ACE Survey among Individuals with a History of National Guard Service

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ABSTRACT

The study is based on previous studies regarding Adverse Childhood Experiences (ACE) among veterans and military service members, with an emphasis on mental health outcomes in the National Guard community. Military service can induce levels of stress that can require a high level of resilience and strong coping skills. As American service members deploy for prolonged periods on a recurrent basis, their ability to cope with the stress of deployment may be more difficult. Long term deployments, combat exposure, and stressful working conditions can have lasting effects on both the body and mind. The impacts of these factors are magnified on the National Guard community since its members may live far from a military treatment facility, have limited healthcare coverage through the Veterans Administration (VA), and lack similar social support systems that Active Duty (AD) service members can maintain. Negative life events that take place prior to joining can influence an individual’s ability to cope or struggle through adversity. Learning more about negative life events or ACEs and their effects on service members is a task at the core of building a more ready and able force. Certain ACEs carry greater risk than others. Determining which combinations are most harmful will help with suicide/self-harm prevention and help to build a more resilient force.

Keywords: Physical Abuse, ACE, Military Service, National Guard, Deployment
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Dedication

I dedicate this dissertation first and foremost to my wife, Ashley, who has been an endless source of support and reassurance during graduate school with many life obstacles and challenges. I am so thankful for you in my life. This work is additionally dedicated to my children, Audrey and Gavin. I could not have done this without you both. Finally, I dedicate this to my father, Daniel E. Burns, who has always showed me unconditional love and understanding in all areas of my life.
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List of Abbreviations

Adverse Childhood Experiences (ACE)
Active Component (AC)
Active-duty military (ADM)
Army National Guard (ARNG)
Behavioral Health Officer (BHO)
Brief Resilience Scale (BRS)
Combat Stress Reaction (CSR)
Department of Defense (DOD)
Department of Veterans Affairs (VA)
Deployment Related Traumatic Exposure (DRTEs)
Diagnostic and Statistical Manual of Mental Disorders (DSM 5)
Institutional Review Board (IRB)
Licensed Clinical Social Worker (LCSW)
Maladaptive Family Functioning Adversities (MFFA)
National Guard (NG)
Posttraumatic Stress Disorder (PTSD)
Reserve Component (RC)
Resilience Theory (RT)
Service Members Group Life Insurance (SGLI)
Traumatic Brain Injury (TBI)
Veterans Affairs (VA)
Veterans Benefits Administration (VBA)
Veterans Health Administration (VHA)
Chapter One: Introduction

Overview

The American Military is widely considered the strongest military in the world. This might have many people wondering why American service members are having serious mental health issues on a large scale. The answer to the abovementioned questions is in the Holy Bible. Ecclesiastes 9:11 “I have observed something else under the sun. The fastest runner doesn’t always win the race, and the strongest warrior doesn’t always win the battle. The wise sometimes go hungry, and the skillful are not necessarily wealthy. And those who are educated don’t always lead successful lives.” The strong can die from a weakness, the brilliant can lose their mind, and the perfect all have flaws. What flaws are driving the poor mental health of U.S. National Guard service members?

For over twenty years, U.S. service members have been at war across the globe. This continual conflict has had lasting effects on both currently serving military personal and the veteran population. One area that has been a huge concern is the suicide rate and suicide attempts among those who are serving and those who have served. The rise of mental health issues and suicide rates among active-duty military (ADM) has been most prevalent among those 18 to 25 years of age (DOD, 2020); in fact, the increase rate of issues with the youngest population has fed additional support for more research regarding resilience and risk factors. Several factors have been examined regarding the high rate of mental health disorders and suicides within the military population and the contributing factors include family history of mental illness, pre-military mental disorders, or adverse childhood experiences (Bandoli et al., 2017; Nock et al., 2015; Rudenstine et al., 2015). It is important to understand the role of current and past mental health events of military personal to change the current state of mental health readiness.
Background

On September 11th, 2001, a group of nineteen terrorists carried out an organized attack on the World Trade Center and the Pentagon. The terrorist took control of four different large passenger airliners. These planes were used as missiles targeting key aspects of America’s economic and military power. A fourth plane, flight United 93, was brought down by the brave people on board prior to the terrorists getting to their target. The attack is commonly known as “the 9/11 attack” or “9/11.” The 9/11 attack killed nearly 3,000 people, leading to America’s now 20-year war on terror. Since the start of the War on Terror, there has been nearly 7000 U.S. military casualties (Mann, 2019). However, there are many more service members that are dying after the battles are over and the bullets have stop flying. Since the War on Terror started in 2001, close to 3 million service members have deployed to the middle east region (Straud et al., 2019).

The current battle is for the health of those currently serving and those that have served. The Veteran Health Administration (VHA) shows that those veterans from the War on Terror have shown higher suicide rates than service members from other wars (2020). According to the Veteran Health Administration (VHA), Veterans ages 18 to 35 showed a high rate of suicide at 45.9 per 100,000 veterans; comparatively, those Veterans aged 75 and older had the lowest rate at 27.4 per 100,000 (2020). Lastly, the highest rate is among those 55 and 74 years of age (VHA, 2020), accounting for 40% of suicides. Those in the highest category are those that are likely to have been in both the Vietnam conflict and the War in the Middle East. The high rate of suicides leads to many questions about trauma and the lasting effects of war.

Trauma affects everyone differently, which helps explain why people react differently to all kinds of traumas. For example, approximately 20 percent of people in the United States have experienced a severe motor vehicle accident (Briere, & Scott, 2015); additionally, over half of adults in the United States have experienced a car accident by the age of 30. Trauma and post-
traumatic stress disorder (PTSD) have a connection that can create issues in other areas of a person’s life. Trauma and PTSD can affect soldiers or families very negatively. PTSD can affect a Service Member’s career, ability to deploy overseas, or renew their security clearance. Research shows that the average service member will deploy 2.2 times over their career in the military for a period of 12 months or more (Cunitz et al., 2019).

PTSD can also affect a person’s ability to function or complete something that they previously had no issues with. Individuals suffering from PTSD related to a car accident might avoid driving or cars altogether. Victims of PTSD might have changes in sleep, mood, and other different behaviors (American Psychiatric Association, 2013). PTSD causes individuals to change and react differently than they did before the trauma. PTSD is correlated with reduced quality of life and trouble with various domains of functioning which include employment, memory, physical health, social support, and relationships (Gros et al., 2019). When the traumatic event or events are over some people might think the worst has passed; however, PTSD is the lasting psychological reaction from an overwhelming experience. These lasting psychological experiences have proven hard for many families to deal with even years after the trauma occurred.

Trauma is not just something that causes mental or physical pain; it can also affect a person’s identity. One definition of trauma explains that “an event is traumatic if it is extremely upsetting, at least temporarily overwhelms the individual’s internal resources, and produces lasting psychological symptoms” (Briere & Scott, 2015, p.10). In clinical terms, trauma is defined as “exposure to actual or threatened death, serious injury, or sexual violence” in one to four ways (DSM-5; American Psychiatric Association, 2013; Briere & Scott, 2015). Some of the effects of trauma affect children later in life, soldiers on the battlefield, or the person when they
are in a parent in a family. A difficult home life can affect other areas of life making socialization difficult. The impaired socialization has been linked to the increasing of suicide rates among adults in the last decade (Case & Deaton, 2015).

**Active Duty & National Guard**

Wars are not always fought by full-time military service members. Some service members that fight the war are from three different areas. Congress defines these areas into component areas “Active Component” AC and “Reserve Component” RC (Kapp & Torreon, 2020). The RC has the National Guard and the Reserves. Each state and territory have a National Guard component (Kapp & Torreon, 2020). National Guard service members can be activated for either state or federal missions. The reserves are only federal not state. Both the AC and the RC have different branches and different missions. The National Guard can be called by states for fires, floods, and other state emergencies. The reserves can only be called within a state when National emergencies with authorized funding (Kapp & Torreon, 2020). For example, COVID-19 forced all branches and components to support the states. In the beginning, only state National Guards were fighting the virus. The active components are the traditional areas of the military and are made of the Army, Air Force, Navy, Marines, and Coast Guard with the Newest branch being Space Force (Kapp & Torreon, 2020). Most recent data show that the United States active-duty military was comprised of 1,327,600 individuals (Defense Manpower Data Center, 2020).

**Military Deployment**

In the military, the family takes on a great deal of stress and trauma. When the family system fails, each member in the family suffers. The stronger the family, the healthier the support system. One cross-sectional population research examined the relationship between maladaptive family functioning adversities (MFFA) in childhood and the susceptibility to PTSD,
which showed higher PTSD rates than those without early life issues (Dorrington et al, 2019). Similarly, another study found that lower levels of social support were correlated with more severe PTSD issues (Blais et al., 2021). Regardless of the trauma, a support system is the key to recovery from trauma and PTSD. The relationship is the most important factor in trauma recovery and the development of PTSD symptoms.

Research shows that couple’s satisfaction and conflict accounted for PTSD symptoms related with parenting alliance, and couple conflict accounted for the connection with inconsistent discipline (Griff, Renshaw, & Allen, 2019). Trauma and PTSD issues are seen on a massive scale when it comes to military families related to overseas deployment. The war zone causes trauma on many service members which can later lead to PTSD. Post-deployment veterans were more likely to divorce after military deployments when compared to those that have not deployed (Pethrus et al., 2019). The deployment alone is stressful and recovering a marriage from a war zone is even harder. When one member of the team feels neglected or not important, it will hurt the family unit. Research shows that military spouses expressed numerous struggles with health behaviors that made it challenging for them to prioritize their own wellbeing and health (Mailey et al., 2018). The relationship between the family and trauma is unique and can be difficult for the family to heal post a military deployment. The deployment is one aspect, and a childhood experience is another. Some events from childhood can follow a person into adulthood and also hurt the marriage. Traumatic events as a child are sometimes called Adverse Childhood Experiences (ACEs).
ACEs Background

Trauma can happen to children in the form of abuse or adults related to combat. In fact, Kaiser Permanente and the CDC studied the prevalence of Adverse Childhood Experiences (ACE), which is considered a form of trauma early in life. Moreover, the researchers found ACEs affect among 52.1% of adults in U.S. population who report at least one ACE exposure category (Balio et al., 2018). Data shows that 83% of those service members requesting behavioral health care during deployment stated having at least one or more ACE (Applewhite, Arincorayan, & Adams, 2016). The differences between the U.S. population and the service member population are over 30%, which indicates those that join the military are more likely to have ACE events in their past.

Some ACE events carry more risk factors than others, while some ACE events have been found to reduce later life risks. Service members affected by ACE events displayed greater rates of depression, PTSD, and suicide (Applewhite et al., 2016; Bandoli et al., 2017; McCauley et al., 2015). However, different studies have found that some ACE events reduced risk in certain populations. For example, homeless adolescents with a history of ACEs who perceived themselves as resilient were found less likely to engage in risky behavior, were less lonely and more hopeful (Klim et al., 2020; Rew et al., 2001). These finding show that a person’s outlook is a strong protective factor in moderating against harm and aiding with resilient behavior after stressful or traumatic events.

Surprisingly, “people with PTSD from repeated trauma (as opposed to a single trauma)—soldiers exposed to severe and repeated carnage in combat, individuals repeatedly abused as children—have smaller hippocampi” (Sapolsky, 2004, p.202). This means both combat soldiers and childhood abuse victims have similar brain reactions in the mind after stress. Research regarding the relationship between combat trauma and child trauma is an area that
might provide insight into the other related traumas. One of the most important premises prompted by the ACE research is that the prevention of childhood adversities might have substantial population level health benefits (Finkelhor, 2018). Preventing PTSD and suicide in the military might have to start at childhood.

**Situation to Self**

The motivation for the research stems from being a full time National Guard Behavioral Health Officer (BHO) for the past 12 years. Over this aforementioned time, reginal BHOs have seen thousands of active and national guard soldiers suffer from military related stressors. Just this past year, our team has lost two Soldiers to Suicide. Stabilizing and helping the mental health of the military population is vital for national security as well as honoring all those who serving and those who have served. Like active-duty service members, the National Guard has high readiness standards but with less full-time resources. This research is dedicated towards helping the part time force through better understanding past childhood issues that might put them at higher risk during post deployment recovery. Helping one’s brother in arms is the greatest love one can show for another. Hebrews 6:10 “God is not unjust; he will not forget your work and love have shown him as you have helped his people and continue to help them.”

**Problem Statement**

The mental health issues and the alarming suicide rates of American military service members in the war on terror has encouraged both awareness and need for more research for reliance skills and risk factors for military service members (Applewhite et al., 2016; Garrido, 2020; LeardMann et al., 2010). Many researchers have examined the risk factors related to the mental health needs of the military population. Some of the risk factors service members have related to suicide and mental health issues include early childhood trauma, history of family mental health issues, preexisting mental health issues, and the impact of combat (Bandoli et al.,
The correlation between posttraumatic stress disorder (PTSD) symptoms and adverse childhood experiences (ACEs) has been systematically recognized with service members and veterans (Bandoli et al., 2017; Fritch et al., 2010; Garrido, 2020).

Several studies have shown the high rates of ACEs among American service members and veterans (Applewhite et al., 2016; Katon et al., 2015; McCauley et al., 2015). Studies have shown ACE events such as sexual abuse, physical abuse, domestic violence, negatively affect individuals later in life (Applewhite et al., 2016; Bandoli et al., 2017; McCauley et al., 2015); in fact, those affected by ACE events show higher rates of depression, PTSD, and suicide. The research has primarily focused on active-duty military service members with few studies examining National Guard service members. To date, no research has effectively examined the role of ACEs on National Guard service members and Guard veterans. Army Research Psychologist, Col. (retired) James Griffith, has the most extensive research on the topic of ACEs and National Guard. Key factors regarding race, gender, and age were not accounted for in their sample (Griffith, 2014). Also, collecting information across several guard units from several states would be a stronger sample. Determining what military characteristics, personal background, military experiences, and number of deployments create the greatest risk would enhance pre- and post-deployment care for returning service members.

**Purpose Statement**

This study has added to the literature that assesses the role of adverse childhood experiences (ACEs) and combat exposure, specifically part time soldiers in the National Guard. The study will examine the relationship between mental health problems, ACE scores, type of military service, and demographic background information. The study looks at correlations between those who have higher scores in mental health, ACEs, and combat exposure. The health outcomes and later symptom development are of particular interest as they relate to the National
Guard compared to those on active duty. Mental Health issues and suicide rates with active-duty military service members increased during the war on terror (Applewhite et al., 2016; LeardMann et al., 2010; McCauley et al., 2015, Garrido, 2020). This survey research attempted to examine mental health symptom severity, while factoring ACEs history and scores, to research the importance of comprehensive mental health services for National Guard service members and Veterans.

**Significance of the Study**

Studies have shown that both Army active duty and National Guard service members, with positive social support systems during deployment, act as a buffer against negative mental health symptoms post deployment (Han et al., 2014). However, those with military service history statistically show higher rates of ACE events when compared to those without military service (Applewhite et al., 2016; Arincorayan et al., 2017; Blosinch., 2014; Katon et al., 2015; McCauley et al., 2015). ACEs of child abuse or sexual abuse statistically increase the risk of poor social support systems, increased odds of homelessness, mental health issues, and physical health problems (Clarke-Walper et al., 2017; Montgomery et al., 2013). The National Guard service members also have less access to health care and long-term service when compared to active duty service member. Therefore, the National Guard service members carry the greatest mental health risk as service members and veterans. This survey has added a greater understanding of risk factors associated ACEs factored in with National Guard service.

**Research Questions**

**RQ 1**: Does severity of ACEs predict poor psychological well-being of National Guard post-deployment?
**RQ 2:** Do social support systems play a role in psychological health post deployment factoring ACE scores?

**RQ 3:** Do those with National Guard Deployment and ACE have higher ACEs than those without military service?

**Definitions**

This study explored the statistically significant predictive relationship between ACE measures, PTSD measures, prior mental health history, trauma witnessed while serving, and the differences among military branches. There are several terms that should be defined. A discussion of the definition of terms follows:

**Active duty.** Active duty is a person who is a Title 10 or Title 32 member of the U.S. armed forces. Specifically, an active duty Service Member is one who is employed full-time by one of the United States military branches (112th Congress, 2011) in the Army, Air Force, Navy, Marines, Space Force, or Coast Guard. National Guard or Reserve members would also be considered active duty when deployed or on Title 10 or Title 32 orders. All service members overseas are normally on Title 10 type orders.

**Adverse Childhood Experiences (ACE):** the term ACE is a broad term for child or childhood physical or emotional neglect, physical, emotional, and sexual abuse. ACE for the purpose of this study will also be used when referring to witnessing domestic violence or having a family history of mental issues (Blosnich, Dichter, Cerulli, Batten, & Bossarte, 2014; National Center for PTSD, 2014; Rosas & Magos, 2015).

