of PTSD, and similar pre-deployment risk factors were identified among Dutch peacekeepers in Yugoslavia.

Soldiers in Africa, particularly those in the South African National Defence Force (SANDF), are now eligible to participate in UN peacekeeping missions. Members of the SANDF in Sudan face many difficulties, such as mutilation, death, and trauma to the community, all of which call for extraordinary adjustment skills

(Koopman & van Dyk, 2012). Observations from Sierra Leone's first battalion deployment highlight the broader issues of mental health impacted by combat experiences (Dwyer & Gbla, 2022).

The Republic of South Sudan gained independence from Sudan on July 9, 2011, and the UN has worked to protect civilians and promote sustained peace. However, during the Japan Ground Self-Defense Force's deployment, escalating civil conflict led to numerous civilian deaths and increased violence against peacekeepers (BBC News, 2013; BBC News, 2016). The mental health of peacekeepers is crucial for the success of these operations.

In Ghana, the mental well-being of deployed troops is also a significant concern. Effective military practices can help mitigate depression and PTSD among soldiers in international peacekeeping missions (Adeti, 2022). The negative impacts of pre-deployment selection and training on mental health outcomes are more pronounced among soldiers with high levels of cross-cultural competence and personal resilience. Furthermore, social support during deployment remains crucial for all soldiers, regardless of their resilience levels (Adeti, 2022). The psychological health of military personnel is vital, as it influences the performance of Ghanaian soldiers after deployment (Bartone & Homish, 2020).

1.2 Statement of the Problem

In the past three decades, more than three-quarters of African nations have experienced various forms of warfare, resulting in significant loss of life and immense suffering for the general African population, including the Ghana Armed Forces, as highlighted by Muluneh et al. (2020). Since the 1960s, Ghanaians have participated in numerous UN security missions worldwide, providing them with diverse

experiences that have heightened their awareness of the devastating impacts of war and violent conflicts on individuals. The direct exposure to daily dangers and the struggle for survival serve as constant reminders of the importance of securing peace (Christensen, 2022).

Despite Ghana being a free and relatively safe country, there are several security concerns that could potentially alter this status. These include the spread of violent extremism and terrorist activities from the Sahel region to the coast, as well as the increase in terrorist incidents in neighboring Burkina Faso. Additionally, Ghana faces internal security threats such as vigilantism, the presence of foreign missions and interests, and conflicts between communities over resources, all contributing to the risk of terrorism (Christensen, 2022).

Musisi and Kinyanda (2020) conducted a study on the African continent over the past two decades, documenting severe trauma and stress-related mental health consequences resulting from “the persistent and enigmatic post-war trauma experienced across Africa”. Africa bears the brunt of global conflict-related fatalities, accounting for 88% of such deaths, with Asia and the Middle East accounting for 9%, Europe 2%, and the Americas 1% (Musisi & Kinyanda, 2020). Global dynamics, particularly control over markets and resources, as well as fundamentalisms (religious and racial), have fueled numerous proxy wars in the region.

Ghana's military forces have been actively involved in 39 missions across Africa, Europe, and Asia, deploying nearly 130,000 personnel. These missions primarily focus on tasks such as patrolling, mine removal, and ceasefire monitoring (Nagar, 2022). Ghana ranks fourth globally in terms of fatalities incurred during these missions, with 131 men lost thus far, following India, Nigeria, and Pakistan (Nyantakyi-Frimpong, 2021). The losses suffered by Ghanaian units, identifiable by

the black star emblem on their shoulders, within peacekeeping missions are particularly significant. Despite these challenges, Ghana continues to lead African countries in contributing troops to UN peacekeeping missions.

Basham (2007) suggests that many military personnel struggle to adjust to civilian life upon returning from peacekeeping missions, often exhibiting behaviors incompatible with their roles at home. However, for some, the transition is smoother, leading to successful adaptation to life back home (Knobloch & Theiss, 2012). Agah (2022) found a positive correlation between post-traumatic stress disorder (PTSD) symptoms and the difficulties experienced by Ghanaian military personnel after deployment. Additionally, the social support received from family and friends upon returning home did not diminish the association between post-deployment issues and the development of PTSD symptoms among military personnel.

This study is centered on the insufficient understanding of trauma-related experiences among military personnel during peacekeeping missions, particularly in the context of Ghana, where gender differences in coping with Post-Traumatic Stress Disorder (PTSD) and Post-Traumatic Growth (PTG) remain underexplored. While existing literature highlights the prevalence of PTSD and the psychological challenges faced by veterans globally, there is a notable gap in examining the specific dynamics of peacekeeping trauma within the Ghana Armed Forces, including how these experiences differ by gender and impact coping strategies and growth. This gap is critical, as the unique socio-political landscape of Ghana, coupled with its active participation in international peacekeeping, necessitates targeted research to inform mental health interventions and support systems tailored to the diverse needs of military personnel returning from deployment.

1.3 Purpose of the Study

The study investigated the trauma-related experiences encountered by military personnel during peacekeeping missions and to evaluate potential gender differences in coping with Post-Traumatic Stress Disorder (PTSD) and experiencing Post-Traumatic Growth (PTG) following peacekeeping deployments. Additionally, the study seeks to examine the relationship among peacekeeping trauma-related combat experiences, PTSD, coping and PTG in military personnel in Ghana.

1.4 Objectives of the Study

1. To find out the types of trauma-related combat experiences that military personnel encounter during peacekeeping?
2. To find out gender differences in post-traumatic stress disorder (PTSD) of military personnel post-peacekeeping.
3. To find out the gender differences in coping strategies used by military personnel post-peacekeeping.
4. To find out the gender differences in post-traumatic growth (PTG) experienced by military personnel post-peacekeeping.
5. To find out the relationship among peacekeeping trauma-related combat experiences, PTSD, coping strategies and PTG in military personnel in Ghana.

1.5 Research Questions

1. What are the types of trauma-related combat experiences that military personnel encounter during peacekeeping?

2. What gender differences exist in post-traumatic stress disorder (PTSD) of military personnel post-peacekeeping?
3. What gender differences exist in coping strategies used by military personnel post-peacekeeping?
4. What gender differences exist in post-traumatic growth (PTG) experienced by military personnel post-peacekeeping?
5. What is the relationship among peacekeeping trauma-related combat experiences, PTSD, coping strategies and PTG in military personnel in Ghana?

1.6 Research Hypothesis

The null hypothesis is H_0 and the alternative hypothesis is H_a

- Ho1: There will be no statistically significant gender differences in post-traumatic stress (PTSD) symptoms, post-peacekeeping coping and post-traumatic growth (PTG) of military personnel post-peacekeeping
- Ha1: There will be a statistically significant gender differences in post-traumatic stress (PTSD) symptoms, post-peacekeeping coping and post-traumatic growth (PTG) of military personnel post-peacekeeping
- Ho2: There will be no statistically significant relationship among peacekeeping related trauma experiences, PTSD, coping and PTG in military personnel in Ghana.
- Ha2: There will be a statistically significant relationship among peacekeeping related trauma experiences, PTSD, coping and PTG in military personnel in Ghana.

1.7 Significance of the Study

Understanding the relationship between trauma-related combat experiences and post-traumatic stress disorder (PTSD) within the Ghana Armed Forces holds several potential benefits. Firstly, it can contribute to the development of more effective PTSD prevention and therapeutic programs tailored to the needs of military personnel. By addressing the effects of trauma comprehensively, these programs can enhance the mental health and well-being of armed forces members. Additionally, such initiatives can help alleviate the long-term burden of PTSD on individual troops, the military organization, and the broader society.

Moreover, by adequately addressing PTSD, the Ghana Armed Forces can enhance the overall readiness and effectiveness of its personnel. Soldiers grappling with PTSD may encounter challenges in carrying out their duties, potentially impacting operational efficiency. However, by addressing their mental health needs, the armed forces can cultivate a more resilient and proficient military force, better equipped to fulfill its responsibilities and adapt to diverse challenges.

In the context of peacekeeping missions, a deeper understanding of trauma and PTSD can significantly contribute to the well-being of soldiers stationed in challenging and potentially traumatic environments. This heightened awareness can lead to more effective peacekeeping operations as personnel are better equipped to cope with the stress and trauma inherent in their experiences. By providing soldiers with the necessary support and resources to address their mental health needs, peacekeeping activities can be carried out more efficiently and with greater resilience, ultimately contributing to the overall success of the missions.

The correlation between PTSD and coping mechanisms holds potential benefits for the Ghana Armed Forces and its personnel. Encouraging effective coping strategies and providing support to individuals dealing with PTSD can foster a culture of resilience and psychological well-being within the military. This not only aids individual soldiers but also enhances the cohesion and performance of military units as a whole. Moreover, addressing PTSD and promoting healthy coping mechanisms can facilitate the recovery process for military personnel following traumatic experiences. By assisting soldiers in overcoming the challenges posed by their trauma, the military can cultivate resilience, personal growth, and a sense of purpose among its members. Ultimately, this contributes to the development of a stronger and more capable military force, thereby enhancing Ghana's overall well-being and stability.

1.8 Delimitation of the Study

The study was specifically focused on the Ghana Armed Forces and did not include any other paramilitary organizations in Ghana. In terms of participant selection, the inclusion criteria were restricted to individuals aged between 25 and 45 years. This age range was chosen because it corresponds to the typical age range of personnel deployed for peacekeeping missions within the Ghana Armed Forces. Additionally, participants were required to have been on at least one peacekeeping mission. Individuals under the age of 25 and those over the age of 45 were excluded from the study, as they generally do not meet the criteria for deployment on peacekeeping missions. Furthermore, personnel who were currently preparing for a peacekeeping mission or who had never participated in a peacekeeping mission were also excluded from the study.

1.9 Operational Definition of Terms

Air Force: A branch of the armed forces concerned with the fighting or defense of the airspace.

Armed Forces: A composite force comprising the Ghana Army, Ghana Navy, and Ghana Air Force of a nation.

Army: An organized military force equipped for fighting on land.

Commander-in-Chief: The supreme commander of the armed forces of a nation, usually the president.

Commissioned Officer or Officer: An officer of a country's armed forces who has graduated from the military academy and is confirmed by a government document (parchment).

Deployment: The temporary transfer of a service member of the armed forces to another location in support of combat or some other military operation.

Enlistment: The process of being enlisted into the military; the intake of officers into the military.

Navy: The part of a country's armed forces that is trained to operate at sea.

Non-Commissioned Officer: This term includes all soldiers, especially those below the rank of a sergeant.

Officer Cadet: The rank held by military cadets during their training to become commissioned officers.

Other Ranks: The intake of non-officers into the military; these soldiers aren't Commissioned Officers and usually have their ranks on their arms (e.g., Corporal, Sergeant), while Officers wear theirs on their shoulders.

Recruit: A person undergoing military training at the training center.

Senior Officer: A commissioned officer of the armed forces of rank above captain but below a brigadier.

Servicemen: Officers and soldiers in the military.

Soldiers: Personnel in the armed forces who were trained at the training center and have not gone through the military academy to receive a presidential commission.

Young Officer: A commissioned military officer of rank below a major.

1.10 Organization of Rest of Chapters

With an emphasis on notions of PTSD, PTG, Coping and traumatic combat exposure, the second chapter delivers a critical evaluation of the literature pertinent to the research. It also looked at the theoretical frameworks that will direct the research. In the third chapter, the research philosophy, research approach, research design, target population and access, sampling procedure, sample size, research instruments, ethical consideration, and data analytic procedure are all discussed in chapter three. Chapter four presents the findings and discussion of the data gathered. Finally, chapter five presents the summary, conclusion and recommendation of the study.

CHAPTER TWO - LITERATURE REVIEW

2.0 Introduction

In this chapter, the interconnections between peacekeeping, post-traumatic stress disorder (PTSD), post-combat coping, and post-traumatic growth within the Ghana Armed Forces are thoroughly examined. Additionally, a comprehensive analysis of a theory pertinent to this study is provided.

2.1. Theoretical Review

2.1.1 Acceptance and Commitment Therapy (ACT)

The theoretical framework underlying this work is Acceptance and Commitment Therapy (ACT), as proposed by Hayes and Pierson (2005). ACT is a psychotherapeutic approach that integrates principles from behavioral and cognitive therapies. Steven Hayes developed ACT as a means to confront and address his own experiences rather than avoiding or denying them, and he subsequently applied this concept to assist his clients.

In ACT, clients are instructed to acknowledge and embrace the idea that certain emotions are appropriate responses to particular situations. By accepting these deeper emotions, clients gain the ability to enact behavioral changes regardless of external circumstances or the directives of their emotions. ACT encourages clients to recognize that negative emotions, such as anxiety, do not necessarily require fixing, managing, or altering, but rather should be embraced as integral aspects of the human experience (Hayes & Pierson, 2005).

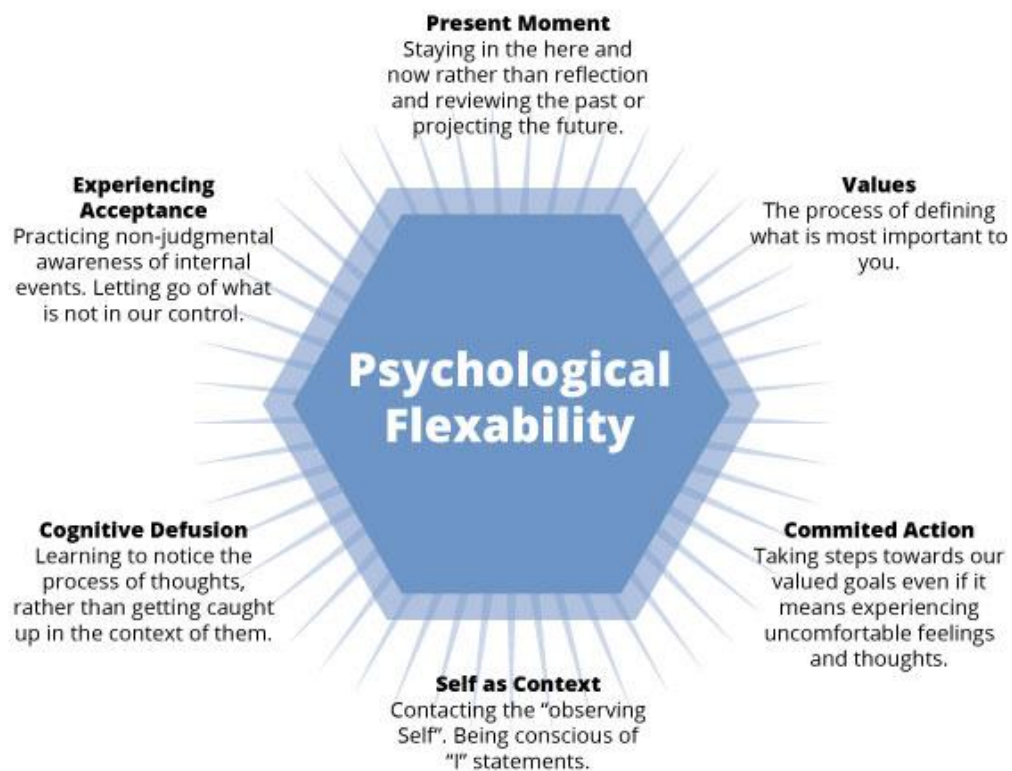
ACT relies on six core processes believed to promote psychological flexibility. These processes include:

- (a) acceptance – where one acknowledges and embraces the full range of thoughts and emotions;
- (b) cognitive diffusion – distancing oneself from as well as changing the way one reacts to distressing thoughts and feelings;
- (c) being present – being mindfully present in the moment and observing thoughts and feelings without judging them to be good or bad;
- (d) self as a context – recognizing that people are more than just their thoughts, feelings and experiences, and expanding self and identity;
- (e) values – instead of living to please others, choosing personal values and living by those standards; and
- (f) committed action – taking concrete steps to make changes that are aligned or consistent with those personal values.

Therefore, in this study, military personnel who have participated in peacekeeping missions and are experiencing symptoms of trauma could be trained in the principles of ACT. This training would involve cultivating mindfulness and awareness of their surroundings, as well as identifying and embracing their personal values. These values may include adopting healthy coping mechanisms and fostering connections with significant others. Furthermore, beyond merely identifying their personal values, these service members could be encouraged to take tangible actions aligned with these values, enabling them to fully engage with the spectrum of life experiences, encompassing both PTSD and post-traumatic growth (PTG) symptoms. By applying mindfulness techniques to these experiences, military personnel may enhance their ability to navigate and cope with the challenges they encounter.

2.1.2 The Hexaflex

At the core of the Acceptance and Commitment Therapy (ACT) framework lies the Hexaflex model. This model delineates the structure of case formulation and treatment guidance, comprising six fundamental processes. As clients engage with these key areas, they gain insight into areas where they may feel stuck and learn strategies to free themselves. The overarching aim of Acceptance and Commitment Therapy is not only to alleviate human suffering but also to cultivate lives that are rich, fulfilling, and vibrant.