**Combat veterans:** a current or former member of the armed forces who experiences any level of enemy hostility for any period of time resulting from offensive, defensive, or friendly fire military action involving a real or perceived enemy in any foreign theater (National Center for PTSD, 2014; Rosas & Magos, 2015).
Drill: drill or Unit Training Assembly (UTA) stands for the days that normally take place on weekends that Service Member must attend for training (Kapp & Torreon, 2020). Each two-day drill is worth 4 UTAs, with those four days being equal to four days of base military pay (Kapp & Torreon, 2020).

Military: Military refers to service members, Department of defense civilians, and defense contractors in any component or branch (112th Congress, 2011). The study will focus on the differences and similarities among Title 10 service members and those that are reserve component.

Ready Reserves: those service members that are the primary manpower of the reserve components (Kapp & Torreon, 2020).

Resilience: Resilience is the psychological ability to keep healthy functioning despite experiencing significant stressors or trauma (Bezdjian et al., 2017, p. 479).

Reserve Component (RC): refers mutually to the seven different reserve components of the U.S Armed Forces: the Army National Guard, Army Reserve, Navy Reserve, Marine Corps Reserve, Air National Guard, Air Force Reserve, and Coast Guard Reserve (Kapp & Torreon, 2020). Of the seven reserve components, the Army National Guard is the largest component at 335,973, the second largest being Army Reserves at 190,719, and the third largest being Air National Guard at 107,197 (Kapp & Torreon, 2020). The total RC force is totaling 807,602 selected reserve soldiers and not including inactive members (Kapp & Torreon, 2020).

Mobilization: full or partial mobilizations can be different lengths of time with full mobilization generally being a time of war and partial typically being a national emergency declared by the President (Kapp & Torreon, 2020).
**Posttraumatic stress disorder (PTSD):** A psychiatric condition and DSM diagnosis that is directly precipitated by an event that threatens a person’s life and that invokes a response of fear, helplessness, or horror (National Center for PTSD, 2014; Rosas & Magos, 2015).

**Social Support:** is generally defined as the belief that one is cared about and has available assistance (Blazer, 1982; Wong, 1998; Zimet, Dahlem, Zimet, & Farley, 1988; Bell et al. 2018) social support is a broad construct consisting of multiple dimensions, and various authors have conceptualized social support differently, including whom the social support comes from (i.e., family and friends), the personal meaning derived from the supports, and the quantity and quality of the supports (Blazer, 1982; Wong, 1998; Zimet et al., 1988).

**Summary**

Understanding how ACEs impact each service member differently is important when considering risk factors, treatment plans, and resilience-based interventions. The goal of the study has been to use this information to identify those service members who are at risk in each type of national guard service or branch, with special consideration for those with the certain combination of ACE risk factors discussed as the most dangerous predictive elements. The aforementioned factors of ACE events, resilience skills, and social support systems are the key elements in understanding service members at greatest risks. Stopping a suicide before the person starts to plan or look for means to hurt themselves or others is the objective. Suicides are our military’s greatest threat beside terrorism. Stopping suicide all together would be the perfect goal. However, early identification through ACE combination risk factors would be step towards the early intervention model.
Chapter Two: Literature Review

Overview

Serving in the military can be a tough task for all members in the military. As the service members of America are deployed for prolonged periods of time on a frequent cycle, their ability to cope with the deployment stress may be more challenging. (Goodwin et al., 2018, Keeling, 2018). The stress that can be induced by the military service can require strong coping skills and robust social support system (Greden, Valenstein, Spinner, Blow, Gorman, Dalack, & Kees, 2010; Goodwin et al., 2018). One concern that can impact the ability of a person to cope is adverse childhood experiences (ACE). Averagely, more than half of the civilian population (51%) in the US are exposed to adverse childhood experiences (Evans, Upchurch, Simpson, Hamilton, & Hoggatt, 2018). The military has a tough task of screening those that offer help for military service. Learning about adverse childhood experience (ACE) with military service is a key task for a more resilient and healthier force. This is an even a greater concern in the Reserve Component (RC), especially in the National Guard (NG) community (Greden et al., 2010; Dondanville et al., 2018). A study on NG soldiers revealed adverse childhood experiences found an association with having current suicidal behavior; additionally, those that reported less childhood abuse saw lesser reports of suicidal behavior (Griffith, 2012).

Among the military service members those with higher ACEs projected increased odds of homelessness, mental health issues, and physical health issues (Montgomery et al., 2013). The objective of this quantitative causal-comparative research study is to relate the frequency of ACEs among individuals with and without a military combat deployment in foreign countries. In addition, the study will be looking for statistically important variances in psychological reliance, suicidal ideation, and ability to develop healthy surviving skills. In sum, how do individuals with
ACEs respond to trauma and related stress to deployment as compared to individuals without ACEs among the NG Service Member and population of NG veterans?

The study’s goal was to develop predictability of post deployment resilience skills among NG service members and veterans. The overall objective of this study was to reduce mental health risk factors among service members by identifying what past ACE events will be the most harmful when combined with combat exposure. The research will add to research gaps that other States have already been examining (Gottschall, et al. 2022). The overall objective is to gather a better comprehension of what ACE events or risk factors that overcome the coping skills for American service members, most importantly the National Guard Members.

**Theoretical Framework**

This study examines ACEs and resilience differences among different service members from all services components through a resilience theoretical framework. The resilience theoretical framework, Resilience Theory (RT), is described as individuals exposed to adversity or significant threat who go on to demonstrate better than predictable outcomes (Van Breda, 2018; Garrido, 2020). The RT theory is a joined process-outcome model that views resilience as a process that mainly focuses on the “mediating processes” as defined by Van Breda (2018). The model merges two lines of thinking into one model. The first part of the model brings resilience pioneers, which are those that define resilience as an outcome. The second part of the model are those that define resilience as a process (Garrido, 2020).

Resilience research started in the early 1970’s that examined children and adolescents that had grown up normally despite adverse childhood events (Bosnich et al., 2019, Aronson et al., 2020). This aforementioned research led to many researchers and theorists to define resilience as an outcome (Van Breda, 2018; Garrido, 2020). After time, research regarding
resilience utilizing the outcome definition led to the increasing interest to develop a greater understanding of the mediating processes concerning negative and adversity outcomes that lead to healthier outcomes for some and lesser outcomes for others (Van Breda, 2018; Garrido, 2020).

**Related Literature**

The fight on terror has hit 20 years with the devastating price of many lives along the way and still killing many long after the arsenals have been put down. The long-lasting mental health effects of war is a topic that the mental health community is continuing to study. What makes service members in American more prepared is how the armed services screen those that serve in the military, with special emphasis prior screening before joining. Mounting a greater understanding of early childhood actions and developing a better screening approach for candidates who might be ill-suited for military service is a key job for both healthcare professionals and legislators. ACEs have been linked to greater mental health risk in the military (Griffith & Bryan, 2018). For example, service members that have never deployed and commit suicide show greater odds of adverse childhood experiences (McGuinness & Waldrop, 2015). A Canadian study found that individuals with an ACE history show higher rates of military service and higher rates of suicides (Afifi, Taillieu, Zamorski, Turner, Cheung, & Sareen, 2016). ACEs are a concern in many countries besides the United States.

Serving in the military is hard enough without combat stress. Finding out what events individuals can cope with is key to helping service members before, after, and during war. Among the veteran community, those with higher ACEs scores predicted odds of homelessness issues, greater mental health problems, and higher physical health risks (Montgomery et al., 2013). However, family structure can also play a factor in health outcomes and being in the military. Military service is appealing to those looking for family. Family dynamics may predict
military service; in fact, research found that stepparent families can increase the odds that a young person would enlist in the military (Spence, Henderson, & Elder Jr, 2013).

As previously mentioned, ACEs are common and happen to most of us around the world. On average, more than half the US civilian population are exposed to childhood adversity (Evans et al., 2018). Essentially, understanding family is key in learning more about differences regarding ACEs. We need to learn the differences between genders, combat experiences, National Guard service in the reserve component, and longer-term health outcomes to have a greater understanding of resilience versus risk. One such example is that verbal ACEs might not increase risk, both mental and physical, in the military while physical abuse ACEs could increase substance abuse and mental health risk (Gottschall et al., 2022).

Combat is an experience that anyone can have a negative reaction to regardless of upbringing or ACE score. However, a Kaiser Permanente study regarding prevalence of ACEs among the U.S. population found that 52.1% of adults report one ACE exposure category (Balio & Greene, 2018). Because ACEs are so common, there is a need to find how to better screen those that volunteer and what ACEs carry the highest risk. Research shows that 83% of those service members seeking mental health services during deployment reported having at least one adverse childhood experience (Foote, 2021). A study found that individuals using the highest level of mental health services showed the highest level of mental health impairment (McKibben, Fullerton, Gray, Kessler, Stein, & Ursano, 2013). These issues are also common in the militaries of other nations as well.

A Canadian study found their service members had higher rates of mental health issues associated with childhood emotional abuse (Battaglia et al., 2019). ACE scores in emotional abuse might make it harder for some to recover and cope with the intense fighting environment of combat. Some researchers assert those who have experienced childhood abuse may have
inadequate coping skills during a combat deployment. For example, those with ACE scores in physical abuse seeking services at higher rates during combat (Powell, 2020); additionally, being deployed with greater frequencies and direct combat exposure, have been associated with increased risk of suicidal risk (Powell, 2020). Other factors that increase risk factors including National Guard service and gender. For example, those that serve in the National Guard have less access to health care services than active duty component which increase health concerns or health outcomes.

Trauma, both physical and mental, is hard for both men and women. However, understanding the differences with how men and women cope with trauma is another key task. Males with military service history showed greater prevalence of adverse childhood experience (ACE) in all examined ACE categories as compared to those males without military services history (Bosnich et al., 2019, Aronson et al., 2020). Women, who are the minority in the combat environment, comprise the majority of the sexual assaults that take place during deployment (Monteith, Menefee, Forster, Wanner, & Bahraini, 2015). Women report higher rates of ACE than men within the veteran and military community (McCauley, Blosnich, & Dichter, 2015).

Female service members with a history of physical childhood abuse showed significantly poorer physical health when compared to those without such physical abuse history (Mercado, Wiltsey-Stirman, & Iverson, 2015); therefore, the military could be a benefit in terms of mental health safety in limiting those females’ veterans with higher rates of physical abuse to a combat environment. Research also found that female veterans reported higher prevalence of 7 out of 11 ACE score than other non-veteran females (McCauley et al., 2015). These results show that history of trauma might encourage those to look for support in the military while also in need additional aid while in a combat role on a deployment. Thus, those female physical abuse victims
might seek military service in greater numbers, but at the same time might struggle with the combat mission.

A recent study found that 72% of women reported one or more ACE on average (Gaska & Kimerling, 2018). Data collected by the VA shows that PTSD rates do not differ among genders; however, women were more likely than men to report issues related to major depression (Elbogen, Wagner, Johnson, Kinneer, Kang, Vasterling, & Beckham, 2013). On the other hand, childhood abuse has been linked to higher PTSD severity in female veterans (Elbogen et al. 2013). Women reported greater sexual stressors on deployment while men reported greater combat exposure (Elbogen et al. 2013). Women have different stressors on deployments than men and may have different reasons for joining related to forms of ACEs and upbringing. However, a study of just female veterans found a connection between avoidant coping and positive appraisal of alcohol may underscore a more complex correlation between coping and substance abuse (Elbogen et al. 2013; Creech & Borsari, 2014).

On average, in a study of nearly 60% National Guard or Reserve members, men in the military report more substance abuse than women. In fact, the study showed men reported 41.4% for alcohol abuse, while women reported 17% (Eisen et al., 2012). Males appear to be more at risk of suicide than females. The population that showed the greatest risk were male soldiers younger than 25 years of age, and Caucasians (Griffith & Vaitkus, 2013). Additionally, males had statistically higher rates of anxiety disorders when adjusting for ACEs and DRTEs than females in a cross-sectional study of service members (Sareen, Henriksen, Bolton, Afifi, Stein, & Asmundson, 2013). A study of all male service members after a combat exposure found that PTSD and depression significantly mediated the relationship between childhood maltreatment and bodily pain (Aversa et al., 2014). It seems both genders have negative coping skills associated with trauma; however, women appear to have greater rates of depression while men
tend to have great substance abuse issues and suicidal ideation among young Caucasians (Griffith & Vaitkus, 2013; Aversa et al., 2014).

ACEs can affect people in both physical health and mental health areas. Higher scores of total adverse childhood experiences (ACE) are associated with more days of poor physical health and mental health overall (Katon et al., 2015, p.575). Those that had more experiences with child abuse or sexual abuse were more likely to report partner violence while in military services (Clarke-Walper et al., 2017). Thus, those with higher ACEs had greater issues in relationships which make it harder to establish a strong support system. ACEs physical abuse and sexual abuse seem to follow those that volunteer for military service. Additionally, ACEs increase odds of an adult experiencing homelessness, mental health issues, and physical health problems (Montgomery et al., 2013, p. S262). Another study found that those who reported ACEs in more than one area were more likely to have PTSD symptoms during post deployment (LeardMann et al., 2010). Those that have more than one area of ACEs or physical related ACE scores appear to be at highest mental and physical health risk than those that reported few scores.

One important study found that physical abuse, among ACE events, was especially linked with greater suicide risk among National Guard members (Griffith, 2014); in fact, those that remembered such abuse were 7.5 times likely to commit suicide. Another study shows those that report suicidal ideation on deployment will most likely report the same in post deployment surveys (Bosnich et al., 2019, Aronson et al., 2020). The relationship between ACE, military service, and suicide is significant. A study showed that those service members who attempted suicide reported ACEs at 64.7% and those that completed suicide reported 43.3% (Perales et al., 2012). Those with higher ACEs scores report higher rates of suicide attempts (Bosnich et al., 2019; Lee et al., 2017); in fact, those who report four or greater issues have a higher rates of
mental health hospitalization. Another issue related to both health and mental health is substance abuse rates.

The military has had a long history of struggling with substance abuse. For example, alcohol misuse has long been an issue in the U.S. military with numbers being as high as 40%, which stress the importance of research findings that show psychological resilience as a protective factor against substance abuse (Green et al., 2014; Bosnich et al., 2019; Aronson et al., 2020). On the other hand, a cross-sectional study found that those exposed to adverse childhood experiences (ACE) and deployment related traumatic exposure (DRTEs) had higher rates of anxiety disorders than those exposed to one or the other alone (Sareen et al., 2013, p.73). A post-deployment study found that those who had a combat stress reaction (CSR) or PTSD were associated with higher rates of avoidant attachment issues (Horesh et al., 2014); additionally, those that report PTSD, not CSR, reporting issues of anxious attachment. It appears that men in the National Guard with high ACE scores also have the highest risk factors associated social ideation and are of greatest risk of mental health issues, substance abuse, and PTSD.

Griffith reports that the Army National Guard experiences the highest rate of suicide among all branches of military service (Griffith, 2014). One military study discovered of those with PTSD, the chronic PTSD had greater likelihood of being in the Army when compared to those low PTSD severity groups (Bonanno, Mancini, Horton, Powell, LeardMann, Boyko, & Millennium, 2012). National Guard and Reserve service members showed higher rates of stress on their post health assessment, which may be related to losing their health care coverage after deployment window timeframe (Milliken, Auchterlonie, & Hoge, 2007). Those National Guard soldiers that reported adverse childhood experiences (ACE) found a relationship with having current suicidal behavior; in fact, those that reported less childhood abuse saw lower reports of suicidal behavior (Griffith, 2012). Air Guard service members reported the lowest levels of
deployment related PTSD, while the Army Guard reported the highest in the guard community (Russell et al., 2014). Therefore, the Army National Guard males carry the highest suicidal factors among all groups statistically.

On average, men in the military report more substance abuse than women in a study of nearly 60% National Guard or reserve members. In fact, the study showed men reported 41.4% for alcohol abuse, while women reported 17% (Eisen et al., 2012). A four-year study on service members from the Ohio National Guard, found those returning faced higher rates of first onset of alcohol use or major depression annually related to non-deployment traumatic events (Fink et al., 2016). In a study that followed National Guard service members 3 to 12 months post deployment, found 8.5% to 14% of PTSD and depression, and 23.2 to 31.1% of alcohol abuse (Thomas et al., 2010). Another study found that National Guard service members are four times the development of PTSD related to perceived social support and stressful life events during post deployment (Polusny et al., 2011). Furthermore, coping skills and social support are the next key issues. National Guard soldiers have the greatest risk factors associated with PTSD, harm to self, and substance abuse related to support systems; in fact, these are the soldiers that live far from a military treatment facility and might not carry adequate health care coverage post deployment. In sum, focusing ACE research on the National Guard community will focus on social support systems, health care, and prevention.

Research has found that outlook on ACE history is an important factor; furthermore, those that reported ACEs being a negative in their life were more likely to report maladaptive coping skills (Helitzer et al., 2015). Understandably, one’s outlook can be a predictive factor in long term mental health outcomes along with support systems. In fact, social support systems are a high value buffer against post deployment PTSD symptoms for both National Guard and
Active duty service members (Han et al., 2014; Laird & Alexander, 2019). Those veterans with ACEs may struggle with one’s ability to have a functional social support system while in adulthood (Van Voorhees et al., 2012). Service members that have higher rates of ACEs are less likely to have a supportive social network (McLafferty et al., 2019).

The aforementioned findings are the same in other military in other nations. For example, the United Kingdom (UK) military found those who are at highest risk group of having unmarried relationships, childhood adversity, and limited family support (Keeling et al., 2015). Additionally, those that have a lower risk have family resilience positively associated with advance notice of military deployment (Leroux et al., 2016); furthermore, the number of deployments was not as an important factor as loss of relationship when examining risk to suicide (Griffith & Vaitkus, 2013). Relationships are among the most important factors in terms of support systems among all military members.

One study found that the military unit can play a key role, positive or negative, in PTSD issues among soldiers; furthermore, the study found the most important factors being support from friends and family being the biggest predictor in PTSD symptoms (Han et al., 2014; Aronson et al., 2020). PTSD-endorsed symptoms were significantly associated with combat exposure but negatively associated with greater marital satisfaction (Miller et al., 2013; Aronson et al., 2020). This finding points to the importance of a supportive family support system in terms of prevention for military families. This shows again that positive social support systems act as a buffer against negative health outcomes in post deployment settings. However, the soldiers most challenged in developing a positive support system are those with greater ACE scores.

Research shows that those who screen positive for mental health issues also report stigma and certain barriers to care than those who do not screen positive for mental health issues.
(Chapman, et al., 2014; Aronson et al., 2020). Also, those that need the help might be using avoidance to cope with combat related stressors. A thought-provoking study found that those veterans diagnosed with PTSD had less arrests when compared to those veterans with no mental health diagnosis (Brooke & Gau, 2018). The service members might be out of legal trouble but are internally suffering daily. Therefore, those in need might need additional social support systems, mental health care, and other recourse might refrain from seeking services related to stigma in terms of treatment or negative career outcome. More research is needed to truly understand how ACEs limit one’s ability to cope from combat and develop strong social support systems.

**Active Duty V.S. National Guard**

While the Active Duty (AD) component and the National Guard (NG) component are similar, each component has many differences. AD component works on a full-time basis while the NG component normally works one weekend a month drills and two weeks in the summer for annual training (Kapp & Torreon, 2020). During the weekend drill days, the NG component is paid double for those weekend days (Kapp & Torreon, 2020). For example, a two-day drill weekend is worth four days of pay and retirement points. AD component works monthly receives base pay, full housing benefits, and free medical benefits (Kapp & Torreon, 2020). NG members have to pay for their Tricare insurance which varies based on number of dependance and coverage compared. Another difference is regarding insurance is the Dental Care plans. While Active Duty has full dental care for free, NG service member pay between $139 to $348 a month for dental care (Kapp & Torreon, 2020).

Life insurance policy is another difference for both AD and NG components. Both service members qualify for Service Members Group Life Insurance (SGLI) program. AD
service members get coverage for free while NG service members pay for their coverage. Retirement is also different among each military component. Both NG and AD service members get their retirement based on how many federal days they have (Kapp & Torreon, 2020). One of the biggest differences among both AD and NG components is the support structure for each branch. AD members live near a base hospital, unit support, and close to a tax-free commissary (Kapp & Torreon, 2020). NG members are not typically near a base hospital, pay for their medical care, and manage their full-time jobs with active duty training requirements.

ACE

Individuals entering the military are a specific population of interest regarding ACE because some might join to get away from life problems, such as home dysfunction or abuse from the family, therefore increasing the incidence of ACE among members of the military (Magos & Rosas, 2015; Nichter et al., 2021). Even more significant, with the conflicts in the Middle East, is the likelihood that military service will expose those service members with a history of childhood trauma to additional trauma in combat, which might increase their risk of developing additional mental health issues (Nichter et al., 2021). However, the frequency of ACE among those entering the military and their reasons for doing so is largely unknown (Nichter et al., 2021).

Adverse childhood experiences (ACE) have historically been identified as antecedents to poor physical and mental health outcomes (Felitti et al, 1998; Nichter et al., 2021). The original work from Felitti and fellow researchers found that home dysfunction and child maltreatment were linked to alcohol abuse, partner violence, depression, and suicide attempts (Felitti et al, 1998, Arincorayan et al. 2017). Those with an ACE score were more likely to have used drugs, engaged in antisocial behavior, and suffered from severe mental health problems (Fink et al.
2014, Arincorayan et al. 2017). The ACE score of a person might not sound like an important factor. However, ACE scores have become a vital factor in the all-volunteer military the US has today.

Data shows that individuals with child abuse in their past were found to be more likely to join the military and show greater rates suicide (Afifi et al. 2016; Griffith, 2014; Nichter et al., 2021). Certain service members, while in a combat environment, have reported a higher prevalence of three or more ACE scores (Arincorayan et al. 2017). Research with the US Marines found that those with an ACE history showed greater risk of developing PTSD after combat exposure (Arincorayan et al. 2017, LeardMann et al. 2010). The research also shows the higher the ACE score, the greater the risk of developing issues later in life (Aronson et al., 2020). However, some research has shown that even in the hardest of times, some people have the reliance skills to overcome their childhood adversity. Actually, psychological reliance acts as a protector against negative mental health outcomes (Aronson et al., 2020; Arincorayan et al. 2017, Roy, 2011).

**Contact Sexual Abuse**

Various adverse childhood exposure factors have increased mental health problems among military soldiers. Several studies have contact sexual abuse to national guard soldiers’ risk of mental health problems. In particular, Cloitre et al. (2019) explored 290 women soldiers enrolled in clinical trials to test for PTSD on the emotion regulation and the association between ACEs and physical and mental health among soldiers in the United States. The study findings indicated a significant association between adverse childhood experiences such as contact sexual abuse and mental health problems. According to Cloitre et al. (2019), past childhood experiences such as sexual abuse affected soldiers’ mental health, resulting in PTSD and other mental health problems (Cloitre et al., 2019). Comparable study results to Cloitre et al. (2019) were also
reported in a quantitative study of 50,603 national guard soldiers in the United States by Gottschall et al. (2022) on ACEs and mental health in military recruits and national guard soldiers. In their findings, Gottschall et al. (2022) indicated that women national guard soldiers were more likely to have experienced contact sexual abuse and witnessed domestic violence resulting in their mental health problems (Gottschall et al., 2022).

Similar results to Gottschall et al. (2022) were replicated in a different quantitative study by Verma and Agrawal (2021). They investigated the effects of childhood trauma on PTSD among national guard soldiers in the United States and reported that childhood trauma or adverse childhood experiences such as contact sexual abuse has a lasting impact on individuals, which may predispose national guard soldiers to mental health problems, substance use disorder, and other psychological, mental health problems (Verma and Agrawal, 2021). Another study was conducted by Portwood et al. (2021) on adverse childhood experiences in the United States. The study results indicated that national guard soldiers who experienced adverse childhood experiences were at the highest risk of developing mental health problems such as PTSD resulting from ACEs effects of contact sexual abuse (Portwood et al., 2021). Further study to Portwood et al. (2021) was also conducted by Holliday and Monteith (2019), who noted national guard soldiers who experienced contact sexual abuse in their early childhood experiences were more likely to be affected mentally and psychologically, resulting in physical and mental health problems (Holliday and Monteith, 2019). Overall, contact sexual abuse leads to mental health problems among national guard soldiers.

The studies reviewed thus far concur that contact sexual abuse may lead to mental health problems. However, the studies presented diverse conclusions regarding the relationship between contact sexual abuse and mental health problems among national guard soldiers. Thus, while Cloitre et al. (2019) indicated that there was a significant association between adverse childhood
experiences such as contact sexual abuse and mental health problems, Gottschall et al. (2022) indicated that women national guard soldiers were more likely to have experienced contact sexual abuse and witnessed domestic violence resulting to their mental health problems.

Additionally, while Verma and Agrawal (2021) reported that childhood trauma or adverse childhood experiences such as contact sexual abuse can have a lasting effect on individuals, which may predispose national guard soldiers to mental health problems, substance use disorder, and other psychological, mental health problems, Portwood et al. (2021) indicated that national guard soldiers who experienced adverse childhood experiences were at the highest risk of developing mental health problems such as PTSD complicating ACEs effects of contact sexual abuse. The studies that have been explored thus far indicate that ACEs experiences such as contact sexual abuse negatively affected national guard soldiers, leading to high mental health problems.

**Exposure to Substance Abuse**

Exposure to substance abuse has been linked to mental health problems among national guard soldiers. Various scholars have related mental health problems among military national guard soldiers or national guards. For instance, Travers et al. (2022) conducted a quantitative study of 405 soldiers in Northern Ireland on the adverse experiences and mental health among soldiers and perpetrators of intimate violence in Northern Ireland. Travers et al. (2022) established that childhood adversity such as exposure to substance abuse due to economic hardships resulted in an increased likelihood of categories of mental health problems (Travers et al., 2022). According to Travers et al. (2022), exposure to adversities resulted in mental health problems among service members and veterans. In a similar study to Travers et al. (2022), Williamson et al. (2022) conducted a quantitative survey of 750 female UK army service members on the adverse childhood experiences and adulthood outcomes among the UK female
service members, reporting that negative childhood experiences such as sexual abuse, exposure to substance abuse and emotional bullying resulted to mental health issues among the female service members.

Overall, studies reviewed indicate that exposure to substance abuse leads to mental health problems. Studies reviewed thus far provide similar results. However, there are few contradictions in conclusions. In particular, whereas Travers et al. (2022) conducted a quantitative study of 405 service members in Northern Ireland on the adverse experiences and mental health among service members and perpetrators of intimate violence in Northern Ireland, reporting that childhood adversity such as exposure to substance abuse due to economic hardships resulted to an increased likelihood of categories of mental health problems and that exposure to adversities resulted in mental health problems among service members, Williamson et al. (2022) conducted a quantitative study of 750 female UK army service members on the adverse childhood experiences and adulthood outcomes and reported that negative childhood experiences such sexual abuse, exposure to substance abuse and emotional bullying resulted in mental health issues among the female service members compared to male service members. In sum, the results reviewed above indicate that exposure to substance abuse poses a great risk for developing mental health problems among service members.

**Exposure to Mental Illness**

Studies have linked exposure to mental illness to mental health problems among national guard soldiers. In particular, Laird and Alexander (2019) conducted a quantitative study on the prevalence of adverse childhood experiences among national guard soldiers in the United States. After the analysis, Laird and Alexander (2019) noted that negative childhood experiences (ACEs) such as the child’s history of mental illness were significantly associated with poor mental health outcomes among military service members and national guard soldiers (Laird and
Alexander, 2019). According to Laird and Alexander (2019), childhood experience may contribute to adult emotional and physical health and the development of mental health problems. Similar results to Laird and Alexander (2019) were reported in a quantitative study of 10,000 national guard soldiers conducted by Morgan et al. (2022), who investigated the exposure to adverse childhood and combat experience on the mental health of the current new post-9/11 national guard soldiers. The data analysis results revealed that childhood exposure to mental illness could lead to mental health problems among national guard soldiers, leading to anxiety, depression, suicidality, and PTSD (Morgan et al., 2022). In general, exposure to mental illness leads to the development of mental health problems.

Although Morgan et al. (2022) extended earlier results on the relationship between exposure to mental illness and mental health problems among national guard soldiers, the investigators did not use diverse sample sizes and different geographical locations to generalize the study results. In this regard, Morgan et al. (2022) advocated for additional research to be conducted using diverse sample sizes and different geographical locations to generalize findings and permit the transfer of the study results. Based on the findings indicated above, the investigators provided different conclusions regarding the exposure to mental illness and mental health problems. In particular, while Laird and Alexander (2019) noted that adverse childhood experiences (ACEs) such as the child’s history of mental illness were significantly associated with poor mental health outcomes among military service members and national guard soldiers, Morgan et al. (2022) revealed that childhood exposure to mental illness could lead to the development of mental health problems among the national guard soldiers, which leads to anxiety, depression, suicidality, and PTSD. Overall, the results above show that mental illness may contribute to mental health problems.
Violent Treatment of Mother or Stepmother

The risk for mental health problems from ACEs has been linked to violent treatment of mother or stepmother through mistreatment. In a quantitative study of 388 women and 390 men in the military, Evans et al. (2020) examined childhood adversity and mental health problems in the United States. In their study, Evans et al. (2020) reported that mistreatment of mothers and stepmothers negatively affected people's mental health based on adverse childhood experiences. Corroborative study findings to Evans et al. (2020) reported another quantitative study of 6000 women in primary care users in the veteran's health administration conducted by Gaska and Kimerling (2018). The latent class analysis results revealed that adverse events such as mistreatment by the mother or the stepmother could promote mental health problems through traumatic experiences, which affected soldiers in their adulthood stage (Gaska & Kimerling, 2018).

Although the results above indicate similar conclusions, there is some inconsistency in findings regarding the violent treatment of mother or stepmother and how they are linked to mental health problems. In this regard, while Evans et al. (2020) reported that mistreatment of mothers and stepmothers negatively affected the mental health of people based on the adverse childhood experiences, Gaska and Kimerling (2018) said that adverse events such as mistreatment by the mother or the stepmother could promote mental health problems through traumatic experiences affected national guard soldiers in their adulthood stage. Given the study results, adverse childhood experiences such as child mistreatment by the mother or the steppmother contribute hugely to mental health problems.

Exposure to Criminal Behavior

Exposure to criminal behavior has been associated with mental health problems among national guard soldiers. Multiple scholars have linked exposure to criminal behavior to mental
health problems in military national guard soldiers. For instance, Taylor et al. (2020) conducted a quantitative study of 191 national guard soldiers on PTSD and justice involvement among the military national guard soldiers in the United States. Given the findings, Taylor et al. (2020) reported a significant correlation between exposure to criminal behavior and PTSD and other mental health problems. According to Taylor et al. (2020), involvement in criminal justice and PTSD were linked among military national guard soldiers. In this regard, exposure to criminal behavior contributed to posttraumatic stress disorder and other mental health problems (Taylor et al., 2020). Comparable findings to Taylor et al. (2020) were reported by Bennett et al. (2018), who investigated the relationship between post-traumatic stress and legal charges among substance-using national guard soldiers in the United States. In their results, Bennett et al. (2018) highlighted that adverse childhood experiences such as exposure to criminal behavior were associated with mental health problems and PTSD among national guard soldiers (Bennett et al., 2018).

Though Bennett et al. (2018) extended earlier results, more research still needs to explore how exposure to criminal behaviors contributes to mental health problems among national guard soldiers. Thus far, studies reviewed indicate that exposure to criminal behavior poses a risk for mental health problems among military national guard soldiers or national guards. At the same time, Taylor et al. (2020) conducted a quantitative study of 191 national guard soldiers on PTSD and justice involvement among the military national guard soldiers in the United States. They reported a significant correlation between exposure to Criminal Behavior and PTSD and other mental health problems. Involvement in criminal justice and PTSD was linked among the military national guard soldiers. In this regard, exposure to criminal behavior contributed to posttraumatic stress disorder and other mental health problems. However, Bennett et al. (2018) highlighted that adverse childhood experiences such as exposure to criminal behavior were
associated with mental health problems and PTSD among national guard soldiers. In general, exposure to criminal behavior is more likely to lead to mental health problems among national guard soldiers.

**Psychological Abuse**

Studies have also linked psychological abuse to the risk of mental health problems. In this regard, adverse childhood experiences such as physical and sexual abuse and psychological abuse may be linked to mental health problems. For example, in a quantitative study conducted by Lutgendorf (2019) on veteran intimate partner violence and women and health in the US., study results indicated that national guard soldiers who experienced psychological abuse in childhood were more likely to develop mental health problems (Lutgendorf, 2019). Psychological abuse results in depression, stress, anxiety, and posttraumatic stress disorder, which are linked to mental health problems (Lutgendorf, 2019). Other researchers, such as Derefinko et al. (2018), conceptualized psychological distress before and after the military to civilians’ transition in the U.S. using a sample size of 80 national guard soldiers. In their findings, Derefinko et al. (2018) reported that psychological abuse resulted in emotional distress in national guard soldiers, contributing to mental health problems among the national guard soldiers (Derefinko et al., 2018). Thus far, studies reviewed demonstrates that national guard soldiers who had experienced psychological abuse in their childhood developed mental health problems in adulthood.