(Hoffmann & Frostholt, 2019)

Figure 1: The Hexaflex (The Acceptance and Commitment therapy)

The following describe the Hexaflex in detail:

- **Cognitive Diffusion:** The human brain has the remarkable ability to absorb and retain information from experiences, senses, and ideas through a process

known as cognition. Cognitive learning represents an active approach to learning that can optimize the brain's potential. By effectively linking new knowledge with existing concepts, cognitive learning facilitates deeper understanding and retention. Understanding one's preferred learning styles through cognitive learning can aid in the development of expertise (Herrity, 2023). Given the dynamic nature of cognitive processes, there is a pressing need for ongoing assessments to account for changes over time as individuals encounter new events (Brown-Schmidt & Cho, 2020). Effective cognitive thinking relies on an individual's capacity to focus attention and fully absorb the information being presented (Densing, 2023). Cognitive diffusion, on the other hand, involves learning to observe cognitive processes without becoming overwhelmed by the material (Mehta et al., 2022). By understanding how thoughts operate, individuals can gradually diminish the influence of distressing or maladaptive thoughts from the past. The goal of cognitive diffusion is to enhance awareness of one's thought processes, enabling clearer thinking and problem-solving before taking action. Similarly, cognitive diffusion encourages individuals to identify and challenge negative thoughts, although this can be challenging when caught in a negative thought pattern.

- **Experiential Acceptance:** Experiential acceptance involves actively cultivating non-judgmental awareness of both internal and external events. This practice entails recognizing that certain aspects of our experiences are beyond our control, and by relinquishing the struggle against them, we can focus on making decisions about the aspects we do have control over. In recent years, there has been a notable surge in research focusing on experiential acceptance, which encompasses the concept of "having" or "allowing" private

experiences (Shahid et al., 2022). However, it's worth noting that acceptance can be seen as a common thread across various psychotherapy traditions.

- **Present Moment:** Each individual inhabits a unique sensory universe shaped by their genetics, upbringing, and life experiences. The human brain naturally gravitates towards change, often prompting our senses to harmonize with one another (Miles, 2023). Recognizing and understanding the diverse sensory worlds that each person occupies can foster a deeper appreciation for the multitude of ways in which we perceive and engage with the world around us. This focus on sensory experiences is particularly valuable for individuals' seeking mindfulness, as it enables them to connect more intimately with their surroundings, thereby enhancing overall well-being (Miles, 2023). The concept of the Present Moment involves becoming attuned to sensory experiences occurring in the here and now. This process provides clients with a foundational awareness crucial for engaging in Acceptance and Commitment Therapy exercises. Unlike abstract concepts or linguistic explanations, the present moment is a direct experience accessible to individuals in real-time. Maslow's (2022) exploration of the present moment represents a compelling addition to psychoanalytic theory and practice, challenging traditional perspectives and offering new insights into human experience.
- **Self as Context:** The concept of "self as context" emphasizes that experiences, emotions, and thoughts are transient aspects of oneself that do not fundamentally define one's core identity. Regardless of the current state of thoughts, feelings, or self-perception, the essence of one's being remains unchanged (Thrive Training and Consulting, 2021). According to Jain (2023), "self as context" involves connecting with the "observing self," a facet of one's

consciousness capable of witnessing thoughts, feelings, and actions in any given moment. This aspect enables mindfulness, allowing individuals to detach from deeply ingrained beliefs about themselves. The conceptual self encompasses an individual's perceived identity, including social roles, gender roles, objective facts (such as name, age, occupation), and subjective aspects (such as preferences, fears, strengths, and weaknesses). When individuals maintain a flexible perspective on their conceptual self, their identity framework remains adaptable. However, losing sight of the distinction between oneself and the limitations imposed by the conceptual self can lead to challenges in various aspects of life, as posited by Acceptance and Commitment Therapy (ACT).

- **Values:** Human values represent the fundamental principles that shape our personality and guide our actions in life. They serve as the essence of who we are and provide direction in our journey through life. Our values dictate not only the type of person we aspire to be but also influence our everyday decisions and actions. Without these values, life would lack coherence and meaning, rendering our pursuits devoid of purpose (source: <https://www.geeksforgeeks.org>). Values are the process of identifying what holds utmost importance to an individual in their life. By engaging in this process and connecting with a deeper sense of what truly matters, individuals can define their purpose, direction, and decision-making, leading to a more fulfilling and meaningful future. Additionally, values involve recognizing the qualities of behavior that one desires to embody and live-in alignment with.
- **Committed Action:** Committed Action involves taking purposeful steps toward valued goals, even in the presence of uncomfortable thoughts and

emotions. Through this practice, individuals learn that committing to meaningful actions, rather than fixating on specific outcomes, can lead to greater vitality and fulfillment. Regularly engaging in behaviors aligned with one's values is referred to as committed action (Wilton, 2022). Furthermore, the outcome of taking action in alignment with one's values is also considered a committed action. Values represent the desired qualities and traits that individuals aspire to embody and demonstrate in their lives. Our actions are influenced by our values in every circumstance. For example, to fulfill the personal value of improving one's tennis game, one might choose to dedicate extra time to practicing their backhand shot after regular training sessions. In the context of Acceptance and Commitment Therapy (ACT), psychological flexibility lies at the heart of the approach. It is essential to understand how the core processes of ACT interrelate and contribute to psychological flexibility. Rather than viewing these processes as separate strategies, they should be seen as mutually reinforcing components that support each other in promoting psychological flexibility.

2.2 Empirical Review

According to Hoge et al. (2007), veterans of the Iraq War have a higher likelihood of developing post-traumatic stress disorder (PTSD) if they have experienced combat trauma. This finding aligns with similar research conducted by Kessler et al. (1995), who observed a higher prevalence of PTSD among individuals exposed to combat-related trauma. The National Comorbidity Survey conducted by Kessler et al. (1995) revealed that individuals who encountered multiple traumatic

events, particularly those associated with combat, were at a greater risk of developing PTSD compared to those who experienced a single traumatic event.

Furthermore, O'Donnell et al. (2004) found that individuals with a history of depression were more prone to developing PTSD following exposure to stressful events. These findings highlight the substantial impact of both combat trauma and prior mental health history on the development of PTSD. According to studies conducted by Adler et al. (2009), troops who employed healthy coping strategies, such as problem-solving and seeking social support, exhibited fewer PTSD symptoms. Conversely, Litz et al. (2009) suggested that the inability to effectively cope with traumatic situations could lead to moral injury, which is associated with increased PTSD symptoms. Pietrzak et al. (2009) identified a correlation between perceived stigma, barriers to mental health treatment, and decreased utilization of appropriate coping mechanisms among veterans, thereby increasing the risk of developing PTSD. Moreover, Milliken et al. (2007) noted that reserve component troops have limited access to certain coping resources compared to active-duty soldiers. This lack of access may contribute to the higher prevalence of PTSD symptoms observed among reserve component soldiers.

Post-traumatic stress disorder (PTSD) can significantly impede post-traumatic development, hampering individuals' ability to undergo positive transformations after experiencing a traumatic event. Severe or persistent PTSD symptoms may pose challenges for individuals in rebuilding their lives and fostering a new perspective on their traumatic experiences, thereby limiting their capacity for post-traumatic growth (Tedeschi & Calhoun, 2004). Individuals with PTSD often experience intrusive thoughts, flashbacks, and avoidance behaviors that can profoundly drain their

cognitive and emotional resources, impeding their personal development (Zoellner & Maercker, 2006).

Military personnel may undergo post-traumatic development, and the manner in which they experience war can impact the trajectory of this growth. While encountering significant combat-related trauma is often associated with an increased likelihood of developing PTSD, research indicates that the extent of combat exposure does not consistently predict post-traumatic development (Tedeschi & Calhoun, 1996). Post-traumatic development is not solely determined by the traumatic experience itself, but rather by the individual's subjective interpretation of the incident. This interpretation encompasses their perceptions of personal growth and the meaning they derive from the experience (Tedeschi & Calhoun, 2004).

Coping methods play a crucial role in shaping the potential for post-traumatic development among military personnel. Effective coping strategies can help alleviate the negative impacts of PTSD symptoms and facilitate positive transformations following a traumatic event. Adaptive coping methods, such as actively seeking social support, employing problem-solving skills, and adopting a positive outlook, have been associated with greater levels of post-traumatic development (Bryant-Davis & Smith, 2015). Engaging in these adaptive coping strategies enables individuals to effectively navigate the challenges posed by trauma, gain insights into the significance of their experiences, and foster a renewed sense of purpose and direction in their lives.

2.2.1 Trauma

Effects of post-war trauma, including intrusive thoughts, nightmares, flashbacks of traumatic events, avoidance of trauma-related memories, hypervigilance, and sleep disturbances, are common challenges faced by soldiers.

These issues can significantly impact various aspects of a military personnel's life, hindering their performance in daily tasks, social interactions, work, and interpersonal relationships (American Psychiatric Association [APA], 2013; Satapathy, 2022),

Van der Kolk (2022) defines “trauma as an emotional reaction to a devastating event such as an accident, sexual assault, or natural disaster”. It can also be characterized as a “response to an intensely distressing or disturbing incident that overwhelms an individual's coping mechanisms, leading to feelings of helplessness and a diminished sense of self, as well as impairing their ability to experience a full range of emotions and life experiences”. “Traumatic events encompass those triggered by human actions (e.g., sexual assault, warfare, industrial accidents) as well as natural occurrences (e.g., earthquakes, landslides, floods)”. Three main types of traumas have been identified: Acute Trauma, Chronic Trauma, and Complex Trauma.

- **Acute Trauma:** Acute trauma typically arises from a singular traumatic event, such as a severe accident, traumatic assault, armed robbery, or natural disaster like an earthquake. These incidents are often severe enough to endanger the individual's physical or psychological well-being, leaving a lasting impact on their mental state and resulting in adverse effects on their emotions and behaviors. Individuals experiencing acute trauma commonly exhibit symptoms of extreme anxiety or panic, disorientation, and may struggle with insomnia as well.
- **Chronic Trauma:** This type of trauma happens when a person experiences a lot of distressing and traumatic events over a long period of time, either continuously or intermittently. Chronic trauma can emerge from repeated incidents of acute trauma or unresolved acute trauma. It may stem from persistent sources such as ongoing domestic violence, relentless bullying,

chronic severe illness, or continuous unrest within one's community.

Symptoms of chronic trauma may take time to manifest and become apparent.

- **Complex Trauma:** Individuals who find themselves entrenched in traumatic interpersonal interactions, feeling trapped within those relationships, often experience this form of trauma. Examples include survivors of domestic violence, victims of child abuse, and individuals dealing with unresolved family conflicts. This type of trauma typically leads to feelings of mistrust and can significantly impact one's overall health, interpersonal relationships, and productivity.
- Responses to traumatic events vary widely among individuals and can be influenced by factors such as personality traits, past experiences, perception of the event and its potential consequences, and available social support. When faced with a traumatic event, the body releases stress hormones, triggering powerful physiological reactions followed by shock, worry, anxiety, and denial. These emotions are commonly experienced in the immediate aftermath of a traumatic incident and constitute what is known as Acute Stress Response (ASR). Acute Stress Response (ASR) is not classified as an illness but is recognized as a normal reaction to distressing events. While symptoms typically diminish relatively quickly, they may persist for days or even weeks. Common symptoms of acute stress reactions include psychological manifestations such as anxiety, sadness, irritability, mood swings, sleep disturbances, difficulty concentrating, and a desire for solitude. Additionally, individuals may experience recurring nightmares known as flashbacks, which can be distressing and intrusive.

2.2.2 Post-Traumatic Stress Disorder

Even though traumatic events have been linked to negative outcomes, several studies have shown that there is potential for growth beyond pathology (e.g., Acquaye, 2016; Calhoun & Tedeschi, 2014). Negative changes in beliefs and emotions, heightened arousal, avoiding stimuli related to the event, and reliving it are all signs of post-traumatic stress disorder (PTSD) (Dar & Deb, 2022). Because of its psychological effects, post-traumatic stress disorder (PTSD) is sometimes referred to as the "invisible wound of war" (Van der Kolk, 2022).

A pathological reaction to an event that upends core beliefs defines PTSD. PTSD is defined by the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5; APA, 2013) as exposure to a particular type of trauma, such as sexual violation, serious injury, or actual or threatened death, which results in symptoms like reliving the event, avoiding situations related to the event, and other related symptoms. A person's quality of life, social well-being, and susceptibility to stress-related illnesses can all be severely hampered by these symptoms. The general health and social welfare outcomes of veterans suffering from chronic PTSD may significantly decline. Such an outcome highlights the significance of diagnosing and treating PTSD in order to enhance the longevity and general well-being of those impacted, especially veterans who have experienced traumatic events while serving in the armed forces.

2.2.2.1 PTSD and Gender

Gavranidou and Rosner (2003) examined gender-specific variations in traumatic events and Post-Traumatic Stress Disorder (PTSD) through the lens of epidemiological studies. Recent research consistently highlights three main findings:

“1) men experience traumatic events more frequently, 2) men and women encounter different types of traumatic experiences, and 3) women are more likely to develop PTSD after a traumatic event”. The latter part of their article delves into potential explanations for these differences.

Women's heightened vulnerability to PTSD may be due to several factors, including methodological issues, a higher prevalence of childhood sexual abuse and rape among women, differing coping mechanisms between genders, and relatively fewer socioeconomic resources available to women. These elements help explain why women are more prone to developing PTSD following traumatic experiences compared to men.

Hapke, Schumann, Rumpf, et al. (2006) investigated the roles of trauma type, pre-existing psychiatric disorders prior to trauma, and gender in relation to PTSD. Their findings challenged previous assumptions, indicating that women do not necessarily have an overall higher vulnerability to PTSD. Instead, they found that the prevalence of PTSD in women is significantly influenced by experiences of sexually motivated violence and pre-existing anxiety disorders, which are key contributors to the elevated PTSD rates seen in women.

Lehavot, Katon, Chen, et al. (2018) analyzed data using the “Alcohol Use Disorder and Associated Disabilities Interview Schedule-DSM-5 Version to assess past-year and lifetime PTSD” among both “veterans” (n = 3,119) and “civilians” (n = 32,982). Their analysis, conducted from “January to March 2017”, revealed “PTSD as a prevalent mental health condition that varies based on gender and veteran status”. The notably “high PTSD rates among women veterans highlight the need for targeted prevention and intervention strategies”. Furthermore, understanding the barriers to

treatment for male veterans and civilians is essential for addressing the impact of PTSD across diverse populations.

Silove et al. (2017) looked at data from a representative sample of Australians to better understand the two types of trauma and how they affect the rates of PTSD in men and women. Their results showed that women are more likely to see gender-based violence (GBV) and network trauma as their main traumas. This is because they have been exposed to GBV more, which makes them more likely to have PTSD. Also, women are much more likely to get PTSD when network trauma is seen as the main trauma. The study suggests that keeping women from being exposed to GBV and giving them timely help for acute psychological responses after network trauma could help lower the number of women with PTSD.

2.2.2.2 PTSD and non-war trauma

Karam et al. (2019) conducted research to assess the roles that sensitivity, childhood adversities, and exposure to war play in the development of post-traumatic stress disorder (PTSD). Their findings demonstrated that in bivariate analyses, PTSD was significantly correlated with all three factors: sensitivity, war experiences, and childhood adversities. In multivariate analyses, however, childhood adversities were clearly the most important predictor. According to the study, the relationship between sensitivity and childhood adversities affected how war affected PTSD. More specifically, the impact of war exposure on PTSD was less noticeable in sensitive children with high levels of adversities than it was in highly sensitive children with lower levels of adversities. This study emphasises how important it is to take into account other adversities and children's sensitivity when evaluating how war affects PTSD in refugee children. This is because sensitive children may be more susceptible

to the negative effects of war, particularly in situations where there are fewer childhood adversities.

According to Ramo-Fernández, Schneider, Wilker, and Kolassa (2015), the long-lasting and generational impacts of trauma may be explained by epigenetic processes, which are vital biological mechanisms for stress adaptation. The epigenetic alterations in genes controlling the immune system and the hypothalamus-pituitary-adrenal axis that have been noted in trauma survivors were highlighted. Long-term changes in stress responses could result from these modifications, raising the possibility of physical health problems. The prenatal and postnatal environment, parental distress, and epigenetic markers transmitted through the germline are further ways that the effects of parental trauma can affect the following generation.