These studies provided differing conclusions about the relationship between psychological abuse and mental health problems among national guard soldiers. In particular, while Lutgendorf (2019) investigated veteran intimate partner violence and women and health in the U.S., reporting that national guard soldiers who experienced psychological abuse in their childhood were more likely to develop mental health problems and that psychological abuse
results in depression, stress, anxiety, and posttraumatic stress disorder, which are linked to mental health problems, Derefkinko et al. (2018) conceptualized psychological distress before and after the military to civilians’ transition in the US and reported that psychological abuse resulted in emotional distress in national guard soldiers, which contributed to their mental health problems. Further, although Derefkinko et al. (2018) extended earlier results, the investigators did not use diverse sample sizes and geographical locations to generalize the study findings, limiting the generalizability and transferability of study findings to different settings. Overall, the studies reviewed thus far indicates that adverse childhood experiences such as psychological abuse, exposure to substance abuse and physical abuse may contribute to mental health problems if no interventions prevent the problem.

**PTSD**

PTSD signs and symptoms are sometimes found in individuals who experience one of the following traumatic events: recurring and disturbing event, including thoughts, images, or perceptions; recurring stressful dreams of traumatic events’ feeling or acting like the distressing event were recurring; extreme psychological distress at contact to internal or external cues that remind the person of the disturbing or terrifying event (Lester et al., 2010). Among the various types of traumas assessed across numerous studies, combat exposure was found to be the strongest predictor of increasing odds of developing PTSD (Phillips, LeardMann, Gumbs & Smith, 2010; LeardMann, Smith & Ryan, 2010; Stein et al., 2005). The likelihood of being exposed to combat-related traumas that contribute to PTSD is essentially a part of military service. The research shows the more intense level of combat exposure and show higher rate of deployments, the higher the odds of having a PTSD diagnosis (Phillips, LeardMann, Gumbs, & Smith, 2010).
Those service members who suffer from PTSD often have reduced functioning and poorer quality of life as evidenced by elevated rates of suicide, hospital admissions, poverty, substance abuse, and unemployment (Brooks & Greenberg, 2022). Like U.S. military service members, researchers found United Kingdom service members with PTSD are more common in those of lower rank, who are single or divorced, have lower educational accomplishment, and show a history of ACEs (Keeling et al., 2015).

Solomon and Siegel (2003) stated that combat is the most common cause for males developing PTSD; in fact, the greater the length of the traumatic experience lasts, the greater the likelihood the victim will react with dissociation. A study that followed National Guard service members 3 to 12 months after a deployment showed 8.5% to 14% had PTSD and depression symptoms, and 23.2 to 31.1% of alcohol abuse related issues (Thomas et al., 2010). Some additional symptoms include feelings of shame, which contribute to many health problems for most individuals with posttraumatic stress disorder (PTSD) (Crocker, Haller, Norman, & Angkaw, 2016).

PTSD causes terrible disturbances in the ability to self-regulate (La Bash & Papa, 2014); additionally, they found that even when controlling associated fear among people with PTSD, shame continues to be a mediator to other symptoms. The research found that there are two types of shame, external and internal; in fact, internal shame includes self-devaluation, and external shame is how individuals perceive the self (Oktendalen et al., 2014). Research by Taylor et al. (2015) found similar findings in that trauma-related shame causes people to view the self negatively, and it is this derived emotion that perpetuates issues related to PTSD. Experiencing a negative view of oneself provokes many negative thoughts and perceptions that lead to feelings of depression, including disturbing and distressing thoughts that continue symptoms of the disorder (Oktendalen et al., 2014).
Dorahy (2017) assessed whether there was an association between symptoms of shame and dissociation that are associated with avoidance symptoms, which are long term symptoms. Researchers found that previous studies have examined the relationship between dissociation and shame and its relation to depression and interference with personal relationships (Dorahy et al., 2017). Researchers revealed that shame adds to the relationship of anxiety and depression in an experimental sample of individuals with PTSD (Dorahy et al., 2017). Basically, the greater the shame and dissociation the participants in the study experienced, the greater interpersonal difficulties and PTSD severity. One strength of the research is that it observes how shame-prone effects add to problems with social relationships. Individuals who experience trauma-related shame continue to hold the negative aspects of the trauma, which propagate the symptoms of PTSD.

When assessing research on feelings associated with PTSD, issues of guilt and fear are obvious. However, feelings of shame are responsible for exacerbating symptoms of PTSD in some cases. Feelings of shame are closely related to feelings of depression and severity of PTSD issues (Robinaugh & McNally, 2010; Brooks & Greenberg, 2022). Some research examined the relationship between trauma-related shame and trauma-related guilt with individuals in a substance abuse facility and found a strong correlation between the two feelings (Held et al., 2015; Brooks & Greenberg, 2022). Researchers revealed that perceptions of internal shame are related to negative beliefs about one’s self, self-blame, and interpersonal trauma feelings. Researchers also assessed whether shame contributed to PTSD symptoms when controlling for fear; they found that shame directly affects PTSD symptoms. In fact, La Bash and Papa noted that individuals who experience shame recognize judgment from others. Those effects result in shame-based behavior such as isolation, anger, and hypervigilance (La Bash & Papa, 2014). In the end, PTSD accounts for feelings of anger, guilt, shame, self-isolation, and depression.
Effects Of PTSD And Other Mental Health Problems within National Guards

PTSD leads to suicidal thoughts resulting from traumatic combat experiences and ACES. National service members with PTSD who experience traumatic combat experiences and ACEs have been believed to experience suicidal thoughts as a result of their encounters from traumatic combats. Several studies have linked suicidal thoughts to PTSD and other mental health problems among service members. In particular, a quantitative study of 4,069 U.S. veterans was conducted by Nichter et al. (2021) on the prevalence and treatment of suicidal behaviors in U.S. military national guard soldiers in the United States. In their results, Nichter et al. (2021) reported that U.S. veterans experienced a high prevalence of suicidal behaviors, most prevalent among veterans with post-traumatic stress disorder. The study results suggest that a majority of the veterans with suicidal behaviors are not engaged in mental health treatment, indicating the need for enhanced suicide prevention and outreach efforts (Nichter et al., 2021). Comparable results to Nichter et al. (2021) were also reported by Aronson et al. (2020) who reported that experiences of traumatic combat among national guard soldiers with ACEs and PSTDs contributed significantly to the suicidal thoughts among these guards or national guard soldiers (Aronson et al., 2020). Overall, studies reviewed indicate that PTSD increases the risk of suicidal thoughts among active, guard, veteran soldiers with mental health problems.

Corroborative results to Aronson et al. (2020) were replicated in a quantitative study of 4,069 soldiers conducted by Kachadourian et al. (2021) on the non-suicidal self-injury of U.S. military soldiers or guards. According to the results from data analysis, Kachadourian et al. (2021) established that soldiers who experienced posttraumatic disorder and ACEs were more prone to suicidal ideation than those who had no PTSD and mental health problems. Soldiers
with PTSD and other mental health problems were more likely to develop suicidal thoughts (Kachadourian et al., 2021). Similar results to Kachadourian et al. (2021) were also extended in a quantitative study of 9,571 veteran men, 3,143 nonnational guard soldiers’ men, 5,543 national guard soldiers’ women, and 1,364 non-national guard soldiers women conducted by Blosnich et al. (2021) in the United States. After the analysis, the study findings revealed that the prevalence of suicidal ideation was strongest among national guard soldiers compared to nonnational guard soldiers in the United States. According to Blosnich et al. (2021), suicidal thoughts among national guard soldiers resulted from past experiences such as ACEs or traumatic combat experiences (Blosnich et al., 2021).

Although Blosnich et al. (2021) extended earlier results, the investigators did not use diverse sample sizes to generalize the study findings. In addition, one geographical location was used to generalize the findings and investigate the relations between PTSDS and suicidal thoughts among national guard soldiers from a general perspective (Blosnich et al., 2021). In this regard, Blosnich et al. (2021) advocated for additional research to be conducted using diverse sample sizes and different geographical locations to generalize the study findings and permit transferability of the results (Blosnich et al., 2021). At the same time, Kachadourian et al. (2021) established that national guard soldiers who experienced posttraumatic disorder and ACEs were more prone to suicidal ideation compared to those who had no PTSD and mental health problems. National guard soldiers with PTSD and other mental health problems were more likely to develop suicidal thoughts. Blosnich et al. (2021) provided a contradicting conclusion that the prevalence of suicidal ideation was strongest among national guard soldiers compared to nonnational guard soldiers in the United States. According to Blosnich et al. (2021), suicidal thoughts among national guard soldiers were related to past experiences, such ACEs or traumatic combat experiences.
PTSD and Divorce

Studies have also linked divorce to national guard soldiers with PTSD and other mental health problems. In particular, Reich et al. (2019) conducted a quantitative study on the interventions to improve psychological functioning in national guard soldiers with mental health problems such as PTSD in the United States. The study results indicated that national guard soldiers with PTSD were likely to be divorced, unemployed and experiencing difficulties with parental responsibilities (Reich et al., 2019). Corroborative results to Reich et al. (2019) were also reported in a quantitative study conducted by O’Donnell et al. (2019) on PTSD among young veteran’s suicide decedents and their divorce rates in the United States, reporting that PTSD results in more divorces and suicidal cases among the young national guard soldiers aged 34 years and above from the United States military (O’Donnell et al., 2019). According to O’Donnell et al. (2019), the correlated risk factors among national guard soldiers with PTSD included risk for divorce and suicidal ideation (O’Donnell et al., 2019). Bhattacharai et al. (2019) extended these findings by reporting that the risk for developing PTSD and dementia resulted in more divorce cases among national guard soldiers compared to nonnational guard soldiers (Bhattacharai et al., 2019).

While Bhattacharai et al. (2019) replicated earlier results, the investigators did not explain how PTSD and dementia contribute to divorce among national guard soldiers with PTSD and other mental health problems. Studies reviewed above have provided differing conclusions regarding the association between divorce and the national guard soldiers with PTSD and other mental health problems such as dementia among national guard soldiers. In response, Reich et al. (2019) conducted a quantitative study on the interventions to improve psychological functioning in national guard soldiers with mental health problems such as PTSD in the United States and
indicated that national guard soldiers with PTSD were likely to be divorced, unemployed and experience difficulties with the parental responsibilities. O’Donnell et al. (2019) reported that PTSD results in more divorces and suicidal cases among the young national guard soldiers aged 34 years and above from the United States military and that the correlated risk factors among national guard soldiers with PTSD included risk for divorce and risk for suicidal ideation (O’Donnell et al., 2019). However, Bhattacharai et al. (2019) extended these findings by reporting that the risk of developing PTSD and dementia resulted in more divorce cases among national guard soldiers than nonnational guard soldiers (Bhattacharai et al., 2019).

**PTSD and Substance Abuse**

Further studies have also associated substance abuse such as Alcohol with national guard soldiers with PTSD and other mental health problems. For example, Smith and Cottler (2018) examined post-traumatic disorder and alcohol use disorder among national guard soldiers in the United States. In their study results, Smith and Cottler (2018) reported that national guard soldiers who have experienced PTSD and other mental health problems are more vulnerable to substance abuse such as alcohol use. Additionally, national guard soldiers with substance use disorder are more likely to be exposed to traumatic situations and develop PTSD (Smith and Cottler, 2018).

Bianucci et al. (2019) replicated Smith and Cottler's (2018) findings in a quantitative study of 2344 female and male national guard soldiers in the United States on the link between placement experiences, PTSD, and alcohol use among male and female national guard soldiers. The study results showed that problematic substance and alcohol use was higher among female national guard soldiers compared to male national guard soldiers. In addition, the strength of the indirect effect of PTSD among women national guard soldiers determined the level of substance abuse and alcohol use among national guard soldiers (Bianucci et al., 2019). In general, studies
reviewed thus far indicate that PTSD among national guard soldiers leads to substance abuse such as alcohol.

In this regard, studies reviewed above show conflicting conclusions about the association between substance abuse such as alcohol and national guard soldiers or guards with PTSD and other mental health problems. As such, while Smith and Cottler (2018) examined the post-traumatic disorder and alcohol use disorder among national guard soldiers in the United States and reported that national guard soldiers who have experienced PTSD and other mental health problems are more vulnerable to substance abuse such as alcohol use and that national guard soldiers with substance use disorder are more likely to be exposed to traumatic situations and develop PTSD, Bianucci et al. (2019) replicated Smith and Cottler (2018) findings in a quantitative study of 2,344 female and male national guard soldiers in the United States on the link between placement experiences, PTSD and alcohol use among male and female national guard soldiers and reported that problematic substance and alcohol use was highest among female national guard soldiers compared to male national guard soldiers. In addition, the indirect effect of PTSD among women national guard soldiers determined the level of substance abuse and alcohol use among national guard soldiers. Overall, PTSD and other mental health problems contribute to national guard soldiers' substance abuse, such as alcohol use.

**Poor Social Relationship related to PTSD.**

People such as national guard soldiers with PTSD and other mental health problems, experience difficulty in social relationships due to recurring experiences. Several studies have linked poor social relationships due to recurring experiences to national guard soldiers with PTSD and other mental health problems. In particular, Murphy et al. (2019) conducted a quantitative study of 600 in the UK on the national guard soldiers seeking social support for mental health difficulties. Murphy et al. (2019) reported in their study findings that national
guard soldiers experienced poor treatment and poor social relationships due to the PTSD effect. Further, similar results to Murphy et al. (2019) were replicated in a quantitative study of 484 peer-reviewed journals conducted by Wilson et al. (2018) on the loneliness and social isolation of military national guard soldiers in the United States, reporting that military national guard soldiers presented experiences of loneliness and social isolation due to PTSD or mental health problems resulting from a poor social relationship with other people (Wilson et al., 2018).

Wilson et al. (2018) advocated for interventions to combat loneliness and isolation among military national guard soldiers to improve their social life (Wilson et al., 2018). Although Wilson et al. (2018) expanded on earlier studies above, the scholars did not use a diverse sample size to generalize the study findings. Additionally, the investigators used geographical location and examined the loneliness and social isolation of military national guard soldiers in the United States from a general perspective (Wilson et al., 2018). In this regard, Wilson et al. (2018) suggested that more studies be conducted using a diversified sample size with unique characteristics such as gender. In addition, Wilson et al. (2018) also advocated for additional studies to use different geographical locations to permit the study results' transferability (Wilson et al., 2018). Studies discussed above presented different conclusions regarding the relationship between poor social relationships and the national guard soldiers with PTSD and other mental health problems. In particular, while Williamson et al. (2019) reported that national guard soldiers experienced poor treatment and poor social relationships due to the PTSD effect. Wilson et al. (2018) reported that military national guard soldiers presented experiences of loneliness and social isolation due to PTSD or mental health problems resulting from poor social relationships with other people.
Resilience

Being resilient is easier said than done for many service members. Finding those service members that do not follow the path of the majority need to be examined in greater depth to help understand the nature of those that struggle with resiliency. Several key factors have played into those individuals that were resilient and those that were not while in the military. Some of the reliance factors were personal perception, having supportive adults in their lives, and having healthy relationships to repair some of the effects of ACEs (Arincorayan et al. 2017). Arincorayan and fellow researchers concluded that having strong healthy relationships change a person’s perceptions of a certain reality for the positive (Arincorayan et al. 2017). Basically, having a supportive and caring environment can influence one’s persecution and perceptions regarding their past childhood trauma. One’s personal perception plays a role in overcoming both ACE events and events from war. A strong support system is the answer to many psychological problems that service members face. Research has shown that social support and perceived burdens are linked to risk or protective factors against negative and positive mental health outcomes (Bell et al, 2018). However, those service members that have low resilience also show low levels of social support (Crane et al, 2019). Additionally, indicators of low resilience are low spiritual support, low social support systems, and low mental resources (Crane et al, 2019).

Psychological resilience is the capability to use protective factors, such as relationship or social support systems, to cope with stressful situations (Besemann et al., 2018). Gross and other researchers found that service members with frequent stress, combat exposure, or sexual assault could result in a declining psychological resilience (2019). Similarly, other researchers found that low resilience manifested itself by PTSD and suicide, which prompted the DOD to attempt to improve warfighter resilience skills (Crane et al. 2019; Nindl et al., 2018; Samuelson et al.,
As the military experiences increasing diagnosis of severe mental health disorders and suicides, the emphasis on resilience has likewise been amplified (Forbes & Fikretoglu, 2018). Individuals with sufficient resilience were more likely to return to normal psychological functioning after combat, assaults, or automobile accidents than those with low resilience skills (Horwitz et al., 2018; Norman, Haller, Hamblen, Southwick, & Pietrzak, 2018); additionally, those service members with low levels of resilience displayed maladaptive behaviors after similar traumatic events. Additionally, research shows that service members with lower levels of resilience might be more likely to have substance abuse issues, attempt suicide, and even complete suicide (Gross et al., 2019; Kramer et al., 2020; S. B. Norman et al., 2018).