Williams and Cartwright (2021) investigated the connection between journalists who experienced trauma at work and their post-traumatic growth (PTG) and PTSD symptoms. They also looked into whether PTG and personal risk exposure were positively correlated. According to the study, journalists in conflict areas had noticeably greater levels of PTG and PTSD than journalists in non-conflict areas. Furthermore, those who experienced personal risk expressed higher PTG levels. Media companies can encourage PTG, according to these findings, by acknowledging the importance of taking personal risks in difficult assignments and providing enough time for journalists working in hostile environments to reflect and create meaning.

2.2.2.3 PTSD and war-related trauma

Richardson, Frueh, and Acierno (2010) used databases such as MEDLINE and PsycINFO to review the literature on PTSD related to combat. According to their findings, the point prevalence of PTSD in US veterans of the Vietnam War varies between roughly 2% and 17%. Among veterans of recent conflicts, the prevalence of

combat-related PTSD ranged from 4% to 17% for US Iraq War veterans and from 3% to 6% for UK Iraq War veterans. According to the data, the prevalence range for non-US Western combat veterans was smaller and generally lower. Numerous sociopolitical and cultural factors, combat experiences, PTSD trajectory, chronicity, comorbidity, symptom overlap with other disorders, varying sampling techniques, measurement strategies, inclusion of criteria for clinically significant impairment, timing of assessments, and other factors were all linked to this variability in findings.

Ai, Peterson, and Ubelhor (2002) conducted a caseworker-assisted survey with 129 Kosovar refugees, 55% of whom were men and ranging in age from 18 to 79. According to the findings, 78 people (60.5%) had a high probability of having PTSD. With a standard deviation of 4.5, respondents on average reported having gone through 15 traumatic war-related experiences. According to the study, being female and having more traumatic experiences were associated with higher PTSD scores.

Feldman and Vengrober (2011) concentrated on PTSD in young children and infants who had experienced trauma during a war. Their research revealed that many of these young children had severe posttraumatic profiles, which could affect how well they adapt in the future. Children who actively sought their mothers' support were resilient, whereas avoidance behaviours suggested a higher risk. To help families of infants and children exposed to war, the study highlighted the significance of maternal well-being, sensitive caregiving, and support networks as crucial resilience factors.

2.2.2.4 Assessing PTSD

Sadeghi et al. (2022) highlighted that self-reported checklists and subjective psychological tests are commonly used for diagnosing Post-Traumatic Stress Disorder (PTSD). Although these methods are generally reliable indicators, they may lack validity. A prominent tool for assessing PTSD symptoms is the PTSD Checklist

(PCL), created by the National Center for PTSD. This checklist asks individuals to report how frequently they experience each PTSD symptom over a specified period, typically one month. Healthcare providers often utilize the PCL to track changes in symptoms over time, especially during treatment. Timely diagnosis of PTSD is essential, as it can lead to life-saving interventions. Veterans diagnosed with PTSD are at increased risk for heart abnormalities, higher mortality rates, and suicide attempts (Gagnon-Sanschagrin et al., 2022).

To improve the accuracy of PTSD assessments in epidemiological studies, one approach involves conducting assessments twice for individuals who report multiple lifetime traumas. Initially, respondents are asked to identify their worst lifetime trauma. Subsequently, they are asked to report on a randomly selected trauma from their experiences. These random trauma reports are weighted by the inverse of their selection probabilities at the individual level. By combining these weighted reports with those of the worst lifetime trauma, researchers can create a representative sample of all lifetime traumas experienced by respondents. For individuals who report only one occurrence of a particular trauma type, the weight assigned is 1.

This weighted sample of trauma occurrences can then be used to estimate the distribution of trauma exposure in the population and the conditional probability of developing PTSD after exposure to various trauma types. These estimates are deemed unbiased, provided the model is accurate, though they may still be affected by recall error biases.

Information from Liu et al. (2017) clarified the variations in the distribution of trauma exposure by kind and the risk of PTSD that goes along with it. “The WHO World Mental Health (WMH) surveys were used in this study, and the weighting

scheme was used to create a representative sample of trauma incidents in the general population of participating nations”. “The National Centre for PTSD created the Clinician-Administered PTSD Scale (CAPS), a popular interview instrument for PTSD evaluation. In addition to other symptoms that are related, it contains questions that assess the frequency and severity of PTSD symptoms. The CAPS is thought to be one of the most comprehensive and accurate tests for PTSD diagnosis”. Another frequently employed interview is the “Structured Clinical Interview for DSM (SCID), which assesses various mental health disorders, including PTSD”. “The SCID offers a structured approach for clinicians to gather information about a patient’s symptoms and history, facilitating standardized assessments of PTSD and other psychiatric conditions”. “Both the CAPS and SCID are essential in the diagnostic process for PTSD and serve as valuable resources for clinicians in evaluating and treating individuals with this disorder”.

2.2.3 Modalities Focused on Trauma and PTSD

The best practice clinical guidelines recommend several effective therapies for treating post-traumatic stress disorder (PTSD), including trauma-focused cognitive behavioral therapy (TFCBT), eye movement desensitization and reprocessing (EMDR), stress management techniques, group TFCBT, and medications such as Zoloft and Paxil. These therapies aim to reduce PTSD symptoms to levels that are not clinically significant, ultimately improving the individual's quality of life and reducing ongoing distress.

Early diagnosis of PTSD is crucial as it allows for timely initiation of appropriate clinical therapy responses. By addressing PTSD symptoms promptly, individuals can receive the necessary treatment to alleviate their distress and prevent further harm.

Moreover, recent psychological literature has started to acknowledge the potential for individuals, including soldiers and active-duty military personnel, to experience positive personal changes as a result of their struggles with traumatic life events. This highlights the importance of not only addressing the negative effects of PTSD but also recognizing and supporting potential opportunities for growth and resilience in affected individuals.

In recent times, there has been a surge in interest regarding the integration of “complementary and alternative medicine” (CAM) to address the rising prevalence of “post-traumatic stress disorder” (PTSD) and “related trauma-induced conditions”. These modalities encompass both “pharmacologic and non-pharmacologic interventions”.

In a study that examined several prevalent nonpharmacologic CAM interventions utilized in the treatment of post-traumatic stress disorder (PTSD), practices such as “recreational therapy, animal-assisted therapy, yoga, acupuncture, and alternative psychotherapy delivery methods were reviewed”.

Clinical professionals may suggest complementary practices, which can be managed or supervised by various medical professionals, including licensed recreational therapists, or they can be incorporated into health-conscious lifestyle initiatives provided by non-profits or healthcare institutions. People may also do these things for fun or as part of a healthy lifestyle. As PTSD symptoms are known to be lessened by increased social and physical activity, these practices provide clinicians treating PTSD patients with useful additional options in clinical settings (Rosenbaum, Sherrington & Tiedemann, 2015; Powers, Medina, Burns et al., 2015; Fetzner & Admundson, 2014).

Emerging alternative therapies for mental health conditions include acupuncture, stellate ganglion block, neurostimulation techniques, and alternative pharmaceutical and psychotherapeutic approaches. Following a disaster, yoga has mostly been used in the immediate post-disaster period, when survivors frequently have elevated anxiety and a higher chance of developing post-traumatic stress disorder. Yoga is used as an intervention to help people control their anxiety and regain self-control in the midst of the chaos that follows. Survivors of earthquakes, floods, and tsunamis who practiced yoga in the aftermath of the disasters reported lower levels of stress and anxiety, as well as a greater sense of well-being (Thordardottir, Gudmundsdottir, Zoëga et al., 2014; Telles, Singh, Joshi et al., 2010; Descilo, Vedamurtachar, Gerbarg et al., 2010).

The goal of acupuncture is to treat various ailments by inserting needles into meridian acupuncture points, which are particular locations on the body. It has shown promise in treating various mental health issues, such as substance abuse disorders and anxiety disorders (Pilkington, Kirkwood, Rampes et al., 2007; Lin, Chan & Chen, 2012). Even though the precise mechanism underlying these advantages is still unknown (Hollifield, 2011), there is growing clinical evidence that acupuncture is effective in treating a range of mental health conditions. Kim et al. (2013) emphasised the need for more thorough research to confirm the effectiveness of acupuncture in treating PTSD, despite the positive evidence supporting this claim. In addition to facing interpersonal and cultural difficulties upon reintegrating into Ghanaian society, military personnel returning from deployment may have experienced traumatic combat situations. Relationships with family and friends, attitudes towards civilians, and work dynamics are just a few of the areas that these experiences can affect. A few studies have specifically looked into the issue of returning service members having

suicidal thoughts (Monteith et al., 2022). Multiple factors, rather than a single predictor, influence the complex process of effectively coping with trauma. Protective factors can be broadly divided into two categories: emotional or psychological traits, such as coping style (Ho et al., 2022); and individual characteristics, such as trait optimism (Suthatorn & Charoensukmongkol, 2022), physical activity (Darroch et al., 2022), and religious or spiritual beliefs (Dein, 2022). Among the most important factors in predicting effective coping and adaptation, social support is particularly important, along with resilience and post-traumatic growth (PTG) (Yıldız et al., 2022).

Additionally, military communities benefit greatly from robust social support systems because they reduce the likelihood of PTSD and depression (Smirnova et al., 2022). Similarly, using a resilience model, Alinovi et al. (2022) looked at veterans and discovered that those who had more support and positive interactions had greater resilience and fewer negative effects from war trauma. Similar to the dynamic nature of coping mechanisms, changes in the quantity, quality, and source of social support are anticipated to take place over time (Chelladurai & Kim, 2022). The importance of social support and its capacity to encourage constructive adaptation or reduce the likelihood of negative mental health outcomes are therefore anticipated to change over time (Delhom, 2022). The likelihood of a decline in both mental and physical health was higher for survivors who were on a trajectory of declining social support. In contrast, individuals who followed a path of growing social support were more likely to see improvements in their mental health over the long run (De Roos et al., 2022).

2.2.4 Post-Combat Coping and Gender

Scoglio, Shirk, Hoff, et al. (2021) conducted a secondary analysis comparing the psychopathology and trauma histories of 283 returning war veterans, with females comprising 29.4% of the sample. Their study found that male soldiers exhibited a higher frequency of gambling in the previous year, impulsivity, and hypersexuality compared to female warriors. Conversely, female veterans were more likely than male veterans to have a history of sexual trauma. While both male and female veterans had higher rates of drug use disorders compared to the general population, there were no gender-related differences observed for depression, anxiety, insomnia, or substance use disorders. Despite the shared experience of various mental health challenges during their transition to civilian life, the gender-specific disparities in sexual trauma, hypersexuality, and impulsivity underscore the need for further research into their potential impacts on veteran reintegration and treatment.

According to research conducted by Azoulay and Gilboa-Schechtman (2022), there are social construction and evolutionary perspectives regarding gender differences in post-traumatic distress. Their study revealed that men experienced higher levels of Post-Trauma Disorder (PTD) following status loss compared to women. Particularly, status losses involving male-male interactions were more likely to result in PTD compared to situations involving other target-aggressor pairs. Additionally, while age did not have an adverse association with PTD in women, it did in men. These findings challenge the conventional belief associating the female gender with increased sensitivity to trauma, suggesting that the pattern of heightened sensitivity to stressful situations is influenced by gender- and developmentally-specific adaptation obstacles.

In their examination of the narratives provided by American and Israeli female combat soldiers, Daphna-Tekoah, Harel-Shalev, and Harpaz-Rotem (2021) placed significant emphasis on the soldiers' accounts of their personal struggles, setbacks, coping mechanisms, and triumphs during their military service and subsequent transition to civilian life. Throughout the interviews with veterans from both military forces, recurring themes emerged, highlighting the desire of female veterans to have their voices heard and the realization that society, therapists, and military organizations often fail to adequately listen to their experiences and are not genuinely interested in understanding their challenges. The study argued that conventional approaches to veteran research may sometimes fall short, as they may oversimplify, pathologize, and fragment the diverse experiences of post-combat individuals within the military ranks.

2.2.5 Post-Combat Coping and Religion

In a study conducted by Mallia (2020), religious practices and coping mechanisms among military personnel were examined both pre- and post-battle. Levels of religiosity were assessed using the Duke University Religion Index (DUREL) and the Brief Religious Coping Survey (RCOPE) before and after conflict. The study revealed the presence of both advantageous and disadvantageous religious coping mechanisms following conflict.

In a study conducted by Staebell (2020), participants' subjective experiences of spiritual or religious transformation following morally challenging combat-related events were examined. Analysis of the data revealed that participants perceived their moral and spiritual/religious identities as being shaped during childhood and

subsequently influenced by their military service. The findings also indicated that individuals underwent a process of spiritual or religious transition following morally challenging military experiences, often leading to either a weakening or a strengthening of faith.

Ensuring the readiness of the U.S. Army to defend against threats has been and will continue to be a priority for the United States. Johnson and the Army Command and General Staff College in Fort Leavenworth, Kansas (2019), highlight that mental health challenges among troops and veterans often impede the readiness of military units. The preparedness and resilience of individual troops significantly affect the overall readiness of the army. Studies conducted by authors associated with Comprehensive Soldier and Family Fitness suggest that addressing post-combat stress through spirituality can be beneficial. Additionally, resilience training has been shown to have a preventive effect on mental health challenges. While the Army allocates minimal attention to the development of spiritual health, it is important to note that personal spirituality and religious activities are protected by the constitution. Reviewing various studies, Johnson and the Army Command and General Staff College (Fort Leavenworth, Kansas, United States, 2019) suggest that spirituality positively influences psychological resilience and may enhance military readiness.

Schott (2021) explored the relationship between spirituality and trauma-related symptoms among military personnel and veterans deployed to active war zones, as well as their interest in integrating spirituality into therapy. The study employed an online survey, collecting demographic information, the PTSD Checklist (PCL-5), and the Assessment of Spiritual and Religious Sentiments Scale (ASPIRES). The PCL-5 was utilized to assess trauma-related symptoms quantitatively rather than for diagnostic purposes. Results indicated that there was no statistically significant

correlation between spirituality, as assessed by ASPIRES, and trauma-related symptoms measured by PCL-5 among military personnel and veterans deployed to active conflict zones. However, further investigation revealed a statistically significant difference in prayer fulfillment within the ASPIRES Spiritual Transcendence subgroup between the Army and Other Military Personnel.

2.2.6 Post-Combat Coping and Traumatic event

The way that trauma survivors manage stressors in their lives may have a significant impact on how they behave and how they feel. Behavioural and cognitive coping strategies, for example, have been demonstrated to lessen the detrimental effects of life stress in young people who have experienced the trauma of war. These strategies include problem-solving, enjoying enjoyable activities, and thinking optimistically (Fayyad et al., 2016). Studies show that trauma survivors are more likely to use negative emotion-focused coping (McElroy and Hevey, 2014) and emotion-focused coping in general (Jaser et al., 2007) than their peers who were not exposed to trauma.

A study by Vaughn-Coaxum, Wang, Kiely, Weisz, and Dunn (2018) investigated how adolescents' current coping mechanisms relate to the type, timing, and accumulation of trauma. In addition to their current coping mechanisms (problem-focused, positive emotion-focused, and negative emotion-focused coping), participants reported their lifetime exposure to 18 distinct traumas, such as witnessing or experiencing interpersonal violence, accidents, disasters, and the death of loved ones violently or unintentionally. Exposure to almost all types of trauma was found to be strongly associated with an increase in negative emotion-focused coping but not

with problem-focused or positive emotion-focused coping. The age at which trauma was initially experienced did not affect the use of various coping mechanisms, but the number of traumatic events in a person's lifetime did. This implies that the degree of trauma exposure, including differences in timing and type, may affect particular coping mechanisms linked to an increased risk of mental health problems. Their study points out the need for a deeper comprehension of how coping responses to stress can support youth development in a healthy way, emphasising that coping strategies could be significant targets for prevention and treatment efforts.

D'az-Tamayo, Escobar-Morantes, and Garc'a-Perdomo (2022) conducted a study that examined the coping mechanisms employed by emergency personnel who had experienced traumatic situations. These first responders frequently used nonadaptive coping mechanisms, the study found, with avoidance or disconnection being the most common ways to avoid dealing with stressful situations and to lessen the perceived impact of traumatic events. Posttraumatic stress disorder (PTSD), burnout syndrome, mental health conditions, and chronic stress were all closely associated with the use of these nonadaptive coping mechanisms. Active coping, on the other hand, which encompasses acceptance, positive reinterpretation, problem-focused approaches, self-efficacy, and emotional support (both social and instrumental), was found to be protective for these employees.

2.2.7 Post-Combat Coping and Social Support

Weltman (2020) explored the Peace of Mind (POM) program, aimed at helping combat veterans achieve posttraumatic growth (PTG), improve social support, and develop coping strategies after their military discharge. The study highlighted the

program's effectiveness and potential benefits for veterans, emphasizing the possibility of positive life changes through participation in this intensive short-term initiative.

Military medical professionals, including doctors, play a crucial role in providing healing support but face challenges such as exposure to traumatic events and stress related to healthcare. To support these professionals, the military invests resources in researching PTSD resulting from combat exposure. The significant loss of life—both among comrades and civilians—exacerbates human suffering. Additionally, limited resources, difficult working conditions, and supply shortages threaten the reputation and sense of control within the medical field (Patel & Ye, 2021).

Bourassa et al. (2020) investigated the effects of therapy on perceived social support as a secondary outcome, as well as the long-term relationships between social support and PTSD symptoms. Their study compared exposure therapy between experimental and control groups, finding that exposure therapy improved social support by the end of the treatment period. Using cross-lagged panel designs and multigroup structural equation modeling, the research indicated that subjective social support predicted reductions in PTSD symptoms for those receiving treatment, but not for those in the waitlist control group. Additionally, changes in perceived social support were identified as a mediator of the treatment's effects on PTSD symptom improvement.

Pereira, Machado, Pereira, et al. (2019) examined how neuroticism, family structure, personality traits, and social support affect post-traumatic stress symptoms and quality of life in combat veterans. The study found that, even forty years after the

Colonial War, post-traumatic stress symptoms remain prevalent. Healthcare services should implement routine screenings for older veterans showing signs of PTSD to assess neurotic tendencies and evaluate their family and social support systems, particularly among the elderly and retired. Promoting social support initiatives is recommended to enhance the quality of life for these individuals.

2.2.8 Post-Traumatic Growth

Post-Traumatic Growth (PTG) refers to the phenomenon where individuals not only survive traumatic experiences but also experience significant and meaningful positive changes that exceed their previous state (Burelli, 2022). This concept typically involves lasting psychological transformations that arise from adversity, trauma, or challenging life situations (Jayawickreme et al., 2021).

In their study, Robinson et al. (2022) aimed to identify four latent classes that illustrate the unique relationships among indicators of growth, distress, and cognitive emotion regulation, including various coping strategies. Their objective was to create detailed profiles of post-trauma adaptation by building on earlier research.

Habib, Stevelink, Greenberg, and Williamson (2018) conducted a qualitative study examining PTG in current and former military personnel. Their findings indicated that military individuals might experience PTG due to trauma encountered during deployment, and this experience is similar to that of the general population. The study emphasized the need for further research to understand the long-term psychological effects of PTG and to assess whether interventions focused on PTG could benefit military personnel affected by trauma.

Na, Tsai, Southwick, and Pietrzak (2021) explored pandemic-related PTG using a nationwide sample of U.S. veterans. Their research highlighted significant links between PTG related to the pandemic and concerns about its potential effects on physical and mental health, as well as PTG stemming from prior traumas, such as enhanced interpersonal connections and new opportunities. They found that the relationship between pandemic-related PTSD symptoms and PTG support among veterans followed an inverted U-shaped pattern, suggesting that a moderate level of PTSD symptoms was most indicative of support for PTG.

2.2.8.1 PTG and Health-Related Challenges

Slade et al. (2019) proposed a conceptual framework for post-traumatic development in the context of recovery among individuals with psychosis and other severe mental health conditions. The study involved 77 participants from diverse backgrounds, including Black, minority ethnic groups, underserved populations, and White British adults, who had experienced psychosis and were engaged with mental health services or employed in peer roles. Post-traumatic development, highlighted by self-discovery, integration of illness-related experiences, and proactive management of well-being, emerged as a crucial aspect of mental health rehabilitation.

Matos et al. (2021) explored the correlation between individuals' experiences of compassion and feelings of social safety and connection, as opposed to feelings of social isolation, loneliness, and fear of compassion, and how these experiences influence the impact of perceived COVID-19 threat on post-traumatic growth and post-traumatic stress. The study revealed that perceived COVID-19 threat was associated with higher levels of traumatic stress and post-traumatic growth. Enhanced post-traumatic growth and traumatic stress were predicted by social connection (compassion and social safety), while social disconnection (loneliness and fear of

compassion) solely predicted increased traumatic symptoms. Social connection was reinforced while social disconnection diminished, indicating the influence of perceived COVID-19 threat on post-traumatic growth. Perceived COVID-19 threat had a more significant impact on traumatic stress due to social isolation, with consistent repercussions observed across all nations.

2.2.8.2 PTG and Non-Combat Trauma

Blau and Miller (2022) conducted research investigating the correlation between four positive coping strategies and post-traumatic growth (PTG) to ascertain potential discrepancies in the utilization of these coping mechanisms and the experience of PTG between combat and non-combat military veterans. The study assessed instrumental support, emotional support, acceptance, and religion as beneficial coping strategies. Findings revealed that instrumental support and religion were both significantly positively associated with post-traumatic growth (PTG) for the entire group. Additionally, there were significant sample differences in instrumental support and religion, with non-combat veterans reporting higher mean levels of both coping mechanisms compared to combat veterans. However, no sample difference was observed for PTG.

Singh, Chalga, and Karmakar (2021) explored the concept that trauma can elicit both favorable and unfavorable outcomes. The study also delved into the accessibility of psychological support for military personnel. It was revealed that due to the stigma surrounding mental health issues, soldiers frequently decline psychological or psychiatric assistance. By thoroughly evaluating, assessing, and addressing their coping mechanisms, the military trauma population may derive benefits in terms of enhanced interpersonal interactions and cognitive functioning.

2.2.8.3 PTG and Gender

In a meta-analysis of 70 studies with 16,076 participants, Vishnevsky, Cann, Calhoun, et al. (2010) examined gender differences in self-reported PTG. A small to moderate gender difference was found, with women reporting higher levels of PTG than men ($g = .27$, 95% CI $= .21 - .32$). Examining variables like mean age, measurement instruments, the type of stressful events, the language of the measures, and sample type (e.g., community samples, college students, or mixed groups), moderator analyses were performed to investigate possible causes of these differences. As the sample's mean age rose, women reported higher PTG ($B = .004$, $p < .01$, $SE = .001$, $Q = 9.13$), making age the only significant moderator.

Gender role adherence and PTG in survivors of interpersonal violence were examined by Barlow and Hetzel-Riggin (2018). Their results showed that the strongest positive predictor of PTG was adherence to masculine roles, not gender per se. It is noteworthy that PTG was more accurately predicted by a combination of healthy masculine norms and altruism than by masculine norms alone. Adherence to feminine roles was positively correlated with PTG as well. According to the authors, reassessing gender roles may help lessen the widespread impacts of violence, suggesting that PTG after interpersonal violence may be more accurately predicted by adherence to gender roles.

In her study of the COVID-19 pandemic's benefits, Cohen-Louck (2022) looked at the connections between PTG, gender, individual quarantine experiences, and the length of the pandemic (short, medium, and long-term). Both gender and pandemic duration showed significant main effects, according to the results. Participants in the short-term pandemic group had significantly lower PTG levels than those in the medium- or long-term groups, and women reported higher PTG levels

than men. Furthermore, there were significant interactions between gender, pandemic duration, and individual quarantine, as well as between gender and pandemic duration and PTG.

2.2.9 Peacekeeping

Peacekeeping involves the deployment of either national or more commonly multinational forces to assist in regulating and resolving ongoing or potential armed conflicts between nations. Soldiers participating in the ECOWAS Monitoring Group (ECOMOG) mission to Liberia (1990–1998) expressed specific concerns about inadequate training and support. Given that this mission marked the first peacekeeping endeavor led by a sub-regional organization in Africa, deficiencies in planning may have stemmed from the novelty of such operations (Dwyer, 2015).

Olonisakin's (2000) study on ECOMOG participants highlights how inadequate preparation and misunderstandings regarding the gravity of the conflict significantly undermined the soldiers' morale. For instance, the initial phases of the mission suffered from a lack of essential intelligence reports and maps. A Nigerian general cited by Olonisakin (2000) noted that in his country, "the planners did not heed warnings during the planning stage to adequately prepare the troops for potential combat in Liberia."

The general's assessment was echoed by rank-and-file soldiers, who asserted that they were never provided with an accurate assessment of the situation in Liberia. Given that junior soldiers comprised the majority of deployed units, insufficient preparation or support likely had the most significant impact on them. The perception of being misled about the mission's nature or being neglected during deployment

readily aligns with longstanding tensions between lower-ranking soldiers and their superiors in the region (Dwyer, 2015).

The United Nations deploys large numbers of peacekeepers to assist with peace processes and state-building efforts in countries and regions transitioning from conflict. The case of Ghana illustrates that the impacts of these missions are not confined solely to the countries hosting UN operations but also extend to the nations providing troops. Despite never having experienced warfare on its own soil, Ghana has consistently been a significant contributor of troops to the UN since its involvement in the UN Operation in the Congo (UNOC) in 1960. Given the overall instability in the West African subregion, particularly since the 1990s, peacekeeping missions abroad have directly contributed to Ghana's security and stability (Danish Institute for International Studies (DIIS) Policy Brief, 2019).

The ongoing exposure of peacekeeping personnel to human rights standards, both during their pre-deployment and in-mission training programs, as well as in their day-to-day mission activities, has played a significant transformative role in this aspect. Additionally, given that the Ghanaian military has not experienced combat within its own borders or in the context of UN peacekeeping missions, the training and experience gained from peacekeeping have enabled troops to prepare for potential national conflicts. This has also provided an opportunity for the military to assess its equipment, some of which has been acquired using funds earned from peacekeeping deployments. Notably, this includes cargo aircraft used in Mali, where the UN mission incorporates elements of peacemaking (DIIS Policy Brief, 2019).

Regional organizations and, in some cases, individual governments may also undertake peacekeeping operations. However, the majority of peacekeeping operations receive authorization from the United Nations (UN) and are often overseen

by the organization. Typically, parties involved in a conflict consent to the deployment of peacekeeping forces in support of a ceasefire or other established peace agreements. As a result, peacekeeping personnel are frequently unarmed or lightly armed and resort to the use of force only when absolutely necessary. When military resources are employed, it is termed peace enforcement. Ghana's military contributes approximately 130 personnel to missions across Africa, Europe, and Asia, primarily engaged in ceasefire monitoring and observation tasks (Troup, 2022).

Newby and Sebag (2021) conducted a study addressing the issue of side streaming, which refers to the intentional or unintentional practice of marginalizing women by confining them to specialized areas within international peace and security efforts, despite purported efforts towards gender mainstreaming or increased gender integration. Through empirical evidence from various national militaries, Newby and Sebag (2021) demonstrated how and where side-streaming occurs, resulting in women being predominantly clustered in gender-specific and lower-status roles within national militaries, as well as in specialized roles within peacekeeping operations. This phenomenon adversely impacts retention and recruitment efforts, thereby contributing to the disproportionately low representation of female peacekeepers in UN peace operations. The authors concluded that achieving gender mainstreaming in its fullest sense necessitates military reforms that disentangle violence and combat skills from masculinity, along with inclusive research strategies that involve both men and women.

Chen et al. (2016) conducted a study aimed at examining the adjustment challenges faced by peacekeepers from Asian (Bangladeshi, Pakistani) and African (Nigerian, Namibian, Ghanaian) backgrounds, along with the primary factors influencing these challenges. Utilizing random cluster sampling, the researchers

administered the Military Psychological Maladjustment Scale (MPMS) and a questionnaire on risk factors to 300 Asian peacekeepers and 271 African peacekeepers. The study concluded that Asian peacekeepers generally displayed higher levels of adaptability and resilience compared to their African counterparts. Among Asian peacekeepers, the duration of education emerged as the primary influencing factor for Emotional Disorder. Conversely, the major factors contributing to maladjustment among African peacekeepers were age, duration of military service, education level, and marital status.

2.2.9.1 Peacekeeping and Civilians

Fjelde, Hultman, and Nilsson (2019) provided the first comprehensive examination of the effectiveness of UN peacekeeping operations in safeguarding civilians at the subnational level. According to their findings, peacekeepers may increase the costs for warring parties to target civilians owing to their substantial presence in local areas. Rebel groups are more likely to be affected by these deterrent effects, as their access to civilian populations typically relies on official consent, unlike government actors. By integrating newly available monthly data on peacekeeper deployments with information on the timing and locations of civilian casualties in Africa, Fjelde et al. (2019) tested these assertions. Their analysis suggested that local peacekeeping assistance enhances civilian protection against rebel violence, yet UN peacekeeping missions encounter challenges in safeguarding citizens from government forces.

Phayal and Prins (2020) examined the conflicts in Sudan, South Sudan, the Democratic Republic of the Congo, and Ivory Coast, leveraging geocoded data on annual UN deployments. Their analysis revealed an immediate reduction in the number of civilian injuries when peacekeeping forces were stationed locally in violent

post-war regions. However, Phayal and Prins (2020) observed that peacekeeping troops showed greater responsiveness to rebel attacks on civilians in areas where significant conflicts between government forces and rebels were absent. This observation implies a hesitancy among peacekeepers to confront government forces that engage in civilian targeting.

Gordon and Young (2017) conducted an original survey among a randomly selected sample of metropolitan Port-au-Prince residents in Haiti. Their findings indicated that individuals exposed to security and relief operations conducted by the United Nations peacekeeping mission, MINUSTAH, tend to hold more positive opinions regarding the effectiveness of these operations and are more inclined to cooperate with peacekeepers by providing information. Conversely, witnessing abuse significantly diminishes civilian perceptions of peacekeepers' effectiveness, goodwill, and integrity, although its impact on collaboration is less pronounced. These findings present both an opportunity and a challenge for peacekeepers: if public opinion and collaboration are influenced by peacekeeper conduct, then providing essential services and preventing abuse are crucial for garnering the cooperation necessary for mission success.

Kathman and Wood (2016) investigated the effectiveness of peacekeeping operations in protecting civilians during the post-war "peace" period. Their analysis, based on newly collected data on United Nations peacekeeping personnel deployments and victimization statistics from all African wars between 1992 and 2010, concluded that a greater deployment of peacekeeping forces is necessary to reduce violence against civilians. However, the study found a positive correlation between violence and increased deployments of UN observers.

2.2.9.2 Peacekeeping and the Military

Moncrief (2017) explored whether the socialization experiences of soldiers in two distinct contexts—their home military and the peacekeeping mission itself—contribute to understanding the observed differences in civilian sexual exploitation and abuse (SEA). Utilizing a dataset of SEA claims spanning from 2007 to 2014 and the initial publicly available data from the United Nations identifying the nationalities of accused perpetrators, Moncrief (2017) delved into the multifaceted nature of socialization in relation to SEA. The study particularly highlights the positive correlation between SEA and breakdowns in discipline at lower levels of command within a peacekeeping mission. It posits that peacekeeping missions may establish their own norms and socialization processes, which can either constrain or facilitate the occurrence and persistence of SEA.

Jowell (2018) investigated the unforeseen repercussions of foreign military assistance in Africa, aimed at bolstering peacekeeping efforts, enhancing the professionalism of national defense forces, and fostering military cohesion among African nations. However, the study found that few of these intended outcomes materialize. Instead, foreign donors may inadvertently exacerbate internal patronage dynamics within African militaries, which are often characterized by patronage networks. This diversion of foreign military aid in Africa tends to align more with domestic and internal objectives rather than the initially intended outward-focused goals.

Chigozie and Ituma (2015) acknowledged the concept of collective security as the underlying principle guiding Nigeria's active involvement in international peacekeeping efforts. The report highlights Nigeria's extensive participation in UN peacekeeping missions, which includes deploying military contingents, unarmed

military observers, military staff officers, police units, consultants, and civilian specialists to over 40 UN operations. Nigeria has emerged as one of the largest contributors to UN peacekeeping, with its military and civilian personnel deployed worldwide. However, a thorough assessment of Nigeria's peacekeeping engagement reveals that the country has yet to fully reap the benefits of its contributions due to various challenges. These challenges include inadequate coordination mechanisms for peacekeeping activities, issues related to financial management and accountability, and the underutilization of reimbursements. Addressing these issues is crucial to ensure that Nigerian peacekeepers receive the recognition and support they deserve.

Tkach and Phillips (2020) conducted a study examining the "UN's institutional and financial motivations for employing private military and security firms (PMSCs) in peacekeeping operations." PMSCs are increasingly being contracted by the United Nations Department of Peacekeeping Operations (DPKO) to supplement regular troop deployments, often to address personnel shortages. However, the UN's rigid organizational structure, limited budgetary flexibility, and opaque procurement procedures contribute to the utilization of PMSCs without thorough assessment of their necessity, costs, and benefits. Organizational reforms are necessary to prevent the ongoing and expanding reliance on PMSCs in peacekeeping efforts.

2.3 Conceptual Framework

The figure below illustrates the conceptual framework of the study. It presents the relationship that exist between the variables.