**Strategies To Support National Guard Members**

Self-care and self-management provide a well-informed and educated veteran and ex-service community that promotes mental health self-care and self-management. In this regard, education is provided to clients with evidence-based information to help them self-manage their mental health conditions. Self-care and self-management also encourage adherence to treatment when needed for those clients with acute or complex requirements or needs. Several studies have linked self-care and self-management to support national guard soldiers with mental health problems. In particular, Arney et al. (2020) conducted a quantitative study on peer support and self-management among national guard soldiers with diabetes and mental health problems in the United States. In their findings, Arney et al. (2020) reported that peer support, self-care, and self-management enhanced support for national guard soldiers with mental health problems and acute diabetes (Arney et al., 2020). Wooldridge et al. (2022) extended these results and reported that self-management and self-care of national guard soldiers' health conditions enhanced their treatment. According to Wooldridge et al. (2022), self-management behaviors allowed national
guard soldiers to manage their stress levels and monitor their health conditions (Wooldridge et al., 2022). Overall, studies reviewed indicate that self-care and self-management are key strategies for supporting national guard soldiers with mental health problems.

While Arney et al. (2020) conducted a quantitative study on peer support and self-management among national guard soldiers with diabetes and mental health problems in the United States reporting that peer support, self-care, and self-management enhanced support for national guard soldiers with mental health problems and acute diabetes. Wooldridge et al. (2022) extended these results. They reported that self-management and self-care of one’s health conditions among national guard soldiers enhanced their treatment and that self-management behaviors allowed national guard soldiers to manage their stress levels and monitor their health conditions. However, Wooldridge et al. (2022) did not explain how self-care and self-management enhanced treatment among national guard soldiers with mental health problems. In this regard, Wooldridge et al. (2022) suggested an additional study examining how self-care and self-management improved treatment among national guard soldiers with mental health problems. In addition, the investigators did not use a diverse sample size to generalize the study findings. Consequently, one geographical location was used for the study, limiting the transferability and generalizability of the study findings. Thus far, more research is needed using diverse sample sizes and multiple geographical locations (Wooldridge et al., 2022).

**Care Coordination**

Better coordinated care can improve results for individuals while also increasing capacity from mental health service providers and strengthening collaboration between health and the support services in supporting national guard soldiers with mental health problems to overcome the challenges of their acute health conditions such as diabetes. Various scholars have linked care coordination to strategies for helping national guard soldiers with mental health problems.
In a quantitative study of 501 national guard soldiers’ patients conducted by Glynn et al. (2021) on bringing chronic pain care to rural national guard soldiers, Glynn et al. (2021) established that coordinated care could get patient care services close to national guard soldiers with mental health problems, which improves their treatment through support. They are training effective self-care of their medical conditions and stressing the importance of embracing treatment for their chronic health conditions (Glynn et al., 2021). According to Glynn et al. (2021), coordinated care ensures quality patient care among national guard soldiers due to the collaboration among healthcare stakeholders. Further, Kilbourne et al. (2018) extended these results. They reported that mental health quality requires coordination across various health service providers, involving the customer advocates, and leveraging resources to improve health care, particularly for the national guard soldiers with mental health problems (Kilbourne et al., 2018).

Comparable results to Kilbourne et al. (2018) were reported by Carras et al. (2018), who examined mental health recovery among national guard soldiers in the United States. In the findings, Carras et al. (2018) noted that coordination care enhanced mental health recovery among national guard soldiers (Carras et al., 2018). Overall, the studies reviewed demonstrated conflicting conclusions regarding national guard soldiers’ coordination and mental health problems. Glynn et al. (2021) established that coordinated care could bring patient care services close to national guard soldiers with mental health problems, which improves their treatment through support training, effective self-care of their medical conditions, as well as the importance of embracing treatment for their chronic health conditions. Furthermore, coordinated care ensures quality patient care among the national guard soldiers due to the collaboration among healthcare stakeholders. Finally, Kilbourne et al. (2018) reported that mental health quality requires coordination across various health service providers, involving the customer...
advocates and leveraging of resources to improve health care, particularly for the national guard soldiers with mental health problems. Studies reviewed indicate that care coordination enhances mental health recovery among veteran patients.

**Social Support.**

A social support system is not an easy thing for those dealing with social issues after combat. Many service members returning from combat feel cut off from loved ones and avoid social settings (Canada et al., 2020; Stanley et al., 2019). Studies have shown that positive social support were associated reduced risk of suicide (Bell et al, 2018). However, Stanley et al., 2019) found an association between avoidance mental health symptoms and weakened social support systems. It makes sense that those avoiding social settings and social situations would struggle developing those important support systems. Avoiding a crowd might have been a survival skill on the battlefield, but those same skills create challenges for combat veterans recovering from PTSD. In fact, Norman et al. (2018) found that avoiding is a protective skill that an individual might use in small doses, but one that can lead to certain pathology when overused to cope with severe stressors. In fact, avoidant coping skills were found to even predict PTSD symptomatology (Stanley et al., 2019).

Perception is a factor that has come up in many areas of research. In fact, positive perception of social support systems was linked with lower PTSD risk among service members (Stanley et al., 2019). Moreover, researchers found that those reporting five or more close relationships or relatives were correlated with a greater reduction in having PTSD (Phillips et al. 2010). On the other hand, those that reports being single, divorced, or separated showed higher frequency of PTSD (Stanley et al., 2019). All in all, these studies easily support the idea of having strong social support systems prior to joining the military. Maintaining strong support
systems during and after the military service will likely be harder for those with an ACE score. PTSD is not just a disorder; the mental illness is the same reason why service members’ ability to cope after battle is more challenging.

**Barriers to Care Among National Guards and Stigmatization**

Stigma has been linked to the barriers to seeking support among national guard soldiers with mental health problems. Studies have linked stigmatization to support seeking among national guard soldiers with mental health problems. For instance, Britt et al. (2020) conducted a quantitative study of 112 national guard soldiers with mental health problems in the U.S. on the support for mental health as a predictor of stigma beliefs about treatment help-seeking behaviors among military personnel. According to the study findings, Britt et al. (2020) noted that a significant positive unit of support was associated with decreased stigma among national guard soldiers or military personnel. The higher the support seeking, the less the stigma experienced by the national guard soldiers. However, a high level of stigma discouraged national guard soldiers from seeking help for their mental health problems or conditions (Britt et al., 2020). Applegarth et al. (2019) corroborated Britt et al. (2020) findings by investigating 997 national guards examining help-seeking among national guard service members in the U.S. and reported that negative beliefs about mental health treatment and stigmatization were barriers to support or help-seeking among national guard soldiers (Applegarth et al., 2019). Thus far, studies above show that stigmatization is a key barrier to support seeking among national guard soldiers.

Based on the study findings discussed above, the authors highlighted conflicting conclusions about the relationship between stigmatization and support seeking among national guard soldiers with mental health problems. Whereas Britt et al. (2020) conducted a quantitative study with 112 national guard soldiers with mental health problems in the U.S. on the
support for mental health as a predictor of stigma, beliefs about treatment help-seeking behaviors among military personnel noted that a significant positive unit of support was associated with decreases in stigma among national guard soldiers or military personnel. The higher the support seeking, the less the stigma experienced by the national guard soldiers. High levels of stigma discouraged national guard soldiers from seeking help for their mental health problems or conditions. Applegarth et al. (2019) reported that negative beliefs about mental health treatment and stigmatization were barriers to support or help-seeking among national guard soldiers (Applegarth et al., 2019). Thus far, studies above show that stigmatization is a key barrier to support seeking among national guard soldiers. The level of support seeking among national guard soldiers determines the level of stigmatization among national guard soldiers with mental health problems.

*Deployment Characteristics of Combat Exposure.*

Combat exposure deployment characteristics have been described as a barrier to support seeking among national guard soldiers with mental health problems. Several studies have also linked combat exposure deployment characteristics to the barrier for support seeking among national guard soldiers with mental health problems. In particular, Randles and Finnegan (2022) explored veteran help-seeking behaviors for mental health challenges in the United States with a sample of 26 peer-reviewed journals. After the analysis, Randles and Finnegan (2022) reported that the barriers to support seeking among national guard soldiers included stigma, combat exposure deployment characteristics, military endurance, and self-sufficiency (Randles & Finnegan, 2022). Corroborative findings to Randles and Finnegan (2022) were also noted in another study conducted by Briggs et al. (2022) on mental health of children, deployment, parental mental health, and support seeking, among.
Relating to national guard soldiers in the United States, Briggs et al. (2022) reported that combat exposure deployment characteristics determined the support seeking among the national guard soldiers while social functioning of parents and family satisfaction was a protective factor for families after deployment. In general, combat exposure deployment characteristics were a setback in support seeking among national guard soldiers with mental health problems.

In conclusion, studies discussed above provide support-seeking barriers among national guard soldiers, such as combat exposure, deployment characteristics and stigmatization. However, these barriers provided conflicting decisions regarding support seeking among national guard soldiers with mental health problems. While the stigmatization barrier indicated that the level of support seeking among national guard soldiers determines the level of stigmatization among national guard soldiers with mental health problems, the Deployment Characteristics of Combat Exposure barrier indicated that it was a setback in support seeking among national guard soldiers with mental health problems.

Gaps In Research

Many studies have spotted gaps in research relating to those in the military that have not deployed overseas (Applewhite, et al. 2016; Besemann et al., 2018). Research suggests additional focus on individuals exposed to stressful experiences and efforts to reduce stress reactivity may prove valuable in the effort (Bandoli et al., 2017; Besemann et al., 2018). Furthermore, due to the part-time environment of the National Guard community and legal complications, data on the reserve community is not available, leading to limited data for studying mental health risks in the reserve component, in particular, ACEs (Griffith, 2014). In fact, “there have been few, if any, studies investigating the prevalence of childhood abuse among personnel in the reserve component,” which includes the Army National Guard (Griffith, 2014, p.6).
Other studies recommend examining individual personality factors to determine if certain variables could explain the increased risk of PTSD in certain genders given similar level of combat experience (Polusny et al. 2014; Nichter et al., 2021). Research also recommends continuing identification of those at highest risk for mental health illness and substance use problems, including examination of service members and deployment characteristics (Eisen et al., 2012). Research in examining the relationship of ACEs with National Guard service in Ohio recommend similar research in other state to compare findings regarding ACEs and National Guard service (Fink et al., 2016). Lastly, no research has been conducted on the National Guard or Guard Veteran community, pertaining to ACEs, in the State of California. Research in California would aid research that has been conducted in other state regarding ACEs.

**Summary**

In summary this chapter discusses the relationship between ACE life events, types of military service, resilience factors, and PTSD. Trauma is hard on all population regardless of background. However, understanding what types of trauma can make or break an army is invaluable. Research has shown that certain life events might create a foundation for emotional instability for coping with a combat environment or building a strong social support system. For example, soldiers that come from a physically abusive background versus an emotionally abusive background react differently. Physical abuse, among ACE events, was specifically related with greater suicide risk among both active and national guard members, with the risk factor being higher among Guard members. Also, those soldiers with higher scores of ACEs reported high rates of attempted harm to self. The literature shows that gender differences exist in the service member population. Males with ACEs showed higher rates of PTSD, anxiety, substance abuse, and suicide. On the other hand, females showed higher rates of sexual assault and depression. One key finding across all research showed that physical abuse, when examined,
was a predictive factor in risk for service members. Service members that remembered being abused, or who had experienced physical abuse, will have a greater risk of suicide; furthermore, they might also struggle with building health partner relationships and have strong social support systems.

Research also shows that positive social support systems act as a defense against negative health outcomes in post deployment environment. The service members most challenged in developing a positive support system are those with greater ACE scores. Relationships, health, and satisfaction have shown to be some of the most important factors in terms of prevention regarding negative health outcomes. National Guard soldiers have the greatest risk factors associated with PTSD, harm to self, and substance abuse related to ACEs, combat exposure and the development of strong support systems. More research is needed to discover what types of resilience skills are needed to overcome the previously stated ACEs scores.
Chapter Three: Methods

Overview

The goal of this quantitative causal-comparative study is to compare the prevalence of ACEs among National Guard soldiers and veterans with or without a military deployment overseas, with a control group of participants that have neither stressor. Additionally, the study was observed for statistically significant differences in psychological reliance scores, mental health scores, and service members social support levels. The overall goal was to learn more about mental health risk factors among service members to increase overall likelihood of identifying those service members with the greatest risk factors associated with certain ACE scores and combat experiences. Learning more about negative life events or ACEs and their effects on service members is a task at the core of building a more ready and healthier force. Certain ACEs carry greater risk than others. Determining which combinations are the deadliest will help with suicide/self-harm prevention and help to build a more resilient force.

Early on in the Gulf war, the suicide rates were highest among service members involved in ground combat operations, specifically, the Marine and Army personnel (Army Health Promotion, 2010). For the Army National Guard (ARNG), research has shown suicide rates have stayed high even with fewer mobilizations down range (Griffith, 2012; Army 2020: Generating Health and Discipline in the Force, 2012). The hypotheses are that those Caucasian males, under 25 years of age, in the National Guard, with high ACE scores, have the highest risk of having mental health issues. This study attempts to provide some answers regarding mental health in the military, specifically, in the ARNG, by examining ACEs and its association with mental health, while examining resilience and social support systems.
Design

Following approval by the Institutional Review Board (IRB), the study followed a quantitative causal-comparative research design with a convenience sampling of three different groups (Haas, 2012). The first group consisted of NG service members or Guard veterans with deployments. The second group contained NG service members or Guard veterans without deployments. The third group was made up of civilians with no military service. Thus, causal-comparative research, a family of research designs used to examine potential causes for observed differences found among existing groups, was chosen (McCusker & Gunaydin, 2015). This causal-comparative design is a research design that seeks to find correlations between demographic questions and clinical scales after an action or event has already occurred. Other comparisons may reveal significant differences in perceived social support, resiliency, PTSD, and adverse childhood events among different demographics.

For specific reasons, a non-experimental quantitative methodology with a causal-comparative design seems to be the best option. To begin, the research contains numerical data that is evaluated in order to test theories (McCusker & Gunaydin, 2015). Second, because the researcher is removed from the research participants, adopting a non-experimental quantitative approach with a causal-comparative design ensures research objectivity (McCusker & Gunaydin, 2015). Third, independent variables are not manipulated. Fourth, three groups (members with deployments, without deployments, and no military service) will be compared; as a result, this is a non-experimental quantitative method with a causal-comparative design (McCusker & Gunaydin, 2015).

The survey will consist of 56-questionnaire that measures ACE scores, social support systems levels, resilience levels, and PTSD levels. Participants will range from 100 to 200 U.S. National Guard service members or Guard Veterans who volunteer to be surveyed. 50 to 100
individuals that have no military service for the control group who also volunteer. Survey
Questions (Appendix A): BRS, PCL-5, MSPSS, and ACE Questionnaire- Along with eight
demographic questions: Age, Number Deployments Overseas, Gender, Years of military service,
National Guard service or Reserve Service, Active Military Service other basic and AIT, Military
Branch, and Race. Sample questions are also available on Appendix A.

**Research Questions**

**RQ1:** Does severity of ACEs predict poor psychological well-being of National Guard
post-deployment?

**RQ2:** Does social support system play a role in psychological health post deployment
factoring ACE scores?

**RQ 3:** Do those with National Guard Deployment have higher ACE scores than those
without military service?

**Participants and Setting**

To qualify for participation in the study, participants are required to be 18 years’ old or
older and fluent in English. Participants must have been or be in the United States National
Guard or a National Guard veteran. Participants for this survey must volunteer for this study and
will be recruited from websites such as Facebook, LinkedIn, and Craigslist. Individuals will be
associated with either the National Guard or the Guard veterans. The study will include full-time
National Guard soldiers, part-time National Guard soldiers that serve once a month, Federal
Reserve’s Members, and veterans from all the aforementioned groups. Participants can complete
the survey from any computer or smart device. As for the survey, the plan is to scan any
information into a dual password protected computer and shred all other paper data. All data
online from the survey will be kept on the password protected computer as well.
A priori power analysis was conducted using G*Power to determine the required minimum sample size for the study. Four factors were considered in the power analysis: significance level, effect size, the power of the test, and statistical technique. The significance level, also known as Type I error, refers to the chance of rejecting a null hypothesis given that it is true (Haas, 2012). Most quantitative studies make use of a 95% confidence level because it adequately provides enough statistical evidence of a test (Creswell & Poth, 2017). The effect size refers to the estimated measurement of the relationship between the variables being considered (Cohen, 1988). Cohen (1988) categorizes effect size into small, medium, and large. Berger, Bayarri, and Pericchi (2013) purported that a medium effect size is better as it strikes a balance between being too strict (small) and too lenient (large). The power of test refers to the probability of correctly rejecting a null hypothesis (Sullivan & Feinn, 2012). In most quantitative studies, an 80% power is usually used (Sullivan, & Feinn, 2012). The statistical test to be used for this study is multiple regression. In order to conduct multiple regression to detect a medium effect size, at the 5% level of significance, with 80% power, at least 139 (Figure 1).
Figure 1.