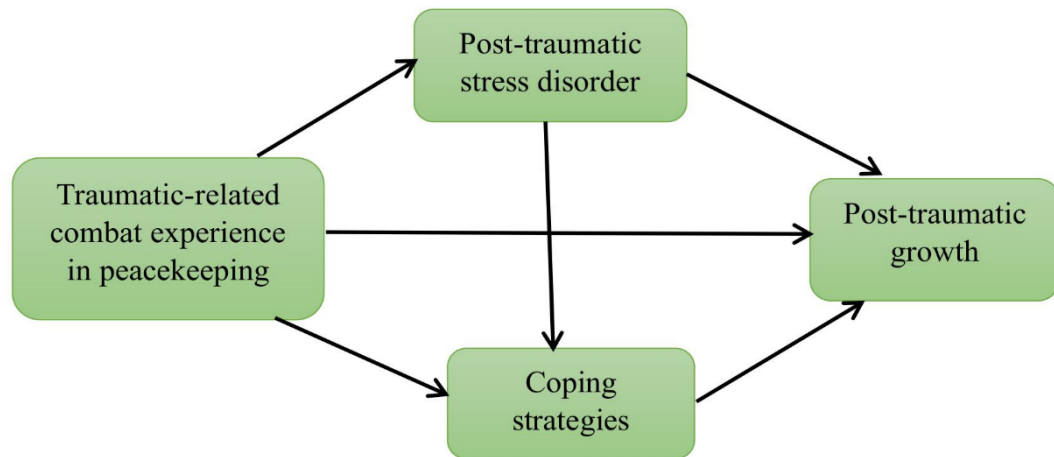


Figure 2: Conceptual framework of study variables

(Source: Researcher's construct, 2024.)

The relationship that exist between trauma-related experiences, post-traumatic stress (PTSD), coping and post-traumatic growth (PTG). The trauma military personnel undergo during peacekeeping missions often results in the development of PTSD. Consequently, individuals acquire coping mechanisms to navigate their daily lives. These trauma-related experiences, along with PTSD and coping strategies, contribute to the emergence of symptoms associated with post-traumatic growth.

CHAPTER THREE - METHODOLOGY

3.0 Introduction

This chapter provides an overview of the research methods employed and the diverse data collection techniques utilized for the thesis. It includes discussions on the research philosophy, research approach, research design, target population and access, sampling methodology, sample size determination, research instruments, ethical considerations, and data analysis procedures.

3.1 Research Philosophy

Researchers assert that research philosophy is influenced by shifts in assumptions, knowledge, and the type of study under consideration (Saunders et al., 2007), thereby reflecting individual intellectual growth. This suggests that researchers' perspectives impact their understanding, worldviews, and interpretations of reality, a notion supported by Cohen et al. (2007). Various terms, such as "worldview" (Creswell & Creswell, 2018), "paradigms" (Lincoln et al., 2011; Mertens, 2010), "epistemologies and ontologies" (Crotty, 1998), as well as broadly defined research methodologies (Newman, 2014), have been used interchangeably with research philosophy. Creswell and Creswell (2018) assert that research philosophy embodies the researcher's worldview and approach to conducting research, which subsequently informs and selects the most suitable research methodologies. Similarly, Saunders et al. (2015) define research philosophy as a collection of ideas and assumptions about knowledge development in a particular field, guiding methodological decisions, research approaches, and the collection and analysis of data. Researchers consider

epistemology, ontology, and axiology when determining their research philosophy, which in turn influences the selection of research methods and procedures.

Positivism, interpretivism, and social constructivism represent the three main schools of thought within the available research paradigms. These paradigms span from the subjective standpoint of "social constructivism" to the objective stance of "positivism." Positivism, which aligns closely with objectivism, is the theory adopted for this research. Positivism and objectivism are considered compatible, and positivism's research methodology emphasizes theory testing through logical techniques (Creswell & VL, 2011; Gray, 2004).

Furthermore, the researcher aims to uphold objectivity by maintaining a distance from the research observations and placing greater emphasis on the facts uncovered during the field study rather than on interpreting their significance. From the positivist standpoint, there exists a single truth or reality that can be quantified and comprehended. Moreover, the observer or researcher remains detached from the observation. Consequently, researchers inclined towards this perspective are inclined to evaluate reality using quantitative methods (Scotland, 2012).

3.1.1 Ontology

This research considered ontology as it pertains to elucidating objects and their interrelations. Ontology is thus delineated as "how the world appears," according to Jennings (2010, p.35). Put differently, ontology is viewed as "constructed out of the perceptions and actions of social actors," as posited by Bryman (2016, p.28). Neuman (2014, p.94) further remarked that "ontology is a field of philosophy concerned with the nature of being, or what it is; the field of philosophy that asks what is real and what are the basic categories of reality." Moreover, Gray (2014) asserted that ontology "leads to unitary and holistic epistemological positions" (p. 20) and "entails an

understanding of what meaning is" (p. 19). Ontology serves as another term used to explicate the researcher's role in the study being conducted. It aids in portraying the "social reality" encountered (Brunt et al., 2017, p. 17).

Ontology, a "branch of philosophy" exploring the essence of reality and existence, is termed the "theory of being," as described by Lee (2012). The choice to engage in research is shaped by ontology (Saunders et al., 2015), encompassing the beliefs researchers uphold regarding the functioning of the world. In contrast, epistemology, the philosophical study of knowledge, primarily delves into questioning the nature of the relationship between subjects (the investigator or investigated) and objects (the known) (Guba, 1990).

3.1.2 Epistemology

The importance of "epistemology", described as "the relationship between the researcher and the research subjects, objects, text units, or participants" (Jennings, 2010: 35), was underscored by the researcher. Scholars such as Bryman (2008), Lee (2008), and Lings (2008) consider the second assumption to be epistemological in nature, addressing what constitutes or should constitute acceptable knowledge within a specific field. While axiology pertains to the values and ethics of researchers that influence the study process, epistemology pertains to the knowledge that may be deemed acceptable or regarded as knowledge within a particular domain (Saunders et al., 2015). As Gray (2014: 19) suggests, "methodology will be influenced by the theoretical perspectives adopted by the researcher... and, in turn, by the epistemological position of the researcher." Epistemology delineates the various approaches a researcher can adopt to comprehend our world, thereby impacting the selection of research methodology. Gray (2014: 19) further posits that epistemology "provides a philosophical basis for determining what kinds of knowledge are

legitimate and adequate." Given its relevance, Easterby-Smith et al. (2012) assert that epistemology "relates to the researcher's role in each of the research designs" (p. 38).

3.2 Research Approach

Research approaches encompass a set of procedures and strategies that dictate the overall research process (Solanki, 2022). Bryman and Bell (2015) observed that qualitative studies emphasize language and delve into people's lives within the context of the real world. Qualitative researchers contend that to truly comprehend individuals' motivations and the reasons behind their actions or behaviors, it is imperative to conduct studies using qualitative methods. Myers (2013) suggests that employing a qualitative approach or methodology can be highly beneficial. In contrast, quantitative research differs from qualitative research in that it focuses on numerical data and aims to generalize and quantify the findings of the study (Bryman & Bell, 2015; Marchington & Wilkinson, 2012).

The researcher opted for a quantitative research approach, which, as outlined by Bryer et al. (2022), revolves around the "measurement of quantity or amount". This approach is suited to "phenomena that can be expressed in quantitative terms, to collect, analyze, and measuring statistical data". In quantitative research, a selection of subjects is studied to enhance the capacity to draw general conclusions (Bryer et al., 2022). Bryman (2008) describes a quantitative methodology as a "research strategy that employs quantification methods in both data collection and analysis". Essentially, it involves gathering and assessing data. According to Saunders et al. (2009), a quantitative approach entails investigating a human issue or social phenomenon by testing or validating a theory using statistical variables to ascertain its accuracy. In essence, it is an inquiry into human problems or social phenomena. A

quantitative study adopts a positivist research approach, grounded in scientific methodology, which assumes that realities can be systematically and objectively examined in a structured manner (Polit & Beck, 2012; O'Dwyer & Bernauer, 2014). Punch (2005) highlights one of the advantages of the quantitative method: the ability to generalize study results, based on a sample, to a wider population.

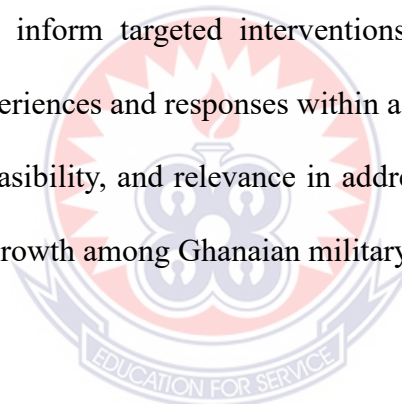
3.3 Research Design

Research design pertains to the process of addressing the primary research inquiries, ensuring that the appropriate data is gathered to investigate or validate our theory and address the principal research questions (Lee and Lings, 2008). Trochim (2006) delineated research design into exploratory, explanatory, or descriptive categories. According to Trochim (2006), exploratory research is undertaken to delineate and elucidate the nature of a problem, particularly when it is ambiguous which characteristics and relationships are significant. Saunders et al. (2009) outlined three main approaches to conducting exploratory research: “reviewing existing literature, consulting subject matter experts, or conducting focus group interviews”.

The researcher employed a “cross-sectional research design”, as the study involved observational research that collects data from a specific population at a particular point in time regarding one or more variables. Cross-sectional design involves gathering data from a specific population, with precise specifications regarding the population, time point, and variables when designing such a study (Brüchert et al., 2022). Governmental census studies can provide data for cross-sectional studies, as they gather information from a specific population, such as Ghanaian citizens, at a particular time or during the survey year. Additionally, data

sets from cross-sectional studies involving populations from specific locations are accessible through the World Health Organization.

The cross-sectional research design finds utility across diverse fields such as medicine, developmental psychology, and economics (Hou et al., 2022). The cross-sectional research design is particularly suitable for assessing the prevalence and patterns of PTSD symptoms, coping strategies, and PTG across different demographic groups, including gender, without the time and resource demands of longitudinal tracking. Furthermore, cross-sectional designs facilitate the examination of associations between peacekeeping-related combat experiences, psychological outcomes, and coping mechanisms, enabling the identification of trends and correlations that can inform targeted interventions and policy development. By capturing diverse experiences and responses within a defined timeframe, this method ensures efficiency, feasibility, and relevance in addressing the complex interplay of trauma, coping, and growth among Ghanaian military personnel.



3.4 Target Population

As noted by Corallo et al. (2022), a target population denotes a comprehensive group of individuals or items intentionally selected for investigation according to the objectives of the research project. It is imperative to precisely define the target population, often determined by characteristics, sample units, and sampling framework. In this study, the focus is on personnel from the Ghana Armed Forces stationed in the Greater Accra Region. Thus, the target population is the 16000 personnel, and it comprises personnel from the Ghana Armed Forces (including the Ghana Army ($n = 8000$), Ghana Navy ($n = 6000$) and Ghana Air Force ($n = 2000$) in

the Greater Accra Region upon their return from peacekeeping missions, and who were available for participation in the study.

3.5 Sampling Procedure

The sample criteria outline specific attributes required for individuals from the population to qualify for inclusion in the research (Denzin & Lincoln, 2013). Sampling entails the process of selecting an appropriate subset or representative portion of a population to identify the characteristics or parameters of the entire population. The statistical process of choosing a subset from a population of interest to make observations and derive statistical conclusions about that population is known as sampling (Etikan, Musa, & Alkassim 2016).

Determining the unit of analysis (individuals, groups, organisations, nations, or objects of interest to the researcher), defining the target population, choosing a sampling frame (representing the accessible population), and finally choosing a sample from the sampling frame using a defined sampling technique are the steps that make up the sampling process (Etikan, Musa & Alkassim, 2016). According to Obilor (2023), there are two primary categories of sampling techniques: probability (random) sampling and nonprobability sampling methods.

With probability sampling, every unit or component of the population has an equal chance of being chosen for a specific research study. The units included in the study have a known nonzero probability of being selected, according to Nanor et al. (2018), which is implied by the use of probability sampling.

On the other hand, nonprobability sampling chooses participants who have little chance of being selected for the research (Agyeman, 2020). In this study, convenience sampling and purposive sampling were the nonprobability sampling

techniques used (Patten & Newhart, 2018). Because not all adults in Ghana are military personnel, purposive sampling was used to select them. A sample was then drawn from any military personnel who had served in peacekeeping operations and who were willing and able to do so.

Because the researcher had quick access to military personnel in the Accra area, convenience sampling was also used to select them for the study. Convenience sampling is the process of choosing people who are accessible to the researcher and who might be able to supply the needed data (Mweshi & Sakyi, 2020). Other names for this technique include opportunity, incidental, and grab sampling (Saunders, Lewis, & Thornhill, 2012). Convenience sampling, according to Wienclaw (2019), comprises gathering information from people who are open to taking part in the study, are reachable, or are simple for the researcher to approach. The first people to receive the questionnaire were Ghana Armed Forces personnel who had embarked on a peacekeeping mission, using the purposive sampling technique. Responses were then obtained from personnel who were available and not occupied during the data collection period, using the convenience sampling technique.

3.6 Sample Size

The population of a study comprises all entities, including humans, animals, insects, birds, and others, while a sample represents a smaller yet representative subset of that population. A sample denotes a particular set of individuals from whom data is gathered by a researcher (Obilor, 2018). Given the growing need for statistically representative samples in empirical research, it is essential to employ a precise method for determining sample size. Addressing this challenge, the study adopted Yamane (1967) formula which is a simplified formula for the sample size.

Yamane formula is expressed below

$$n = \frac{N}{1 + N(e)^2}$$

Where n is the sample size, N is the total population and e is the margin of error.

“Yamane formula in its present state is, therefore, best suited for categorical variables and only applicable when the confidence coefficient is 95% with a population proportion of 0.5”.

$$n = \frac{16000}{1 + 16000(0.05)^2}$$

$$n = 390.24$$

Therefore, 390 is the sample size for the study.

Hence, the research's sample size was initially set at 390 individuals from the Ghana Army, Ghana Navy and Ghana Air Force stationed at the Burma Camp in Accra. This figure was later adjusted to 400 in order to enhance the response rate and also to take out questionnaires that were not properly filled or were not returned. However, a total of 392 responses were received for the study.

3.7 Instrumentation and Reliability Test

The study adopted several valid and reliable instruments to assess the variables of interest in the study. Specifically, four instruments along with a demographic questionnaire were utilized. These instruments included: (1) the Combat Exposure Scale (CES; Keane et al., 1989); (2) the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5; Weathers et al., 2013); (3) the Brief Version of the Cope Inventory

(Brief Cope, Carver, 1997); and (4) the Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996). Each of the instruments were used to measure a variable.

3.7.1 Combat Exposure Scale

The Combat Exposure Scale (CES) was adopted and serves as an instrument to assess the extent of exposure to traumatic combat-related events (Bell & Nye, 2007; Keane et al., 1989). “Comprising seven measures, the CES evaluates exposure levels to violence, fear of severe injury or death, personal injuries, injuries to others, instances of leadership failure, aggressive behavior, and experiences of Prisoner of War captivity (Lund et al., 1984)”. “With a satisfactory internal consistency and test-retest reliability ($\alpha = .85$; Keane et al., 1989), the scale employs a 5-point Likert-type rating scale ranging from 1 to 5”. Sample statements include queries such as "Have you ever participated in combat patrols or undertaken hazardous duty?" "Have you ever been targeted by enemy fire or found yourself surrounded by enemy forces?" and "How frequently did you discharge rounds at the enemy?" “In this study involving Ghanaian military personnel, the internal consistency of the CES was deemed acceptable ($\alpha = .708$)”.

3.7.2 Posttraumatic Stress Disorder Checklist for DSM-5

The Posttraumatic Stress Disorder Checklist (PCL-5), adopted for DSM-5 (PCL-5) is a self-report instrument comprising 20 Likert-type items designed to gauge the extent to which an individual has experienced distressing posttraumatic stress symptoms over the past month, related to their most recent distressing event (Weathers et al., 2013). “Responses are rated on a scale ranging from 'not at all' (1) to 'extremely' (4)”. The total severity score is derived by summing the scores of all items. Sample items from the scale include statements like "Avoid memories, thoughts, or feelings associated with the war experience" and "Suddenly feel or act as if the war experience

were recurring (as if reliving it)." Additionally, subscale severity scores are calculated by summing the items corresponding to each of the four DSM–5 PTSD symptom clusters: intrusions (Items 1–5), avoidance (Items 6–7), negative alterations in cognitions and mood (Items 8–14), and alterations in arousal and reactivity (Items 15–20).

"PCL-5 scores range from 0 to 80, with a mean (M) of 42.41 and a standard deviation (SD) of 15.06, demonstrating robust psychometric properties, including a strong Cronbach's alpha coefficient ($\alpha = .91$) and excellent test-retest reliability ($\alpha = .95$) (Wortmann et al., 2016)". "Inter-item correlations for the PCL-5 fell within the recommended range of .15 to .50, spanning from .10 to .74 (Clark & Watson, 1995). In this Ghanaian military sample, internal consistency was notably high ($\alpha = .897$)".