G*Power Output of Sample Size Calculation for Multiple Regression

Null Hypotheses

The study will explore the following null hypotheses:

H0: The demographic variables of age, number of deployments overseas, years of military service, gender, National Guard/ Reserve Service, active military service, military
branch, and race do not significantly predict severity of ACE score, PTSD, resilience, and perceived social support.

$H_0_2$: The demographic variables do not significantly moderate the relationship between social support, ACE scores and PTSD.

$H_0_3$: Those with National Guard Deployment do not have significantly greater mean ACE scores than those without military service.

**Alternate Hypotheses**

The study will explore the following alternate hypotheses:

$H_1_1$: The demographic variables of age, number of deployments overseas, years of military service, gender, National Guard/ Reserve Service, active military service, military branch, and race significantly predict severity of ACE score, PTSD, resilience, and perceived social support.

$H_1_2$: The demographic variables significantly moderate the relationship between social support, ACE scores and PTSD.

$H_1_3$: Those with National Guard Deployment have significantly greater mean ACE scores than those without military service.

**Recruitment**

Upon receiving IRB approval, in order to advertise the study and recruit volunteers, the researcher will send emails to those that have signed up from both online and community boards sign-up sheets. Interested Guard service members, Guard veterans, active-duty military, and civilians will then be directed to the next steps required for participation, including the opportunity to sign-up immediately by providing their email address. The researcher’s email address and phone number will be included for supplementary information. A recruitment announcement will also be posted at guard armories, libraries, colleges, National Guard units
based on approval, coffee shops near military bases, and locations that military members frequent. Potential survey sites for recruitments are unit Facebook pages, LinkedIn website, Starbucks community boards near National Guard units, and Craigslist’s adds. Participants will not receive any form of payment for their time.

The researcher will be sending an email to prospective participants containing a link to the survey hosted on Survey Monkey. People who wish to participate in the study will click on a link provided in the email invitation. Participants will be asked to click the link to Survey Monkey to access the informed consent form on the first page, as well as the survey instruments to follow. If the participant does not give his/her consent by clicking “I do not agree,” they will be taken to an exit page thanking them for their time. If the participant gives consent by clicking “I agree,” the Survey Monkey survey will begin with a page describing the research, any ethical concerns or risks to participants, any risks to anonymity, and directions explaining how to contact the researcher. The second page of the survey will contain demographic questions and the study’s instruments which include the MSPSP, BRS, PTSD, ACE instruments. The final page of the survey will thank the participants for their time. After a set period of time, a follow-up email will be sent to potential participants as a reminder to complete the survey if they had not already, to encourage all people to participate. After every participant has completed the online survey, data will be retrieved from Survey Monkey for analysis.

Additionally, respondents will get receive a “thank you” email with a list of mental health resources once finished with the survey. If necessary, the researcher will make an immediate referral to professional mental health services either federal or state level based on results of questionnaire.
Inclusion & Exclusion Criteria

Any service member or veteran who states interest in participation in the study will complete a consent form that describes the study. Inclusion criteria will include the participant being at least 18 years of age, self-reporting, and being able to sign a consent form. Any eligible National Guard or Guard veterans who were interested will sign a consent form describing the study purpose, goals, study processes, risks and inconveniences, precautions, confidentiality, along with the benefits of participating in the study. Prospective service members will not be provided will an incentive to participate in the study.

Certain individuals will be excluded from the study if they were not fluent in English, are current Active Duty, not in National Guard, or not recognized federal military service. Service members who gave partial responses or have missing data will be contacted to complete missed questions. Unfinished surveys will not be used in the results or any form of data analysis. All participants must complete surveys to be counted in the study. Service members will be given thank you emails with a list of resources available from the State of California and the VA treatment centers.

Procedures

This study began by the researcher posting online sign-up sheets, community board sign-up sheets, and National Guard armories sign-up sheets. Upon completing community sign-ups or online signs, participants received an email link from survey monkey.com or QR code for a link to start the survey. Once the surveys were emailed or QR scanned, participants were encouraged to be completed within days or weeks of receiving the email. The survey questionnaire was the same for all individuals in the study. Each participant had to agree to informed consent provided by IRB from Liberty University for this study. Next, the participant was given a list of mental health, military support, and VA support resources
phone numbers. Lastly, the survey questions were given. In terms of the survey structure, each participant was provided military and personal nonidentifiable background information.

Following the demographic and social support background information, the next assessment was the BRS scale. After the BRS section, the next section was the PCL-5 and the MSPSS. The last section given was the ACE questionnaire. Any incomplete surveys were left out of the data sets. After and before the survey was administered, the mental health and supportive resources from the state and federal levels were provided a second time. All surveys are stored with survey website and backed up on the researcher’s created one drive that are both password protected and encrypted. No formal controls will be presented to prevent participants collaborating in completing the survey.

**The Researcher’s Role**

As a quantitative causal-comparative design, this researcher required a great deal of insight into the experiences and tendencies with service members and veteran’s population. The researcher is a two-time combat veteran with knowledge and experiences from combat operations in Iraq, Jordan, Kuwait, and Nigeria. He has also been in the California National Guard as a Behavioral Health Officer for over ten years. In that role, the researcher helps service members and veterans get connected with services within the community after military deployment or service. Finally, the researcher teaches as an Assistant Adjunct Professor at Fresno Pacific University (FPU). As a LCSW, Mental Health Officer in the National Guard, he has treated thousands of service members and families with pre and post deployment issues.

**Instrumentation**

*Brief Resilience Scale (BRS)* (Appendix A). The Brief Resilience Scale was designed using a theoretical structure that defines resilience as the ability to rebound back from a type of
adversity (Smith, et al., 2008). The BRS includes six questions that are scored on a 5-point Likert-type scale varying from 1 “strongly disagree” to the high score of 5 “strongly agree.” A sample question is, “I tend to bounce back quickly after hard times.” A factor analysis displayed that the BRS is unidimensional and 55-67% of the variance could be explained by this factor (Consten, 2016). The loadings on the factor were between .68 and .91. (Consten, 2016); in fact, Cronbach’s alpha was between .80 and .91 and test-retest reliability was .69 for one month, .62 for three months.

**PCL-5** (Appendix A). The PCL-5 is a 20-question assessment tool designed to measure a person’s levels of symptoms associated with PTSD (Weathers, Litz, Keane, Palmieri, Marx, & Schnurr., 2013); additionally, the PCL-5 is included in this study to account for service members who experience symptoms of PTSD. However, some of those surveyed might not have been diagnosed by a medical professional. Therefore, an unconfirmed diagnosis of PTSD can be calculated using the scale of “Moderately” to “Extremely” as basis for positive symptom scoring. Furthermore, the DSM-5 requires at least 1 Criterion B item, questions 1-5, 1 Criterion C item, questions 6-7, 2 Criterion D items, questions 8-14, and 2 Criterion E items, questions 15-20 (American Psychiatric Association, 2013). A cut off score of 33 is used for provisional diagnosis of PTSD.

Participants were not officially diagnosed with PTSD as part of the study since PTSD requires further assessment and evaluation by a medical professional (American Psychiatric Association, 2013). Both the English and French versions of the PCL-5 total scores established excellent internal consistency (English: $\alpha = .95$; French: $\alpha = .94$), and strong convergent and divergent validity (Ashbaugh, Houle-Johnson, Herbert, El-Hage, & Brunet, 2016). Strong internal consistency was also observed for each of the four subscales for each version ($\alpha$’s > .79).
(Ashbaugh et al., 2016); in fact, test-retest reliability for the French version of the measure was also very good ($r = .89$).

**Adverse Childhood Experiences (ACE) (Appendix A).** were measured with a 10-item yes or no questionnaire assessment tool, representing the cumulative burden of childhood neglect, abuse, and household dysfunction (Felitti et al., 1998). In fact, the assessment questionnaire measures the direct experience of any three different categories of childhood abuse: physical abuse, psychological abuse, or contact sexual abuse in the home, along with four categories of household dysfunction: substance abuse, mental illness, intimate partner violence, and imprisonment of a family member before the age of 18 (Felitti et al., 1998). Numerous studies have reported that the aforementioned ACE questionnaire has good test-retest dependability and solid internal consistency with Cronbach’s $\alpha$ ranging from 0.81 to 0.91 (Bruskas & Tessin, 2013; Dube, Williamson, Thompson, Felitti, & Anda, 2004; Larkin & Park, 2012; Murphy et al., 2014).

**Multidimensional Scale of Perceived Social Support (MSPSS) (Appendix A).** This is a 12-item scale of social support scale ranging from 1 to 7 score (Zimet, Dahlem, Zimet & Farley, 1988). The 12-item questions are divided into four groups of support which are social support, family, friends, and significant other (Zimet, Dahlem, Zimet & Farley, 1988).

**Variables**

**Independent variables**- The independent variable in this study are the service members’ age (measured at the interval level), number of deployments (measured at the interval level), military branch (measured at the nominal level consisting of Army = 1, Navy = 2, Air Force = 3, Marines = 4, Space Force = 5, Coast Guard = 6), years of services (measured at the interval level), marital status (nominal level coded as married coded as 1 or not married coded as 0),
gender (male coded as 0, female coded as 1), and number of children (measured at the interval level), and race (nominal level consisting of White =1, Black = 2, Asian =3, Hispanic = 4, Other = 5).

**Dependent variables**- There are four dependent variables in this study: Perceived social support, resiliency, PTSD, and adverse childhood events. Perceived social support will be measured by the 12 item Multidimensional Scale of Perceived Social Support (MSPSP) instrument (Zimet et al., 1988). The scale is a seven-point Likert scale ranging from 1 “Very strongly disagree” to 7 “Very strongly agree”. Resiliency will be measured by the Brief Resiliency Scale (BRS) instrument (Smith, et al., 2008). The BRS is a six-item instrument measured on a five-point Likert scale ranging from 1 “Strongly disagree” to 5 “Strongly agree”. PTSD will be measured by the 20-item PCL-5 (Weathers et al., 2013),. The PCL-5 is measured on a 5-point Likert scale ranging from 0 “Not at all” to 4 “Extremely”. Adverse childhood events score will be measured by the ACE (Felitti et al.,1998). The ACE variable will be defined a well-known 10 question assessment from the original study. The item responses are dichotomous with a no (0) /yes (1) response.

All of the dependent variables were measured at the interval level of measurement. The Likert scales MSPSP, BRS, and PCL-5 are ordinal (Likert scales are always ordinal). The intervals between positions on the scale are monotonic but never so well-defined as to be numerically uniform increments (Zumbo et al., 2007). In this case, the Likert scales range from 1 to 5; in fact, Likert scales may be treated as interval if there are at least five responses, (Wu & Leung, 2017). Thus, the responses to the items were summed together and the mean calculated. The mean was formed overall measures of perceived social support, resiliency, and PTSD. The ACE score was calculated by summing the responses of the dichotomous yes/no responses. The higher the ACE score, the greater level of childhood trauma.
Data Analysis

The survey (Appendix A) was created online with SurveyMonkey.com. After the surveys were completed, the data collected was analyzed with Excel and SPSS. The quantitative data was analyzed using IBM SPSS computer software and available software on SurveyMonkey.com. The data collected through the survey was descriptive and provided the quantitative data for this study. The research study was coded into seven sections labeled A-G. Each section comprised of its own matching numbered questions to assess each variable section. Descriptive statistics were used including the mean, median, mode, and standard deviation in order to describe measures of statistical significance.

<table>
<thead>
<tr>
<th>Coding Section</th>
<th>Numbered Questions and Category Assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section A</td>
<td>(1-8) Military and, Demographic Questions</td>
</tr>
<tr>
<td>Section B</td>
<td>(9-14) Brief Resilience Scale (BRS)</td>
</tr>
<tr>
<td>Section C</td>
<td>(15-34) PCL-5 Questionnaire</td>
</tr>
<tr>
<td>Section D</td>
<td>(35-46) Multidimensional Scale of Perceived Social Support (MSPSS)</td>
</tr>
<tr>
<td>Section E</td>
<td>(47-56) Adverse Childhood Experience (ACE)</td>
</tr>
<tr>
<td>A TO E</td>
<td>TOTAL 56 QUESTIONS ONLINE</td>
</tr>
</tbody>
</table>

Multiple regressions were conducted with SPSS in order to address this first research question:

RQ1: Does severity of ACEs predict poor psychological well-being of National Guard post-deployment?

A multiple regression analysis is used to calculate a continuous dependent variable based on multiple independent variables. Multiple regression analysis allows for measurement of the
overall fit (variance explained) of the model and the relative contribution of each of the predictors to the total variance explained (McCusker & Gunaydin, 2015). The independent variables consist of the demographic variables of age, number of deployments overseas, years of military service, gender, National Guard/Reserve Service, active military service, military branch, and race. The nominal variables of gender, National Guard/Reserve Service, active military service, military branch, and race will be dummy coded such that a value of zero indicates exclusion into a specific category and a value of 1 indicates inclusion. Multiple regression analyses were performed four times, one for each of the four dependent variables of ACE score, PCL-5 score, resilience score, and perceived social support.

Moderation analysis was conducted with SPSS using Andrew Hayes’s PROCESS macro for SPSS in order to address the following second research question:

**RQ2:** Does social support system play a role in psychological health post deployment factoring ACE scores?

The PROCESS macro uses bootstrapping combined with multiple regression in SPSS in order to determine if the interaction terms involving the specific demographic variable and the independent variables social support and ACE scores are statistically significant. If the addition of the interaction terms to the model produces a significant change in the F statistic ($p \leq .05$), then there is significant moderation. If the addition of the interaction terms does not result in a significant change in F statistic ($p > .05$), there is no significant moderation.

Lastly, an independent t test was conducted in order to address this third research question:

**RQ 3:** Do those with National Guard Deployment have higher ACE scores than those without military service?
The independent-samples t-test is used to find if a difference exists between the means of two independent groups on a continuous dependent variable (Mertler & Vannatta, 2013). Thus, the test was conducted in order to determine if there is a significant mean difference in ACE scores between two groups: those with National Guard Deployment and those without military service. If the p-value is less than or equal to .05, there is a significant mean difference. If the p-value is greater than .05, there is no significant mean difference.

Prior to conducting multiple regression, the parametric assumptions were first tested. Parametric assumptions are statistical tests conducted to determine when normality or homogeneity of variance assumptions are met or satisfied (Mertler & Vannatta, 2013). Mertler and Vannatta (2013) said that multiple regression analysis includes linearity, normality, homoscedasticity, and multicollinearity (Mertler & Vannatta, 2013). Plots of the standardized residuals and the standardized predicted values were examined to assess linearity and homoscedasticity. If the plots are not curvilinear, there are violations of the assumption of linearity (Field, 2018). Additionally, if the plots form a rectangular pattern, there is no violation of the assumption of homoscedasticity (Field, 2018; Mertler & Vannatta, 2013). A Shapiro-Wilk test of normality will be used to determine if the data are normally distributed (Field, 2018). Kurtosis and skewness statistics will be generated to further assess normality. The variable inflation factor (VIF) was calculated for each variable to determine if there is a violation in multicollinearity between any two variables (Mertler & Vannatta, 2013). If the VIF scores fall below 10, there is no violation of the assumption of multicollinearity (Field, 2018). Outlier detection will be assessed through visual inspection of the boxplots as well as the calculation of standardized values.

The parametric assumptions of the independent t-test include normality, absence of outliers, and equality of variance. Normality and outliers will be assessed in the same manner
described earlier for multiple regression. The equality of variance assumption was tested by conducting the Levene’s test of homogeneity of variance. If the test was not significant \( p > .05 \), there is no violation of the assumption. If \( p \leq .05 \), there is a violation of the assumption, and in which case the Welsh’s t-test are performed as default in SPSS. The Welsh’s t-test adjusts for this violation.

**Internal & External Validity**

This designed study did have low to moderate levels of internal validity. The survey was conducted in a non-laboratory setting via a computer or mobile device and did have potential threats to validity. Because of this factor, there was less control. Causality and generalizability were limited as there was uncontrolled factors such as incomplete surveys or user malfunction, but correlations between the independent and dependent variables were able to be determined.

The overall study was expected to be higher in external validity than internal because it was conducted by an experienced military therapist with real clinical scales with service members, active military, and civilians who are all volunteers. However, threats to external validity exist because of the use of assessments and the number of questions. Service members or civilians could have reacted to questions in ways that might alter the course of the survey’s outcome by trying to get the superficial anticipated results. Also, service members could be diverse in some ways which may also alter the outcomes. For example, some of the service members might have some familiarity with the tools used in the survey. Similarity of those sampled might increase validity but would decrease generalizability and the value of the real-life aspect of the findings.
Ethical Considerations

Ethical considerations are a valuable part of this study due to the fact that some of the participants might be among a vulnerable population. Survey research needs to respect the rights of a vulnerable population (Kim, 2012). This study did require informed consent be obtained by each survey participant. Also, if a participant is identified to be a member of a vulnerable population, additional resources were provided during the survey. Each survey participant was given the number for the National Suicide Prevention Lifeline (800) 273-8255, the VA helpline (800) 698-2411, and Military OneSource at (800) 342-9647. No personal identifying information was taken from any of the survey participants. Each participant was free to leave the survey at any time. At no time was a participant forced into completing the survey. Each study participant received the national and community resources prior to the start of the survey.

Summary

The methods used in the study were followed with IRB’s approval of the study and follow all necessary procedures to protect all those that participate in the survey. Each person taking the survey did use the online survey method. The quantitative causal-comparative study was made of 56 questions with demographic and four different clinical scales. The overall goal of the study was to compare the prevalence of ACEs among National Guard soldiers and veterans with or without a military deployment overseas, with a control group of participants that have neither stressor. Furthermore, the study’s watched for statistically significant differences in psychological reliance scores, mental health scores, and service members status with reliance skill levels. Both Active duty and National Guard service members enter the military with high scores of ACE events. Certain ACEs carry greater risk than others. Determining which
combinations are the deadliest, will help stop suicide/self-harm and help to build a healthier population.

**Conclusion**

The suicide rate and suicide attempts among service members has been a steady problem since the beginning of the war on terror. Several variables have been studied regarding the high rate of mental health disorders and suicides within the military population and the contributing factors include family history of mental illness, pre-military mental disorders, or adverse childhood experiences (Bandoli et al., 2017; Nock et al., 2015; Rudenstine et al., 2015). Service members with an ACE life event showed a greater likelihood to have used drugs, engage in antisocial behavior, and suffer from severe mental health issues (Fink et al., 2016, Arincorayan et al. 2017). Data shows that 83% of those service members requesting behavioral health care during deployment stated having at least one or more ACE (Applewhite, Arincorayan, & Adams, 2016). Service members show alarming rates of ACEs that need further consideration and research.

Research has shown that a positive social support system is associated with a reduced risk of suicide (Bell et al, 2018, Montross et al. 2014). Moreover, positive perceptions of social support systems were linked with lower PTSD risk among service members (Rosas & Magos, 2015). Personal perception regarding a supportive adult in the person’s life, and healthy relationships can repair some of the effects of ACEs (Arincorayan et al. 2017. Rew, 2001).

However, we do not know how social support systems and resilience variables differ among National Guard service members. Furthermore, due to the part-time environment of the National Guard members, data on the reserve force is not yet available, leading to limited data for studying mental health threats in the reserve component, in particular, ACEs (Griffith, 2014); furthermore, “there have been few, if any, studies investigating the prevalence of childhood
abuse among personnel in the reserve component,” which includes the Army National Guard (Griffith, 2014, p.6). It is vital to better understand the role of current and past mental health events of military personal to change the current state of mental health readiness and outcomes.
Chapter Four: Findings

Overview

The purpose of this quantitative causal-comparative study is to add to the literature that assesses the role of adverse childhood experiences (ACEs) and combat exposure, specifically involving part-time soldiers in the National Guard. The study examined the relationship between mental health problems, ACE scores, type of military service, and demographic background information. The study measured the predictive relationship between ACE scores, PTSD, resilience, perceived social support, and the demographic variables of age, the number of deployments overseas, years of military service, gender, National Guard/Reserve Service, active military service, military branch, and race. The following research questions and hypotheses were addressed:

**RQ1:** Does the severity of ACEs, predict poor psychological well-being of National Guard post-deployment?

**H0:** The demographic variables of age, number of deployments overseas, years of military service, gender, National Guard/Reserve Service, active military service, military branch, and race do not significantly predict the severity of ACE score, PTSD, resilience, and perceived social support.

**H1:** The demographic variables of age, number of deployments overseas, years of military service, gender, National Guard/Reserve Service, active military service, military branch, and race significantly predict the severity of ACE score, PTSD, resilience, and perceived social support.
**RQ2:** Does the social support system play a role in psychological health post-deployment factoring ACE scores?

H02: The demographic variables do not significantly moderate the relationship between social support, ACE scores, and PTSD.

H12: The demographic variables significantly moderate the relationship between social support, ACE scores, and PTSD.

**RQ 3:** Do those with National Guard Deployment have higher ACE scores than those without military service?

H03: Those with National Guard Deployment do not have significantly greater mean ACE scores than those without military service.

H13: Those with National Guard Deployment have significantly greater mean ACE scores than those without military service.

The following is a discussion of the study's population and sample, as well as a demographic description of the sample. Demographic descriptions included frequencies and percentages for categorical (nominal) variables and means and standard deviations for variables measured at the interval level. Also presented are the testing of parametric assumptions for the statistical analysis and the results of statistical testing. This chapter concludes with a discussion of the results of this study.

Upon receiving IRB approval, to advertise the study and recruit volunteers, the researcher sent emails to those who have signed up from both online and community board sign-up sheets. Interested Guard service members, Guard veterans, active-duty military, and civilians were then directed to the next steps required for participation, including the opportunity to sign-up immediately by providing their email address or scanning the study QR code. The researcher’s email address and phone number were included for supplementary information. A recruitment
announcement was also posted at guard armories, libraries, colleges, National Guard units based on approval, coffee shops near military bases, and locations those military members frequent.

Survey sites for recruitments were unit Facebook pages, LinkedIn pages, Starbucks community boards near National Guard units, and armory community boards. Participants did not receive any form of payment for their time. The researcher sent an email to prospective participants containing a link to the survey hosted on Survey Monkey. After the data collecting process was over, the survey data was downloaded as an Excel spreadsheet and then imported by SPSS to perform statistical analysis, including descriptive statistics and inferential statistics. Additionally, the author of the study conferred with a statistician prior to the research.

**Descriptive Statistics**

There were $N = 146$ participants in the study, which included 79 (54.1%) males and 67 (45.9%) females. Ages ranged from 19 to 77 years ($M = 41.89$, $SD = 11.18$). Regarding race, most were White, 82 (56.2%). Regarding military service, most served, 105 (71.9%) and 41 (28.1%) did not serve. The number of deployments ranged from 0 to 9 ($M = 1.47$, $SD = 1.82$) and years of service ranged from 0 to 39 years ($M = 12.00$, $SD = 11.00$). Tables 1 through 4 provide this information.

**Table 1**

<table>
<thead>
<tr>
<th>Sex</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>79</td>
<td>54.1</td>
</tr>
<tr>
<td>Female</td>
<td>67</td>
<td>45.9</td>
</tr>
<tr>
<td>Total</td>
<td>146</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The sample was close to 50/50 in terms of gender. The sample had 79 participants who selected Male and 67 who selected female. Only 12 more males took the study than females.
However, the military population statistically has more males than females. However, the population sample was primarily made up of Army National Guard. The sample data shows that 94% were Army National Guard of those that selected they had served in the military.

Table 2

*Descriptive Statistics of Continuous Demographic Variables of Age Deployments, and Years of Service*

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>18</td>
<td>77</td>
<td>41.88</td>
<td>11.18</td>
</tr>
<tr>
<td>Deployments</td>
<td>0</td>
<td>9</td>
<td>1.47</td>
<td>1.82</td>
</tr>
<tr>
<td>Years Service</td>
<td>0</td>
<td>39</td>
<td>12.00</td>
<td>11.00</td>
</tr>
</tbody>
</table>

The minimum age selected was 18, and the maximum selected was 77. The average age of the sample was close to 42 years old. The minimum number of deployments was 0, and the maximum was 9. The sample showed an average deployment of 1.47, meaning most of the population had a deployment of some kind in the past. Research shows that the average service member will deploy 2.2 times over their military career for 12 months or more (Cunitz et al., 2019). Thus, the population had a lower deployment rate than the research average. Years of service ranged from 0 to 39 years, with an average of 12 years of service. The number of years of service shows that many that took the survey had been in the military for several years.

Table 3

*Race*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Another race</td>
<td>7</td>
<td>4.8</td>
</tr>
<tr>
<td>Asian</td>
<td>10</td>
<td>6.8</td>
</tr>
<tr>
<td>Black or African American</td>
<td>10</td>
<td>6.8</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>34</td>
<td>23.3</td>
</tr>
<tr>
<td>Native Hawaiian or other Pacific Islander</td>
<td>3</td>
<td>2.1</td>
</tr>
</tbody>
</table>
White  
82  56.2
Total  
146  100.0

Most participants selected White (56.2 %), and the second most selected race was Hispanic or Latino (23.3%). These two categories comprised nearly 80% of those who took the survey. The smallest group in the sample were those that identified as native Hawaiian or other Pacific Islander at 2.1%. The sample also shows a tie between those that selected Asian and those that selected Black or African American at 6.8%

**Table 4**

Miliary Service

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never Served</td>
<td>41</td>
<td>28.1</td>
</tr>
<tr>
<td>Served</td>
<td>105</td>
<td>71.9</td>
</tr>
<tr>
<td>Total</td>
<td>146</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The data shows that most of the sample served in the military, 71.9%; in fact, only 28.1% selected no military service. Participants identified as those who have served were either Active Duty, National Guard/Reserves, or Veterans of either service component. Participants that selected no military service were most likely those who were civilians or not served in the military yet. The dependent variables of ACE events, PTSD, resilience, and perceived social support were measured using the Adverse Childhood Experiences (ACE) scale, PCL-5 scale, Brief Resilience (BRS) scale, and Multidimensional Scale of Perceived Social Support (MSPSS) scales, respectively. Adverse Childhood Experiences (ACE) (Appendix A) were measured with a 10- item yes or no questionnaire assessment tool, representing the cumulative burden of childhood neglect, abuse, and household dysfunction until age 18.
This sum of the responses ranged from 0 to 10 ($M = 3.13$, $SD = 2.70$). The PCL-5 is a 20 questions assessment tool designed to measure a person’s levels of symptoms associated with PTSD. The sum of the responses ranged from 0 to 77 ($M = 25.09$, $SD = 17.61$). The Brief Resilience (BRS) scale utilizes seven items that were designed using a theoretical structure that defines resilience as the ability to rebound back from a type of adversity (Smith, et al., 2008). The sum of the responses ranged from seven to 30 ($M = 21.70$, $SD = 5.12$). Lastly, the Multidimensional Scale of Perceived Social Support (MSPSS) (Appendix A) is a 12-item scale of social support scale ranging from 1 to 7 score. The sum of the responses ranged from 12 to 84 ($M = 63.72$, $SD = 15.90$). Table 5 provides this information.

**Table 5**

*Descriptive Statistics of ACE, PCL-5, BRS, and MSPSS Study Measures*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Min</th>
<th>Max</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE</td>
<td>0</td>
<td>10</td>
<td>3.13</td>
<td>2.70</td>
</tr>
<tr>
<td>PCL-5 (PTSD measure)</td>
<td>0</td>
<td>80</td>
<td>25.09</td>
<td>17.61</td>
</tr>
<tr>
<td>BRS</td>
<td>7</td>
<td>30</td>
<td>21.70</td>
<td>5.12</td>
</tr>
<tr>
<td>MSPSS</td>
<td>12</td>
<td>84</td>
<td>63.72</td>
<td>15.90</td>
</tr>
</tbody>
</table>

Regarding the reliability of these measures, Cronbach's alphas were measured in order to assess internal consistency. A generally accepted rule is that $\alpha$ of 0.6-0.7 indicates an acceptable level of reliability, and 0.8 or greater is a very good level (Serbetar & Sedlar, 2016). All measures were acceptable, with Cronbach's alphas demonstrating a very good level of reliability (Table 6).

**Table 6**

*Cronbach’s Alpha Reliability Measures*

<table>
<thead>
<tr>
<th>Measure</th>
<th># Items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE</td>
<td>10</td>
<td>.806</td>
</tr>
<tr>
<td>PCL-5</td>
<td>20</td>
<td>.955</td>
</tr>
<tr>
<td>BRS</td>
<td>7</td>
<td>.905</td>
</tr>
<tr>
<td>MSPSS</td>
<td>12</td>
<td>.959</td>
</tr>
</tbody>
</table>
Testing of Parametric assumptions

Multiple regression was conducted for RQ1 and RQ2, whereas independent t-tests were conducted for RQ3. However, before the analysis, some assumptions had to be tested. Regarding multiple regression, these assumptions included linearity, homoscedasticity, absence of multicollinearity, no outliers in regression residuals, and normality of regression residuals (Field, 2018). Regarding independent t-tests, these assumptions included normality, absence of outliers, and homogeneity of variances (Field, 2018).

The assumptions of multiple regressions conducted were first tested. There was linearity and homoscedasticity as assessed by plots of standardized residuals against the predicted values (Figures 1 through 4). The scatter plots depicted a non-curvilinear and random plot which suggests no violation of these assumptions.

Figure 1.
Scatter Plot of Standardized Residuals against the Predicted Values (Demographics Predicting ACE Score)
Figure 2
*Scatter Plot of Standardized Residuals against the Predicted Values (Demographics Predicting BRS Score)*

![Scatterplot](image1)

Figure 3
*Scatter Plot of Standardized Residuals against the Predicted Values (Demographics Predicting MSPSS Score)*

![Scatterplot](image2)
There was the independence of residuals, as assessed by Durbin-Watson statistics, all within 1.5 to 2.5 (McCusker, K., & Gunaydin, S. 2015). There was no evidence of multicollinearity, as assessed by variance inflation factors (VIFs) below 10. There were no standardized residuals greater than ±3 standard, thus no outliers. The assumption of normality was met, as assessed by visual inspection of histograms (Figures 5 through 8).
Figure 5
Histogram of Regression Residuals (Demographics Predicting ACE Scores)

Figure 6
Histogram of Regression Residuals (Demographics Predicting BRS Scores)
Figure 7
Histogram of Regression Residuals (Demographics Predicting MSPSS Scores)

Figure 8
Histogram of Regression Residuals (Demographics Predicting PTSD Scores)
The assumptions of the independent t-tests were tested. Regarding examining the normality, skewness and kurtosis index were used to find the normality of the data (McCusker, K., & Gunaydin, S. 2015). The results suggested the deviation of data from normality was not severe as the value of skewness and kurtosis index were between -3 to +3 (Kline, 2011). Table 7 provides this information.

**Table 7**

*Skewness and Kurtosis Values of Study Measures*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE</td>
<td>0.535</td>
<td>-0.827</td>
</tr>
<tr>
<td>BRS</td>
<td>-0.476</td>
<td>-0.185</td>
</tr>
<tr>
<td>MSPSS</td>
<td>-0.854</td>
<td>0.570</td>
</tr>
<tr>
<td>PCL-5 (PTSD measure)</td>
<td>0.842</td>
<td>-0.002</td>
</tr>
</tbody>
</table>

Regarding outliers, there were no standardized values beyond -3 to +3 standard deviations, thus no outliers. Lastly, there was no violation of the equality of variance assumption as assessed by non-significant Levene’s tests \((p > .05)\).

**Results**

Multiple regression was conducted in order to address this first research question and hypotheses:

**RQ1**: Does the severity of ACEs predict poor psychological well-being of National Guard post-deployment?

**H0**: The demographic variables of age, number of deployments overseas, years of military service, gender, National Guard/ Reserve Service, active military service, military branch, and race do not significantly predict the severity of ACE score, PTSD, resilience, and perceived social support.

**H1**: The demographic variables of age, number of deployments overseas, years of military service, gender, National Guard/ Reserve Service, active military service, military
branch, and race significantly predict the severity of ACE score, PTSD, resilience, and perceived social support.

Regarding the dependent variable ACE, the overall model was not significant, $F(9, 142) = 1.954$, $p = .050$. The model explained an 11.7% variance in predicting ACE scores from the demographic variables. However, none of the demographic predictors were significant ($p > .05$). Table 8 provides this information.

**Table 8**

Regression Coefficients for RQ1 (Demographics Predicting ACE Scores).