3.7.3 Cope Inventory

The study adopted Brief COPE, which is a 28-item tool designed to assess various coping strategies and cognitive regulation methods in response to stressors. Derived from the larger 60-item COPE Inventory, this condensed version evaluates the frequency of employing different coping techniques. Participants rate items such as "I've been turning to work or other activities to take my mind off things," "I've been making fun of the situation," and "I've been criticizing myself" on a scale from 1 (I haven't been doing this at all) to 4 (I've been doing this a lot) (source: scienceofbehaviorchange.org). The Brief COPE includes 14 two-item subscales, each measuring a distinct coping strategy, such as self-distraction, active coping, denial, substance use, emotional support, instrumental support, behavioral disengagement, venting, positive reframing, planning, humor, acceptance, religion, and self-blame (source: scienceofbehaviorchange.org).

The scores on the Brief COPE range from 0 to 28 (Mean = 44.72; Standard Deviation = 15.05), with robust psychometric properties showing a high Cronbach's alpha coefficient ($\alpha = .931$) and strong test-retest reliability ($\alpha = .93$; Wortmann et al., 2016). The internal consistency within this sample of Ghanaian military personnel was exceptionally high ($\alpha = .934$).

3.7.4 Post-Traumatic Growth Inventory

The study adopted the Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996), which is a Likert-type self-report tool consisting of 21 items designed to assess individuals' perceived psychological growth following a traumatic event. Participants rate their level of experienced change on a six-point Likert scale, ranging from 'I did not experience this change as a result of my crisis' (0) to 'I experienced this change to a very great degree as a result of my crisis' (5). Sample items include "I have a greater feeling of self-reliance" and "I know better than I can handle difficulties".

The PTGI assesses growth across five domains. The first domain, "Relating to Others," evaluates participants' interpersonal connections following a traumatic event. The second domain, "New Possibilities," examines individuals' capacity to perceive post-traumatic opportunities that might otherwise have been overlooked. The third domain, "Personal Strength," acknowledges resilience in the face of adversity. The fourth domain, "Spiritual Change," indicates any alteration in spirituality resulting from the traumatic experience, whether positive or negative. The final domain, "Appreciation of Life," pertains to a newfound gratitude for life.

The PTGI demonstrates strong psychometric properties, with high internal consistency overall ($\alpha = .90$; Tedeschi & Calhoun, 1996). Each of the five factors also showed substantial internal consistency: new possibilities ($\alpha = .84$), relating to others

($\alpha = .85$), personal strength ($\alpha = .72$), spiritual change ($\alpha = .85$), and appreciation of life ($\alpha = .67$). Additionally, corrected item-total correlations fell within a moderate range ($.35 \geq r \leq .63$). A test-retest reliability over two months ($n = 28$) revealed acceptable consistency ($r = .71$). Test-retest reliabilities for the factors, except personal strength ($r = .37$) and appreciation of life ($r = .47$), ranged between .65 to .74. Internal consistency remained very high within this Ghanaian military sample ($\alpha = .967$).

3.8 Ethical Considerations

Ethics, as defined by Di Paolo and De Jaegher (2022), encompasses the philosophical contemplation of the morals of a community and how individuals coexist, encompassing the habits and customs of various groups or humanity as a whole. Throughout this research endeavor, a commitment to upholding integrity, transparency, and quality standards was maintained. Prior to engaging with any respondents, explicit permission was obtained from the target population. Furthermore, informed consent was sought from all participants. The confidentiality and anonymity of respondents were diligently safeguarded, ensuring that their identities remained undisclosed. Additionally, participants were assured that their involvement was voluntary and free from coercion or any form of pressure. Lastly, the study made earnest efforts to maintain impartiality and objectivity, striving for independence and unbiased analysis.

3.9 Data Analytic Procedures

The raw data were input into SPSS (version 25). Frequencies and percentages were utilized to comprehend the demographic data. Reliability analyses were

conducted to ascertain the dependability of the instruments employed in this study. Cronbach's alpha served as the metric to gauge reliability, with Cohen's (1988) index employed for classification (e.g., acceptable, strong, very strong). Normality tests were executed to verify that all assumptions necessary for the execution of these parametric analyses were fulfilled (Field, 2018).

Table 1. Data Analysis Procedural Table

Research Objectives and Hypotheses	Analytic Test	Reporting Indices
Assess the types of trauma-related experiences encountered in peacekeeping by military personnel	Descriptive statistics	Frequencies and percentages
Gender differences in post-traumatic stress (PTSD) symptoms of military personnel post-peacekeeping	Independent samples t-test	t-statistic, degree of freedom (df); p-value; effect size
Gender differences in post-peacekeeping coping of military personnel	Independent samples t-test	t-statistic, degree of freedom (df); p-value; effect size
Gender differences in post-traumatic growth (PTG) of military personnel post-peacekeeping	Independent samples t-test	t-statistic, degree of freedom (df); p-value; effect size

Research Objectives and Hypotheses	Analytic Test	Reporting Indices
The relationship among peacekeeping trauma-related combat experiences, PTSD, coping and PTG in military personnel in Ghana.	Pearson's Product Moment Correlation	R-value; p-value



CHAPTER FOUR - RESULTS AND DISCUSSION

4.0 Introduction

This chapter presents the findings of the data gathered from a cross-section of military personnel in Ghana. The chapter entails the limitation of the study, analysis of objectives and discussion of results.

4.1 Analysis of Demographic Information

Demographic information included gender, age, brand of military that respondents work, religious affiliation, and some information about their intimate relationships.

4.1.1 Gender of Respondents

Majority of the respondents were male ($n = 316$) and the rest females ($n = 76$).

4.1.2 Age of Respondents

Majority of the participants were in the 30-34 years age range ($n = 176$; 44.9%).

Table 2. Age Range of Respondents

Age in Years	Frequency	Percent
25 – 29	66	16.8
30 – 34	176	44.9
35 – 39	105	26.8
40 – 45	45	11.5
Total	392	100.0

The group with the lowest frequency and percentage was those in the 40-45years range.

4.1.3 Brand of Military

Of the three brands, respondents with the majority (57%) were from the Army, followed by Air Force (28%), then Navy (15%).

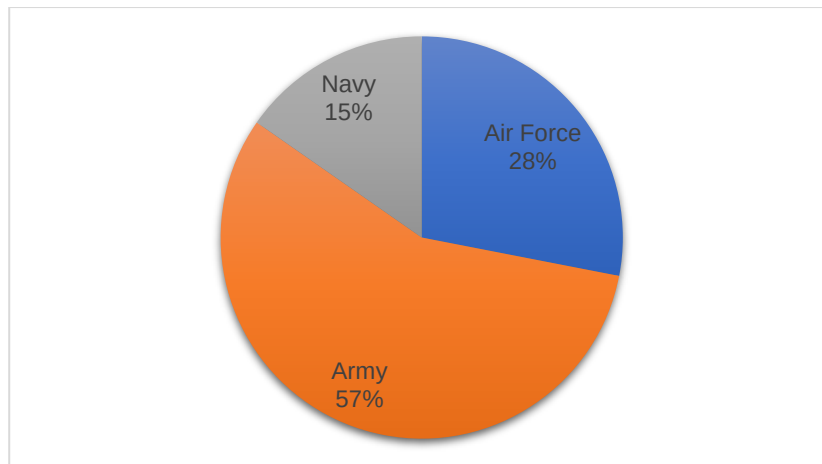


Figure 3: Pie chart of Brand in Military

4.1.4 Intimate Relationship Status

Majority of the respondents used for the study were from the Ghana Army (57%). The group with the lowest percentage (15%) were from Ghana Navy.

Table 3. Intimate Relationship of Respondents

Intimacy Status	Frequency	Percent
Single	30	7.7
Married	348	88.8
Divorced	14	3.6
Total	392	100.0

4.1.5 Partner in Military Service

Majority of the respondents indicated that their partners were not in the military ($n = 311$; 79.3%). About 20.7% ($n = 81$) indicated their partners were in the military.

4.1.6 Enlistment

Of the respondents in the sample, 223 (56.9%) indicated they were enlisted and 169 (43.1%) reported they belonged to 'Other' ranks.

4.1.7 Religious Faith

The majority of the respondents were Christians ($n=295$). The group with the lowest frequency ($n=7$) were traditionalist.

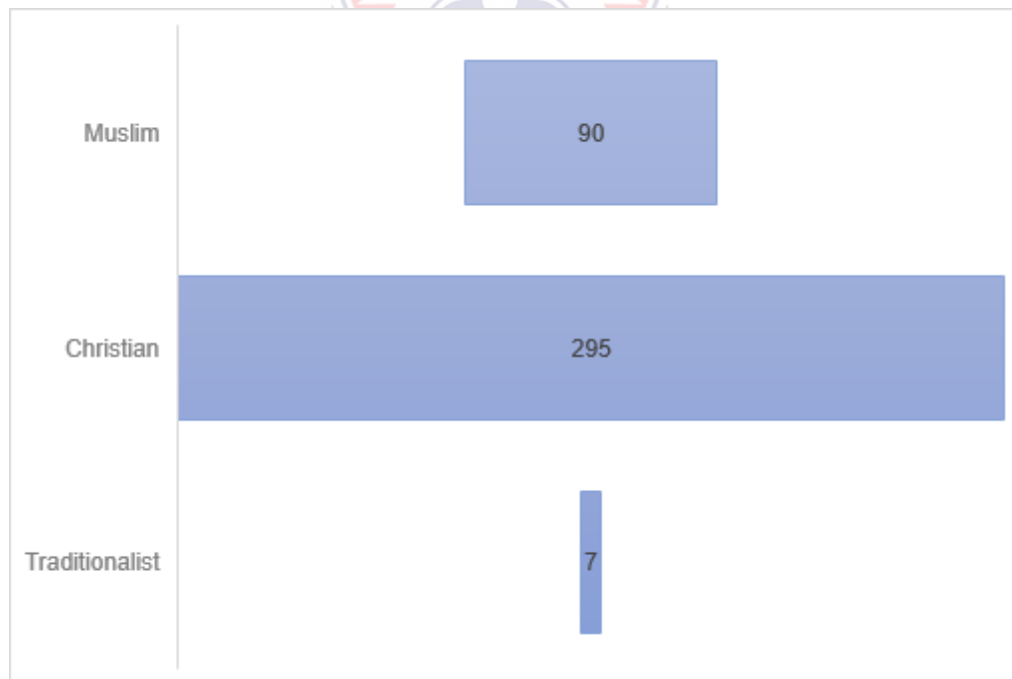


Figure 4. A funnel chart of religious affiliation

4.2 Analysis of Questions

4.2.1 Research Question 1: What are the types of trauma-related combat experiences that military personnel encounter during peacekeeping?

This question sought out to find out the types of trauma-related combat experiences that military personnel encounter during peacekeeping. The study employed SPSS in analysing the data and used Excel to generate a bar chart for the analysis.

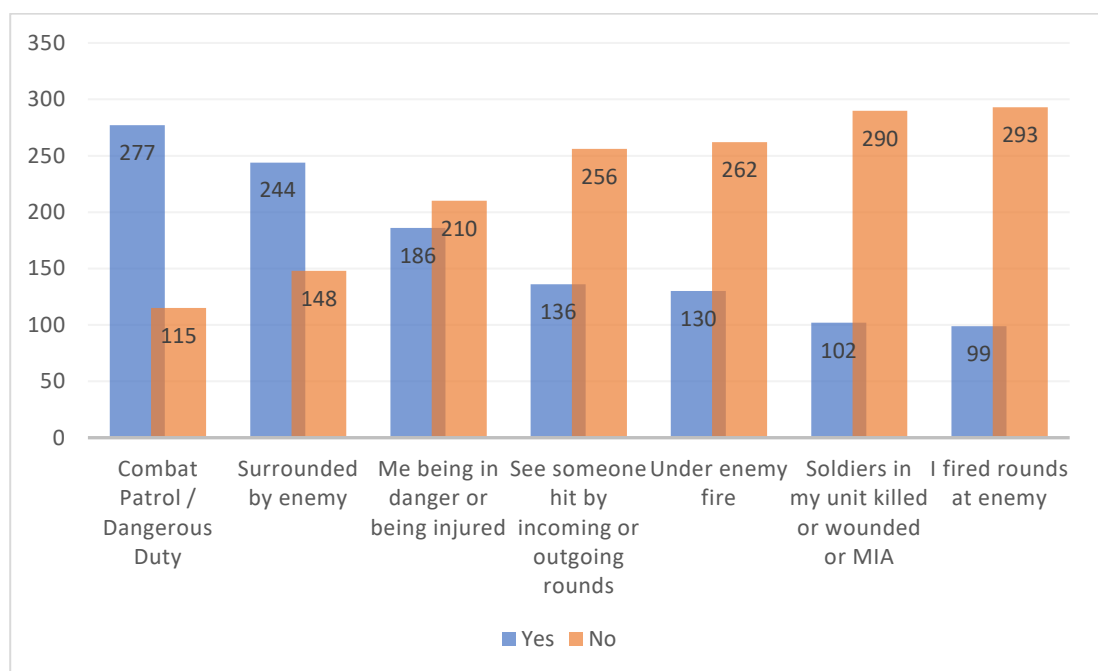


Figure 5: Clustered Graph of Combat-Related Experiences

From figure 5, respondents had many combat-related experiences ranging from being in danger or being injured during peacekeeping, through being shot at and losing unit members, to being surrounded by enemies and being under enemy fire. According to the military personnel, when they were at peacekeeping, the areas that received the most yeses included having dangerous duties (70.66%) and being surrounded by enemies (62.24%).

4.2.2 Research Question 2: What gender differences exist in post-traumatic stress disorder (PTSD) of military personnel post-peacekeeping?

The second question sought to examine gender differences in PTSD symptoms. The study used t-test to find out the gender difference in PTSD. From table 4, Males had more PTSD symptoms ($M = 32.77$; $SD = 10.84$) than females ($M = 27.38$; $SD = 8.55$). These differences had medium clinical significance (Cohen's $d = 0.514$). Therefore, the null hypothesis (H_0), "there will be no significant gender differences in post-traumatic stress (PTSD) symptoms" is rejected. There were gender differences in PTSD $t(327) = 3.51$; $p < .001$.

Table 4. Independent Sample t-test of Gender and PTSD

Parameter	Male		Female		$t(327)$	p	Cohen's d
	$(n = 316)$		$(n = 76)$				
	M	SD	M	SD			
PTSD	32.77	10.84	27.38	8.55	3.51	< .001	.514

Therefore, the null hypothesis (H_0), "there will be no significant gender differences in post-peacekeeping coping," is accepted.

4.2.3 Research Question 3: What gender differences exist in coping used by military personnel post-peacekeeping?

The third question sought to find out the gender differences in coping. T-test was employed to find out the gender differences in relation to coping. When it comes to coping, both males and females coped similarly ($p = .099$) as presented in table 5 below. Therefore, **the null hypothesis (H_0)**, "there will be no significant gender

differences in post-traumatic growth (PTG) of military personnel post-peacekeeping” is accepted.

Table 5. Independent Samples *t*-test of Gender and Coping

Parameters	Male		Female		<i>t</i> (252)	<i>p</i>	Cohen's <i>d</i>
	(n=316)		(n=76)				
	M	SD	M	SD			
Coping	44.03	15.07	46.87	14.94	-1.29	.099	-.189

4.2.4 Research Question 4: What gender differences exist in post-traumatic growth (PTG) experienced by military personnel post-peacekeeping?

The study sought out to find out the gender differences that exist in PTG experienced by military personnel. T-test was used performed to find out the gender differences. According to table 6, when it comes to PTG, males were different from females in their exhibition of PTG $t(289) = -1.92$; $p = .029$. Females exhibited higher PTG ($M = 46.87$; $SD = 29.23$) than males ($M = 39.37$; $SD = 25.31$). These differences had small clinical significance (Cohen's $d = -0.284$).

Table 6. Independent Samples *t*-test of Gender and PTG

Parameter	Male		Female		<i>t</i> (289)	<i>p</i>	Cohen's <i>d</i>
	<i>(n</i> = 316)		<i>(n</i> = 76)				
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
PTG	39.37	25.31	46.87	29.23	-1.92	.029	-.284

4.2.5 Research Question 5: What is the relationship among peacekeeping trauma-related combat experiences, PTSD, coping and PTG in military personnel in Ghana?

Research question 5, sought out to find out the relationship that exist between trauma-related combat experiences, PTSD, coping and PTG in military personnel in Ghana. Pearson correlation matrix was used to find out the relationship that exist between traumatic-related combat experiences, PTSD, Coping, and PTG.

The null hypothesis 2 (Ho2), “there will be no significant relationship among peacekeeping related trauma-experiences, PTSD, coping and PTG in military personnel in Ghana” was rejected. There were statistically significant correlations (relationships) among peacekeeping traumatic-related combat experience, PTSD, post-combat coping, and PTG as presented in table 7

Table 7, Correlation matrix

Variable	M	SD	1	2	3	4
1 TRCE	11.61	3.59	1			
2 PTSD	31.85	10.67	.582**	1		
3 Coping	44.72	15.06	.325**	.647**	1	
4 PTG	41.15	26.44	.285**	.460**	.738**	1

Note: M and SD are used to represent mean and standard deviation, respectively.

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

TRCE stands for traumatic-related combat experience

PTSD stands for post-traumatic stress disorder

PTG stands for post-traumatic growth

The presence of peacekeeping traumatic-related combat experiences increased PTSD by 58.2%, increased coping by 32.5% and increased PTG by 28.5%. This means there was a positive moderate relationship between TRCE and PTSD, and minimal positive relationship between TRCE and coping, and minimal positive relationship between TRCE and PTG. The presence of PTSD increased post-combat coping by 64.7% and increased PTG by 46.0%. This means there was a strong positive relationship between PTSD and coping, and moderate positive relationship between PTSD and PTG. The presence of post-combat coping increased PTG by 73.8%. There was a very strong positive relationship between combat and PTG.

4.3 Discussion of Results

4.3.1. Traumatic-related combat experience

The empirical studies reveals that Military personnel are faced with dangerous duties when they are on peacekeeping. Olonisakin's (2000) study on ECOMOG participants reveals that inadequate preparation and misunderstandings about conflict gravity significantly impacted soldiers' morale, with a lack of essential intelligence reports and maps which is in line with the study findings. In contrast, Phayal and Prins (2020) revealed an immediate reduction in the number of civilian injuries when peacekeeping forces were stationed locally in violent post-war regions. However, Phayal and Prins (2020) observed that peacekeeping troops showed greater responsiveness to rebel attacks on civilians in areas where significant conflicts between government forces and rebels were absent. This observation implies a hesitancy among peacekeepers to confront government forces that engage in civilian targeting.

4.3.2. Gender and PTSD

The study findings reveals that there exist a lot of males in the Ghana Army Forces faced with several PTSD symptoms. Hapke, Schumann, Rumpf, et al. (2006) conducted a study to examine how trauma type, pre-existing mental problems that occurred before the event, and gender affect the development of post-traumatic stress disorder (PTSD). Research has shown that women do not have a greater overall susceptibility to post-traumatic stress disorder (PTSD). Sexually motivated violence and pre-existing anxiety disorders are the primary factors contributing to greater rates of PTSD in women.

4.3.3. Gender and Coping Strategies

Coping exists between both genders in the Ghana Army. According to research by Azoulay and Gilboa-Schechtman (2022) the conventional belief associating the female gender with increased sensitivity to trauma is modified by the analysis of evolutionary obstacles. Therefore, it seems that the pattern of increased sensitivity to stressful situations is influenced by gender- and developmentally-specific adaptation obstacles which is in line with the study findings.

4.3.4 Gender and PTG

Post-traumatic growth refers to the experience of people who have advanced beyond their pre-conflict state, at least, in certain areas where crises started to happen (Burelli, 2022). The empirical findings reveal that, “females exhibited higher PTG than males at the Ghana Army Forces”. According to Akbar and Witruk (2016), “females tend to report greater levels of posttraumatic growth following the experience of traumatic event than males”. A meta-analysis was conducted by Vishnevsky, Cann, Calhoun, et al., (2010) to examine the direction and magnitude of

gender differences in self-reported posttraumatic growth. Results from 70 studies ($N = 16,076$) revealed a “small to moderate gender difference ($g = .27$, 95% CI = $.21 - .32$), with women reporting more posttraumatic growth than men”. Cohen-Louck (2022) revealed that “women reported higher PTG levels than men, and participants experiencing short-term pandemic reported significantly lower PTG levels than participants experiencing medium- or long-term pandemic”.

4.3.5 Traumatic-related combat experience and PTSD

There was a statistically significant relationship between trauma-related combat experience and PTSD. This implies that the “military personnel of the Ghana Army Forces' intensity and frequency of stressful incidents encountered in warfare strongly increase the probability of them acquiring post-traumatic stress disorder (PTSD)”. Hoge et al. (2007) discovered a “strong correlation between exposure to combat trauma and a heightened risk of post-traumatic stress disorder (PTSD) among veterans of the Iraq war”. The National Comorbidity Survey, done by Kessler et al. (1995), found that “those who had several traumatic events, such as combat-related experiences, had a greater likelihood of developing post-traumatic stress disorder (PTSD) compared to those who experienced a single incident which is in line with the study findings”.

4.3.6 Traumatic-related combat experience and Coping

There was a statistical significant relationship between TRCE and coping. Peacekeepers exposure to traumatic-related combat increases their coping levels. Jaser et al. (2007) indicates that “individuals exposed to trauma are more likely than their non-exposed peers to use negative emotion-focused coping (McElroy and Hevey 2014) as well as emotion-focused coping overall”. Díaz-Tamayo, Escobar-Morantes

and García-Perdomo (2022) revealed that “first responders to emergencies frequently used nonadaptive coping strategies, with avoidance or disconnection being one of the main strategies, as a tool to avoid confronting difficult situations and to downplay the perceived stressful event” which is in line with the study findings.

4.3.7 Traumatic-related combat experience and PTG

The relationship that exists between TRCE and PTG was positive and statistically significant. The presence of peacekeeping TRCE increased PTG. Military members may undergo post-traumatic growth, and the way war is experienced can influence how this growth unfolds (Tedeschi & Calhoun, 1996). Habib, Stevelink, Greenberg, and Williamson (2018) stated that “military personnel may develop PTG as a result of trauma exposure associated with deployment which is in line with the study findings”. Encountering severe combat-related trauma is correlated with an increased probability of developing PTSD (Tedeschi & Calhoun, 1996).

4.3.8 PTSD and Coping strategies

There was a statistically significant relationship between PTSD and coping and this means that the way in which military personnel of the Ghana Arm Forces cope with combat-related trauma can increase the chances of a personnel developing PTSD symptoms. This implies that military personnel of the Ghana Armed Forces indulging in coping strategies such as avoidance, substance use and self-isolation leads to high risk of PTSD. According to Milliken et al. (2007), reserve component troops have less access to certain coping tools in comparison to active-duty soldiers. This lack of access may be a contributing factor to the higher levels of PTSD symptoms seen in the reserve component of soldiers which is in line with the study findings.

In contrast, Adler et al. (2009) established that soldiers who used effective coping methods, such as problem-solving and seeking social support, had reduced levels of symptoms related to post-traumatic stress disorder (PTSD). According to the Hexaflex, committed action involves taking purposeful steps toward valued goals, even in the presence of uncomfortable thoughts and emotions. Through this practice, individuals learn that committing to meaningful actions, rather than fixating on specific outcomes, can lead to greater vitality and fulfillment (Wilton, 2022).

4.3.9 PTSD and PTG

Post-traumatic stress disorder (PTSD) on post-traumatic growth was positive and statistically significant. The presence of PTSD increased PTG by 46.0%. Post-traumatic stress disorder (PTSD) may greatly impede post-traumatic growth, hindering people's capacity to undergo good transformations after a horrific occurrence. Individuals with severe or persistent symptoms of post-traumatic stress disorder (PTSD) may encounter difficulties in reconstructing their lives and cultivating a fresh outlook on their traumatic encounters, thus impeding their capacity for post-traumatic development (Tedeschi & Calhoun, 2004).

4.3.10 Coping and PTG

The empirical study establishes that the influence of coping on post-traumatic growth was positive and statistically significant and this implies that a unit change in coping will lead to an increase in PTG. This means that military personnel seeking social support and engaging into problem solving after peacekeeping deployment will help them endure a positive psychological change experienced as a result of adversity, trauma, or highly challenging life circumstances. In line with the study findings, research by Blau and Miller (2022) study established that, for the whole group,

instrumental support and religion were both significantly positive correlates of post-traumatic growth (PTG). Adaptive coping methods, such as actively seeking social support, engaging in problem-solving, and adopting a positive perspective, have been linked to a higher level of post-traumatic development (Bryant-Davis & Smith, 2015). Those who followed the pathway of increasing social support were more likely to see long-term gains in their mental health (De Roos et al., 2022). In contrast, the probability of a decline in both mental and physical health was higher for survivors in the trajectory of declining social support.



CHAPTER FIVE - SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.0 Overview of the Chapter

This chapter first looked at the summary of the study, followed by the conclusion and finally the recommendations of the study.

5.1 Summary

Chapter One introduced the study on the correlation between peacekeeping missions, post-traumatic stress disorder (PTSD), coping mechanisms, and post-traumatic growth (PTG) among Ghanaian military personnel. It provides background on the evolving nature of global conflicts and peacekeeping operations, highlighting challenges such as exposure to violence, traumatic events, and mental health issues like PTSD, depression, and anxiety. The problem statement emphasizes the insufficient understanding of trauma in Ghana's military context, including gender differences in coping with PTSD and PTG. The purpose is to investigate trauma-related experiences during missions and evaluate gender variations in PTSD, coping, and PTG, along with their interrelationships. Objectives and research questions align with this, testing hypotheses on gender differences and relationships among variables. The chapter discusses the study's significance for mental health programs, delimitations focusing on Ghana Armed Forces personnel aged 25-45 with peacekeeping experience, operational definitions of military terms, and an outline of subsequent chapters.

Chapter Two reviewed literature on peacekeeping, PTSD, post-combat coping, and PTG in the Ghana Armed Forces. It presents Acceptance and Commitment

Therapy (ACT) as the theoretical framework, emphasizing psychological flexibility through processes like acceptance, cognitive diffusion, and committed action, illustrated by the Hexaflex model. Empirical reviews cover trauma types (acute, chronic, complex), PTSD symptoms and gender differences (women often more vulnerable), non-war and war-related traumas, assessment tools like PCL and CAPS, and treatment modalities including trauma-focused therapies and complementary approaches like yoga and acupuncture. Coping strategies post-combat, influenced by gender, religion, social support, and traumatic events, are explored, alongside PTG as positive transformation post-trauma, varying by health challenges, combat exposure, and gender. Peacekeeping discussions address civilian protection, military socialization, and regional contributions like Ghana's. The conceptual framework links trauma experiences to PTSD, coping, and PTG, summarizing key theoretical and empirical insights.

Chapter Three detailed the research methodology for examining the interplay of peacekeeping missions, post-traumatic stress disorder (PTSD), coping mechanisms, and post-traumatic growth (PTG) among Ghanaian military personnel. Rooted in a positivist research philosophy, the study prioritizes objectivity and employs a quantitative, cross-sectional design to collect data from 392 personnel (from a 16,000-strong population) in the Greater Accra Region, using purposive and convenience sampling. The sample size, calculated via Yamane's formula and adjusted to 400, yielded 392 valid responses. Four reliable instruments—Combat Exposure Scale (CES), Posttraumatic Stress Disorder Checklist (PCL-5), Brief COPE Inventory, and Posttraumatic Growth Inventory (PTGI)—were used, each with high internal consistency (α ranging from .708 to .967). Ethical measures ensured informed consent, confidentiality, and impartiality. Data analysis utilized SPSS for descriptive

statistics, reliability tests, t-tests for gender differences, and Pearson's correlation to explore variable relationships, aligning with the study's objectives to assess trauma, PTSD, coping, and PTG.

Chapter Four presented findings from the study, revealing prevalent trauma-related combat experiences during peacekeeping, such as dangerous duties (70.66%) and enemy encirclement (62.24%). Gender differences showed males with higher PTSD symptoms ($M=32.77$) than females ($M=27.38$), rejecting the null hypothesis ($t(327)=3.51$, $p<.001$, Cohen's $d=.514$), but no significant differences in coping strategies ($p=.099$), accepting the null hypothesis. Females exhibited higher PTG ($M=46.87$) than males ($M=39.37$, $t(289)=-1.92$, $p=.029$, Cohen's $d=-.284$). Pearson's correlation analysis rejected the second null hypothesis, showing significant positive relationships: trauma-related combat experiences (TRCE) moderately increased PTSD (58.2%), minimally increased coping (32.5%) and PTG (28.5%); PTSD strongly correlated with coping (64.7%) and moderately with PTG (46.0%); and coping strongly correlated with PTG (73.8%). The discussion links findings to prior studies, highlighting how inadequate preparation worsens trauma (Olonisakin, 2000), gender influences PTSD vulnerability (Hapke et al., 2006), and adaptive coping fosters PTG (Blau & Miller, 2022), underscoring the need for targeted mental health support.

5.2 Conclusion

This study examined the impact of combat-related experiences on PTSD, coping strategies, and post-traumatic growth (PTG) among military personnel, with a focus

on gender differences. The findings revealed significant insights into these relationships.

A substantial portion of respondents reported dangerous combat experiences during peacekeeping missions, with many acknowledging hazardous duties and being surrounded by enemies. These experiences are critical in understanding the psychological impacts faced by military personnel.

The analysis indicated that males exhibited higher PTSD symptoms compared to females, suggesting that gender plays a crucial role in the manifestation of PTSD among military personnel, leading to the rejection of the null hypothesis regarding gender differences in PTSD.

Contrary to expectations, the study found no significant gender differences in coping strategies, as both males and females coped similarly post-peacekeeping. This finding led to the acceptance of the null hypothesis regarding gender differences in coping.

Gender differences were observed in PTG, with females demonstrating higher levels than males. This underscores the varying experiences and outcomes of trauma processing between genders.

The Pearson correlation matrix revealed significant relationships among traumatic-related combat experiences, PTSD, coping, and PTG. The presence of traumatic experiences was found to increase PTSD symptoms, coping abilities, and PTG. Additionally, PTSD significantly enhanced coping and PTG, indicating a complex interplay among these variables.

5.3 Recommendation

The Ghana Armed Forces should prioritize the mental health and well-being of their personnel by implementing comprehensive training programs that address the psychological impacts of combat-related experiences. Regular mental health assessments and support systems should be established to identify and assist service members displaying signs of PTSD. Additionally, the Armed Forces can enhance resilience training, equipping personnel with effective coping strategies to better navigate the challenges of peacekeeping missions.

Military personnel involved in peacekeeping should be encouraged to engage in open discussions about their experiences and feelings related to combat exposure. Establishing peer support networks can create a safe environment for sharing and processing trauma. Furthermore, peacekeepers should be made aware of available mental health resources and support services, ensuring they can access help when needed.

The Government of Ghana must recognize the importance of mental health in the military and allocate adequate resources to support mental health initiatives within the Armed Forces. Policies should be developed to ensure that mental health services are accessible and culturally appropriate for military personnel. Additionally, the government should promote public awareness campaigns to destigmatize mental health issues, encouraging service members and their families to seek help without fear of judgment.

Psychologists working with military personnel should specialize in trauma-informed care and be familiar with the unique experiences faced by peacekeepers. They should provide tailored interventions that address PTSD, coping strategies, and post-traumatic growth. Collaborative efforts with the Armed Forces can help ensure

that mental health programs are effectively integrated into military training and support systems.

Family and friends play a crucial role in the mental health and well-being of military personnel. They should be educated about the challenges faced by peacekeepers and the potential psychological impacts of combat experiences. Establishing support groups for families can provide them with tools to understand and cope with their loved ones' experiences, fostering an environment of empathy and understanding. Encouraging open communication within families is vital. Service members should feel safe discussing their feelings and experiences without fear of judgment. Families can be trained in active listening and supportive communication techniques to help their loved ones process trauma. Additionally, friends and family members should be informed about available mental health resources and how to guide their service members toward seeking help. By creating a strong support network, families and friends can significantly contribute to the recovery and resilience of military personnel, helping them navigate the complexities of post-combat life.

Researchers should continue to explore the psychological effects of combat-related experiences on military personnel, focusing on gender differences and the long-term impacts of PTSD. Future studies should aim to evaluate the effectiveness of various interventions and support programs, providing evidence-based recommendations for improving mental health care in the military. Collaborating with the Ghana Armed Forces and mental health professionals can enhance the relevance and applicability of research findings to real-world scenarios. The study also suggests that a study should be conducted on Ghana Police Service, Immigration and the Fire Service in relation to PTSD, PTG and Coping.

5.4 Limitations

A limitation to the study concerned the inclusion criteria on going for at least one mission. A person's peacekeeping activity in one mission and the subsequent trauma-related experiences will not be the same as someone who has gone on several missions. Moreover, it would have been better to assess which type of peacekeeping as some regions are known to have more insurgence than other regions. This assessment could inform the GAF on how to prepare personnel for such missions, as well as the psychological resources to put in place when personnel come back from missions in those areas.

Another limitation concerns the time since peacekeeping. A person who just returned from peacekeeping, say two months ago, may have PTSD just as the one who came 3 years ago. However, because of coping and social support, the one who has had it longer may have found ways to navigate the post-peacekeeping experience in the way that a person who just returned may not have. It would have been more effective to assess their help seeking behaviors and connect it to the length of time post-peacekeeping any maturation effect (Patten & Newhart, 2018).

A specific issue that might come up with this kind of research is social-desirability bias, which is the desire to act or answer questions in a way that other people will find acceptable (Kuncel & Tellegen, 2009). In fact, it's possible that some poll participants didn't give us all the answers they thought were "bad," since post-traumatic stress is still seen as a bad thing in this mostly male field of work. Therefore, we recommend that future studies use the PCL-C and the PTGI (both of which are self-report instruments) together with the evaluation of a clinical practitioner during interviews. Finally, since the data were cross-sectional, we can't say anything about the causes of the relationships between how central an event was and the results. After a traumatic

event, PTSD symptoms or feelings of growth may make the event seem more important to identity. When looking at how stress affects people over time, longitudinal studies should be done.



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APPENDIX I

Request for Introductory Letter

Tanink Ghana Limited
P. O. Box CE 11386
Tema
0244535449
mawutorb8@yahoo.com

January 12, 2023

The Head of Department
Department of Counselling Psychology
Faculty of Educational Studies
University of Education, Winneba

Dear Sir,

APPLICATION FOR INTRODUCTORY LETTER FOR DATA COLLECTION
STUDENT NUMBER 220017548

I wish to apply for an introductory letter to start data collection. My Principal Supervisor is Dr. Hannah Acquaye, and my secondary supervisor is Dr. Patricia Mawusi Amos. My principal supervisor has approved and agreed that I write to request permission to start data collection.

The purpose of my study is the relationship between Peacekeeping, Post-traumatic Stress Disorder, Post-combat Coping, and Post-traumatic Growth in the Ghanaian Military Personnel. Data will be collected from Military Personnel at Burma Camp, Accra.

The following are my research questions:

- a) What are the types of trauma-related experiences encountered in peacekeeping by military personnel?
- b) What PTSD symptoms do military personnel exhibit in post-peacekeeping?
- c) What are the types of coping used by military personnel in post-peacekeeping?
- d) What are the PTG symptoms in military personnel post-peacekeeping?

I have been trained in Ethics in Human Subjects Research and my informed consent reflects this training. It is expected that data will be collected from January 20, 2023 to January 28, 2023.

Please find attached the instruments for data collection and the informed consent document.

Thank you.

Yours sincerely,

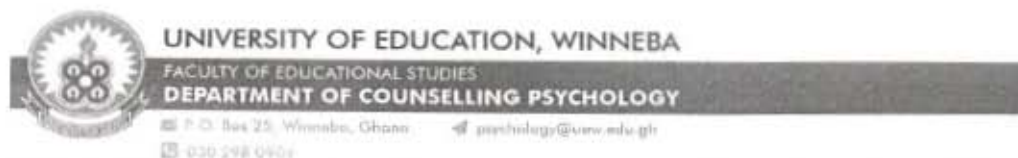


Olivia Mawutor
220017548

cc: Dr. Patricia Mawusi Amos

APPENDIX II

Introductory Letter from Department of Counselling Psychology



22nd February, 2023

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

LETTER OF INTRODUCTION

I write to introduce to you **OLIVIA MAWUTOR KLOGO**, a student in the Department of Counselling Psychology of the University of Education, Winneba.

MS. KLOGO is pursuing a Master of Philosophy Degree Programme in counselling psychology. As part of the programme she is conducting a research on the topic: *Assessing the relationship among peace keeping, post-traumatic stress disorder, post combat coping and post traumatic growth in military personnel.*

She is required to administer questionnaires to enable her gather information for her data analysis and she has chosen to do so in your outfit. I would be very grateful she is given the permission to conduct this important exercise, which is only for academic purposes.

Thank you.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Dr. Paul K. A. Bedu-Addo".

DR. PAUL K. A. BEDU-ADDO
AG. HEAD OF DEPARTMENT

APPENDIX III

Request for Data Collection to the Ghana Armed Forces

P. O. Box CE 11386
Tema

October 18, 2022

The Director
Planning Research and Development
Ghana Armed Forces
Burma Camp
Accra

ATTN: GROUP CAPTAIN GYIMAH

Dear Sir,

REQUEST TO COLLECT DATA AND INTERVIEW PERSONNEL OF THE GHANA ARMED FORCES

Sir, I am a student of University of Education, Winneba offering a top-up course at The Department of Counselling Psychology

Sir, one of our academic requirements, is for students to conduct research in their area of study on thesis topic that has been accepted and approved by the university administration.

"THE RELATIONSHIP AMONG PEACEKEEPING, POST-TRAUMATIC STRESS DISORDER (PTSD), POST-COMBAT COPING AND POST TRAUMATIC GROWTH (PTG), IN MILITARY PERSONNEL" is my approved thesis topic.

I respectfully write to ask your excellent self for the approval for the aforementioned subject.

Dr. Hannah and Dr. Patricia Mawusi Amos are my research supervisors.

Thank you for your continuous cooperation and guidance.

Yours truly,



Olivia Mawutor
(0244 535449)

APPENDIX IV

Permission to Collect Data from Ghana Armed Forces

DECLARATION

STUDENT'S DECLARATION

I, OLIVIA MAWUTOR KLOGO, declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE:

DATE: April 02, 2024

SUPERVISORS' DECLARATION

We hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of thesis as laid down by the University of Education, Winneba.

Prof. Hannah E. Acquaye (PhD)

(Principal Supervisor)

Signature:

Date: March 29, 2024

Dr. (Mrs.) Patricia M. Amos

(Co-Supervisor)

Signature:

Date:

APPENDIX V

Data Collection Package

University of Education, Winneba

Faculty of Educational Studies

Department of Counselling Psychology

The relationship among peacekeeping, post-traumatic stress disorder, post-combat coping and post-traumatic growth in military personnel

INFORMED CONSENT

Principal Investigator: Olivia Mawutor Klogo

Faculty Supervisors: Dr. Hannah E. Acquaye

Dr. (Mrs.) Patricia M. Amos

You are being invited to participate in a research study. The study is *voluntary* so you can choose to take part or not.

Purpose of the study: The purpose of this study is to assess the relationship among peacekeeping, post-traumatic stress disorder, post-combat coping, and post-traumatic growth in military personnel.

What you will be asked to do in the study: When you take part in this study, you will be asked to complete 3 sets of questionnaires. Please note that the information obtained in this research may be used in future research. You will be asked to complete a set of demographic questions and multiple questionnaires that assess how peacekeeping experiences, and possible stress-related symptoms. You will also be asked questions about how you cope as well as any perceived growth or lack thereof due to your peacekeeping experiences. Should there be any discomfort with any of the questions, please feel free to stop answering in order to take care of yourself. It is possible that after answering the questions, some of those memories may come up to distress you. Please reach out to your therapist at the 37 Military Hospital for support.

You will not be given any incentive in taking part of this study.

Time required: We expect that you will do the questionnaire in no more than 30 minutes.

Age requirement: To take part in this study, you must be in the military and have ever gone on peacekeeping mission in the past 5-10 years.

Study contacts for questions about the study or to report a problem: If you have questions, concerns, or complaints, or think the research has impacted you negatively in any way, communicate with: Ms. Olivia Klogo or her principal supervisor, Dr. Acquaye at heacquaye@uew.edu.gh.

Demographic Questionnaire

Gender:

- a. Male ☐
- b. Female ☐

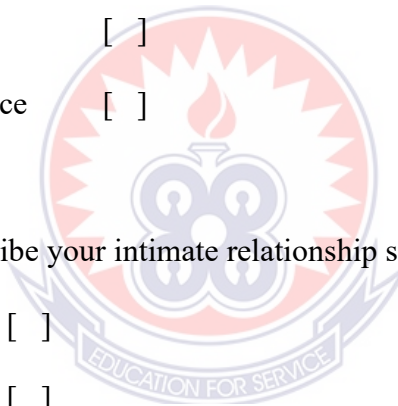
How old are you as of today? _____

Which branch of the military are you?

- a. Ghana Army ☐
- b. Ghana Navy ☐
- c. Ghana Air Force ☐

How would you describe your intimate relationship status?

- a. Single ☐
- b. Married ☐
- c. Divorced ☐
- d. Widowed ☐



If you are married or in a relationship, is your partner also in the military?

- a. Yes ☐
- b. No ☐

What is your military status?

- a. Enlisted ☐

b. Officer []

What is your religious faith?

a. Muslim []

b. Christian []

c. Traditionalist []

d. No religion []

How many tours of peacekeeping have you had?

Peacekeeping Mission and year served	Length of tour (in months)
--------------------------------------	----------------------------



This questionnaire assesses your peacekeeping-related experiences. Please answer as honestly as you can.

Please circle the number above the answer that best describes your experience.

1) Did you ever go on combat patrols or have other dangerous duty?

1	2	3	4	5
No	1-3 times	4-12 times	13-50 times	51+ times

2) Were you ever under enemy fire?

1	2	3	4	5
Never	<1 month	1-3 months	4-6 months	7+ months

3) Were you ever surrounded by the enemy?

1	2	3	4	5
No	1-2 times	3-12 times	13-25 times	26+ times

4) What percentage of the soldiers in your unit were killed (KIA), wounded or missing in action (MIA)?

1	2	3	4	5
None	1-25%	26-50%	51-75%	76% or more

5) How often did you fire rounds at the enemy?

1	2	3	4	5
Never	1-2 times	3-12 times	13-50 times	51+ times

6) How often did you see someone hit by incoming or outgoing rounds?

1	2	3	4	5
Never	1-2 times	3-12 times	13-50 times	51+ times

7) How often were you in danger of being injured or killed (i.e., being pinned down, overrun, ambushed, near miss, etc.)?

1	2	3	4	5
Never	1-2 times	3-12 times	13-50 times	51+ times

Instructions: Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Please read each one carefully, then circle one of the numbers to the right to indicate how much you have been bothered by the problem since the time of the peacekeeping experience.

BOTHERED BY	Not at all 1	A little bit 2	Moderately 3	Quite a bit 4	Extremely 5
1. Repeated, disturbing, and unwanted memories of the experience?	1	2	3	4	5
2. Repeated disturbing dreams of the war experience?	1	2	3	4	5
3. Suddenly feeling or acting as if the war experience were actually happening again (as if you were actually back there reliving it)?	1	2	3	4	5
4. Feeling very upset when something reminded you of the war experience?	1	2	3	4	5
5. Having strong physical reactions when something reminded you of the war experience (for example, heart pounding, trouble breathing, sweating)?	1	2	3	4	5
6. Avoid memories, thoughts, or feelings related to the war experience?	1	2	3	4	5

BOTHERED BY	Not at all	A little bit	Moderately	Quite a bit	Extremely
7. Avoiding external reminders of the war experience (for example, people, places, conversations, activities, objects, or situations)?	1	2	3	4	5
8. Trouble remembering important parts of the war experience?	1	2	3	4	5
9. Having strong negative beliefs about yourself, other people or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	1	2	3	4	5
10. Blaming yourself or someone else for the war experience or what happened after it?	1	2	3	4	5
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	1	2	3	4	5
12. Loss of interest in activities that you used to enjoy?	1	2	3	4	5
13. Feeling distant or cut off from other people?	1	2	3	4	5
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	1	2	3	4	5
15. Irritable behavior, angry outbursts, or acting aggressively?	1	2	3	4	5

BOTHERED BY	Not at all	A little bit	Moderately	Quite a bit	Extremely
16. Taking too many risks or doing things that could cause you harm?	1	2	3	4	5
17. Being “super-alert” or watchful or on guard?	1	2	3	4	5
18. Feeling jumpy or easily startled?	1	2	3	4	5
19. Having difficulty concentrating?	1	2	3	4	5
20. Trouble falling or staying asleep?	1	2	3	4	5

Post Traumatic Growth Inventory



Please indicate which change you experienced as a result of the peacekeeping experience(s)

1. I changed my priorities about what is important in life.
- 0 I did not experience this change as a
- 1 I experienced this change to a *very*
- 2 I experienced this change to a *small*
- 3 I experienced this change to a
- 4 I experienced this change to a *great*
- 5 I experienced this change to a *very*

Please indicate which change you experienced as a result of the peacekeeping experience(s)	0	1	2	3	4	5
2. I have a greater appreciation for the value of my own life	I did not experience this change as a	I experienced this change to a <i>very</i>	I experienced this change to a <i>small</i>	I experienced this change to a	I experienced this change to a <i>great</i>	I experienced this change to a <i>very</i>
3. I developed new interests	0	1	2	3	4	5
4. I have a greater feeling of self-reliance	0	1	2	3	4	5
5. I have a better understanding of spiritual matters	0	1	2	3	4	5
6. I more clearly see that I can count on people in times of trouble	0	1	2	3	4	5
7. I established a new path for my life	0	1	2	3	4	5
8. I have a greater sense of closeness with others	0	1	2	3	4	5
9. I am more willing to express my emotions	0	1	2	3	4	5
10. I know better that I can handle difficulties	0	1	2	3	4	5
11. I am able to do better things with my life	0	1	2	3	4	5

Please indicate which change you experienced as a result of the peacekeeping experience(s)	0	1	2	3	4	5
	I did not experience this change as a	I experienced this change to a <i>very</i>	I experienced this change to a <i>small</i>	I experienced this change to a	I experienced this change to a <i>great</i>	I experienced this change to a <i>very</i>
12. I am better able to accept the way things work out	0	1	2	3	4	5
13. I can better appreciate each day	0	1	2	3	4	5
14. New opportunities are available which wouldn't have been otherwise	0	1	2	3	4	5
15. I have more compassion for others	0	1	2	3	4	5
16. I put more effort into my relationships	0	1	2	3	4	5
17. I am more likely to try to change things which need changing	0	1	2	3	4	5
18. I have a stronger religious faith.	0	1	2	3	4	5
19. I discovered that I'm stronger than I thought I was	0	1	2	3	4	5
20. I learned a great deal about how wonderful people are	0	1	2	3	4	5
21. I better accept needing others	0	1	2	3	4	5

Please indicate by choosing the option that best describes your experience after your peacekeeping experience(s)

Statement	I haven't been doing this at all	I've been doing this a little bit	I've been doing a medium amount	I've been doing this a lot
1. I've been turning to work or other activities to take my mind off things	1	2	3	4
2. I've been concentrating my efforts on doing something about the situation I'm in	1	2	3	4
3. I've been saying this to myself "this isn't real."	1	2	3	4
4. I've been using alcohol or other drugs to myself feel better.	1	2	3	4
5. I've been getting emotional support from others	1	2	3	4
6. I've been giving up trying to deal with it.	1	2	3	4
7. I've been taking action to try to make the situation better.	1	2	3	4

Statement	I haven't been doing this at all	I've been doing this a little bit	I've been doing a medium amount	I've been doing this a lot
8. I've been refusing to believe that it has happened	1	2	3	4
9. I've been saying things to let my unpleasant feeling escape	1	2	3	4
10. I've been getting help and advice from other people	1	2	3	4
11. I've been using alcohol or other drugs to help me get through it	1	2	3	4
12. I've been trying to see it in a different light, to make it seem more positive	1	2	3	4
13. I've been criticizing myself	1	2	3	4
14. I've been trying to come up with a strategy about what to do	1	2	3	4
15. I've been getting comfort and understanding from someone	1	2	3	4

Statement	I haven't been doing this at all	I've been doing this a little bit	I've been doing a medium amount	I've been doing this a lot
16. I've been giving up the attempt to cope	1	2	3	4
17. I've been looking for something good in what is happening	1	2	3	4
18. I've been making jokes about it.	1	2	3	4
19. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.	1	2	3	4
20. I've been accepting the reality of the fact that it has happened	1	2	3	4
21. I've been expressing my negative feelings	1	2	3	4
22. I've been trying to find comfort in my religion or spiritual beliefs	1	2	3	4

Statement	I haven't been doing this at all	I've been doing this a little bit	I've been doing a medium amount	I've been doing this a lot
23. I've been trying to get advice or help from other people about what to do	1	2	3	4
24. I've been learning to live with it	1	2	3	4
25. I've been thinking hard about what steps to take	1	2	3	4
26. I've been blaming myself for things that happened	1	2	3	4
27. I've been praying or meditating	1	2	3	4
28. I've been making fun of the situation	1	2	3	4

Endorsed by:



Hannah E. Acquaye, PhD
Principal Research Supervisor
January 17, 2023