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>$t$</th>
<th>$p$</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>$SE$</td>
<td>$\beta$</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>(Constant)</td>
<td>3.998</td>
<td>1.072</td>
<td>3.729</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.039</td>
<td>.024</td>
<td>-.162</td>
<td>-1.633</td>
<td>.105</td>
</tr>
<tr>
<td>Other race</td>
<td>1.117</td>
<td>1.155</td>
<td>.083</td>
<td>.967</td>
<td>.335</td>
</tr>
<tr>
<td>Asian</td>
<td>-.144</td>
<td>.906</td>
<td>-.014</td>
<td>-.159</td>
<td>.874</td>
</tr>
<tr>
<td>Black</td>
<td>1.828</td>
<td>.971</td>
<td>.164</td>
<td>1.883</td>
<td>.062</td>
</tr>
<tr>
<td>Hispanic</td>
<td>.038</td>
<td>.565</td>
<td>.006</td>
<td>.068</td>
<td>.946</td>
</tr>
<tr>
<td>Pac Islander</td>
<td>-2.868</td>
<td>1.924</td>
<td>-.125</td>
<td>-1.491</td>
<td>.138</td>
</tr>
<tr>
<td>Sex</td>
<td>.994</td>
<td>.508</td>
<td>.183</td>
<td>1.956</td>
<td>.053</td>
</tr>
<tr>
<td>Deployments</td>
<td>.168</td>
<td>.186</td>
<td>.112</td>
<td>.901</td>
<td>.369</td>
</tr>
<tr>
<td>Years Mil Service</td>
<td>-.004</td>
<td>.033</td>
<td>-.018</td>
<td>-.132</td>
<td>.895</td>
</tr>
</tbody>
</table>

* $F(9, 142) = 1.954, p = .050; R^2 = .117$

Regarding the dependent variable BRS, the overall model was significant, $F(9, 153) = 2.085$, $p = .035$. The model explained an 11.5% variance in predicting BRS scores from the demographic variables. Years of service was significant ($B = 0.177, p = .005$). A one-unit increase in years of experience corresponds to an overall average increase in BRS. No other demographic variables were significant ($p > .05$). Table 9 provides this information.
Table 9

Regression Coefficients for RQ1 (Demographics Predicting BRS Scores)

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>p</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>β</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>(Constant)</td>
<td>20.682</td>
<td>1.915</td>
<td>-</td>
<td>-</td>
<td>10.798</td>
</tr>
<tr>
<td>Age</td>
<td>-.003</td>
<td>.043</td>
<td>- .007</td>
<td>- .073</td>
<td>- .073</td>
</tr>
<tr>
<td>Other race</td>
<td>-3.179</td>
<td>2.402</td>
<td>-1.324</td>
<td>-1.324</td>
<td>-1.324</td>
</tr>
<tr>
<td>Asian</td>
<td>-.118</td>
<td>1.709</td>
<td>-1.324</td>
<td>-1.324</td>
<td>-1.324</td>
</tr>
<tr>
<td>Black</td>
<td>-.633</td>
<td>1.650</td>
<td>-1.222</td>
<td>-1.222</td>
<td>-1.222</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1.259</td>
<td>1.031</td>
<td>1.222</td>
<td>1.222</td>
<td>1.222</td>
</tr>
<tr>
<td>Pac Islander</td>
<td>2.293</td>
<td>3.647</td>
<td>.500</td>
<td>.500</td>
<td>.500</td>
</tr>
<tr>
<td>Sex</td>
<td>-1.054</td>
<td>.940</td>
<td>-1.222</td>
<td>-1.222</td>
<td>-1.222</td>
</tr>
<tr>
<td>Deployments</td>
<td>-.428</td>
<td>.341</td>
<td>-1.222</td>
<td>-1.222</td>
<td>-1.222</td>
</tr>
<tr>
<td>Years Mil</td>
<td>.177</td>
<td>.062</td>
<td>.383</td>
<td>.383</td>
<td>.383</td>
</tr>
</tbody>
</table>

* F(9, 153) = 2.085, p = .035; R² = .115.

Regarding the dependent variable MSPSS, the overall model was not significant, F(9, 144) = 1.153, p = .330. The model explained 7.1% in the variance in predicting MSPSS scores from the demographic variables. None of the demographic variables were significant (p > .05).

Table 10 provides this information.

Table 10

Regression Coefficients for RQ1 (Demographics Predicting MSPSS Scores)

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>p</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>β</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>Age</td>
<td>.113</td>
<td>.142</td>
<td>.080</td>
<td>.794</td>
<td>.429</td>
</tr>
<tr>
<td>Other race</td>
<td>3.907</td>
<td>6.434</td>
<td>.053</td>
<td>.607</td>
<td>.545</td>
</tr>
<tr>
<td>Asian</td>
<td>3.296</td>
<td>5.428</td>
<td>.053</td>
<td>.607</td>
<td>.545</td>
</tr>
<tr>
<td>Black</td>
<td>-9.117</td>
<td>5.481</td>
<td>-1.466</td>
<td>-1.663</td>
<td>-.099</td>
</tr>
<tr>
<td>Hispanic</td>
<td>6.643</td>
<td>3.378</td>
<td>.178</td>
<td>1.966</td>
<td>.051</td>
</tr>
<tr>
<td>Pac Islander</td>
<td>5.724</td>
<td>11.526</td>
<td>.042</td>
<td>.497</td>
<td>.620</td>
</tr>
<tr>
<td>Sex</td>
<td>-.411</td>
<td>3.014</td>
<td>-.013</td>
<td>-.136</td>
<td>.892</td>
</tr>
<tr>
<td>Deployments</td>
<td>.252</td>
<td>1.107</td>
<td>.029</td>
<td>.228</td>
<td>.820</td>
</tr>
</tbody>
</table>
Years Mil Service: -.201 .200 -.140 -1.007 .316 .358 2.796

* $F(9, 144) = 1.153, p = .330; R^2 = .071$

Regarding the dependent variable PCL-5, the overall model was not significant, $F(9, 140) = 1.418, p = .187$. The model explained 8.9% in the variance in predicting PCL-5 scores from the demographic variables. None of the demographic variables were significant ($p > .05$). Table 11 provides this information.

**Table 11**

*Regression Coefficients for RQ1 (Demographics Predicting PCL-5 Scores)*

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>$t$</th>
<th>$p$</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>34.149</td>
<td>7.104</td>
<td>4.807</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.274</td>
<td>.159</td>
<td>-.175</td>
<td>.087</td>
<td>.676 1.478</td>
</tr>
<tr>
<td>Other race</td>
<td>12.939</td>
<td>7.126</td>
<td>.160</td>
<td>.072</td>
<td>.893 1.120</td>
</tr>
<tr>
<td>Asian</td>
<td>-4.550</td>
<td>5.988</td>
<td>-.067</td>
<td>.449</td>
<td>.906 1.104</td>
</tr>
<tr>
<td>Black</td>
<td>4.618</td>
<td>6.039</td>
<td>.068</td>
<td>.446</td>
<td>.890 1.123</td>
</tr>
<tr>
<td>Hispanic</td>
<td>-1.451</td>
<td>3.771</td>
<td>-.035</td>
<td>.701</td>
<td>.840 1.191</td>
</tr>
<tr>
<td>Pac Islander</td>
<td>-9.750</td>
<td>12.698</td>
<td>-.066</td>
<td>.444</td>
<td>.949 1.054</td>
</tr>
<tr>
<td>Sex</td>
<td>1.474</td>
<td>3.356</td>
<td>.042</td>
<td>.439</td>
<td>.767 1.304</td>
</tr>
<tr>
<td>Deployments</td>
<td>2.242</td>
<td>1.255</td>
<td>.235</td>
<td>.661</td>
<td>.402 2.489</td>
</tr>
<tr>
<td>Years Mil</td>
<td>-.164</td>
<td>.228</td>
<td>-.102</td>
<td>.747</td>
<td>.343 2.913</td>
</tr>
</tbody>
</table>

* $F(9, 140) = 1.418, p = .187; R^2 = .089$

Moderation analysis was conducted in order to address this second research question and hypotheses:

**RQ2**: Does the social support system play a role in psychological health post-deployment factoring ACE scores?
H02: The demographic variables do not significantly moderate the relationship between social support, ACE scores, and PTSD.

H12: The demographic variables significantly moderate the relationship between social support, ACE scores, and PTSD.

Andrew Hayes’s PROCESS macro for SPSS was used to conduct moderation (Hayes, 2012). The macro uses bootstrapping combined with multiple regression in SPSS in order to determine if the interaction terms involving the specific demographic variable and the independent variable of social support were statistically significant (Hayes, 2012). If the addition of the interaction terms to the model produces a significant change in the F statistic (p ≤ .05), then there is significant moderation. If the addition of the interaction terms does not result in a significant change in the F statistic (p > .05), there is no significant moderation. The results of the moderation analysis are depicted in Table 12. There were no significant moderation effects of social support (MSPSS measures) on the relationship between the demographic variables and ACE scores, as indicated by the non-significant change in each F-statistic (p > .05).

**Table 12**

*Moderation Analysis Results (RQ2)*

<table>
<thead>
<tr>
<th>Interaction Term</th>
<th>R2 Change</th>
<th>F</th>
<th>Df1</th>
<th>Df2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age*MSPSS</td>
<td>.0147</td>
<td>2.419</td>
<td>1</td>
<td>141</td>
<td>.122</td>
</tr>
<tr>
<td>YearsService*MSPSS</td>
<td>.0163</td>
<td>2.594</td>
<td>1</td>
<td>140</td>
<td>.109</td>
</tr>
<tr>
<td>MilitaryService*MSPSS</td>
<td>.0140</td>
<td>2.201</td>
<td>1</td>
<td>141</td>
<td>.140</td>
</tr>
<tr>
<td>Sex*MSPSS</td>
<td>.0236</td>
<td>3.840</td>
<td>1</td>
<td>139</td>
<td>.052</td>
</tr>
</tbody>
</table>

Independent t-tests were conducted in order to address this third research question and Hypotheses:

**RQ 3:** Do those with National Guard Deployment have higher ACE scores than those without military service?
\( H_03: \) Those with National Guard Deployment do not have significantly greater mean ACE scores than those without military service.

\( H_13: \) Those with National Guard Deployment have significantly greater mean ACE scores than those without military service.

Those that served in the military had greater mean ACE scores (\( M = 3.20, SD = 2.74 \)) than those that did not serve (\( M = 2.95, SD = 2.65 \)). However, this was a significant mean difference of \( M_{\text{diff}} = 0.25 (p = .617) \).

**Table 13**

ACE Scores by Military Service

<table>
<thead>
<tr>
<th>Military Service</th>
<th>( N )</th>
<th>( M )</th>
<th>( SD )</th>
<th>( SE )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never Served</td>
<td>41</td>
<td>2.95</td>
<td>2.645</td>
<td>.413</td>
</tr>
<tr>
<td>Served</td>
<td>104</td>
<td>3.20</td>
<td>2.736</td>
<td>.268</td>
</tr>
</tbody>
</table>

Those that served had a greater mean average than those that did not have military service. However, the sample population had a greater rate of ACE, with prior research showing one ACE event for 52.1% of the population. The researchers found ACEs effect among 52.1% of adults in the U.S. population who report at least one ACE exposure category (Balio et al., 2018).

This sample had an average ACE of 2.95 ACE score among those that have never served.

**Table 14**

Independent Samples Test (RQ3)

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Variances</th>
<th>( t )</th>
<th>( df )</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>( F )</td>
<td>.167</td>
<td>.502</td>
<td>143</td>
<td>.617</td>
</tr>
<tr>
<td>( p )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>t-test for Equality of Means</th>
<th>( SE )</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>( M_{\text{diff}} )</td>
<td>.500</td>
<td>-1.239 to .737</td>
</tr>
</tbody>
</table>
Summary

The study examined the relationship between mental health issues, ACE scores, type of military service, and demographic background information. Results of multiple regression indicated that years of service were significant \( (B = 0.177, p = .005) \). A one-unit increase in years of experience corresponds to an overall average increase in BRS score. This result is similar to other studies which found there was a significant positive correlation between military service and resilience in that increased number of years of military service corresponded to an average increase in resilience (Aronson et al., 2020; Carbajal, 2022). There were no statistical moderating effects of social support on the relationship between demographic background information and ACE scores. Additionally, those that served in the military had greater mean ACE scores \( (M = 3.20, SD = 2.74) \), than those that did not serve \( (M = 2.95, SD = 2.65) \). This was not a significant mean difference of \( M_{\text{diff}} = 0.25 \) \( (p = .617) \). However, the sample had a greater mean ACE score among the total sample than historical research on ACEs.
Chapter 5: Discussion

Overview

The problem addressed in this study was the mental health issues of National Guard members, particularly those serving part time. The alarming suicide rates of American military service members in the war on terror have encouraged both awareness and the need for more research on reliance skills and risk factors for military service members (Applewhite et al., 2016; Garrido, 2020; LeardMann et al., 2010). This quantitative causal-comparative study was to add to the literature that assesses the role of adverse childhood experiences (ACEs) and combat exposure, specifically regarding part-time service members in the National Guard. The study examined the relationship between mental health issues, ACE scores, resilience scores, type of military service, and demographic background information. The study looked at correlations between those with higher mental health scores, resilience scores, ACE scores, and combat exposure. After the sample data analysis, the multiple regression indicated that years of military service were statistically significant in terms of resilience skills. The findings indicated that a one-unit increase in years of military experience corresponds to an overall average increase in the Brief Resilience Scale (BRS) score.

Furthermore, the analysis of the sample results revealed no moderating effects of social support on the relationship between demographic background information and ACE scores. Moreover, those who served in the military had greater mean ACE scores than those who did not, and the mean difference was not statistically significant among the sample population. However, the sample population showed a greater rate of ACE events than the original study population (Felitti et al., 1998). Chapter 5 presents a discussion of the data and the findings, interpretation of the findings, limitations, implications, recommendations for future research, and conclusion of the study.
Discussion

The purpose of this study was to add to the literature that measures the role of adverse (ACEs) and combat exposure, specifically regarding service members in the National Guard component. This chapter compares the results from quantitative analysis with previous studies reviewed in chapter two of this dissertation (Griffith, 2014; Arincorayan et al., 2017; Kramer et al., 2020). The discussion and interpretation of findings were based on each research question stated in previous chapters, as discussed below.

**RQ1: Does the severity of ACEs predict poor psychological well-being of National Guard post-deployment?**

The results of multiple regression indicated that the years of service were significant such that a one-unit increase in years of experience corresponds to an overall average increase in BRS scores. For example, those with ten years of military service compared to those with five years of military service would score five units higher on the BRS scale than those with five fewer years of service. No other demographic variables such as age or gender were statistically significant in the study sample. The findings indicate that the number of years determines National Guards' resilience to rebound from mental health problems and challenges.

Interpretively, the findings imply that the severity of ACEs predicts poor psychological well-being of the National Guard post-deployment among military service members. The implication is that the psychological well-being of military service members is negatively affected by the number of years of exposure to ACEs among the military service members. Therefore, the severity of ACEs significantly impacts the poor psychological well-being of the National Guard post-deployment, thereby presenting a substantial negative impact on their mental health well-being. The findings are important because they provide significant insight into the effect of years of ACEs exposure, such as sexual abuse, mother or stepmother
mistreatment, substance abuse, exposure to criminal behavior, and exposure to mental illness on
the National Guard's post-deployment psychological well-being.

The findings above have been reported in other studies regarding the severity of ACEs and their prediction of poor psychological well-being in the National Guard post-deployment. As an illustration, Lutgendorf (2019) echoed the current study findings by indicating that National Guard service members who experienced psychological abuse in childhood were more likely to develop mental health problems (Lutgendorf, 2019). According to Lutgendorf (2019), psychological abuse results in depression, stress, anxiety, and posttraumatic stress disorder, which have been linked to mental health issues among service members (Lutgendorf, 2019). The number of years of exposure to psychological abuse could affect the psychological well-being of National Guard members post-deployment among the veterans. The findings concurred with current study results indicating that the emotional well-being of the National Guard members is negatively impacted by the years of exposure to ACEs among part-time service members.

Furthermore, Derefinko et al. (2018) reported that psychological abuse resulted in emotional distress among the National Guard population, contributing to mental health issues among part-time service members. The above findings are also consistent with current study results that the length of exposure to early childhood experiences such as sexual abuse and substance abuse leads to the poor psychological well-being of the National Guard soldiers post-deployment. In a comparable study to Derefinko et al. (2018), Evans et al. (2020) supported the above current study findings by reporting that mistreatment by mothers and stepmothers negatively affected people's mental health based on adverse childhood experiences. These adverse experiences will likely negatively affect the National Guard member’s post-deployment in the military. The current research findings indicate that the effect of such experiences is determined by the years of exposure to ACEs experiences among the National Guard population.
Gaska and Kimerling (2018) echoed these findings by reporting that adverse events such as mistreatment by the mother or the stepmother could encourage mental health issues through traumatic experiences, which affect soldiers in their adulthood stage of life.

Although the above literature supports the findings, some studies provide inconsistent results. For instance, Taylor et al. (2020) reported that involvement in the criminal justice system and PTSD were linked among the military and National Guard soldier population. In this regard, exposure to criminal behavior contributes to posttraumatic stress disorder and other mental health issues (Taylor et al., 2020). Comparable findings to Taylor et al. (2020) were reported by Bennett et al. (2018), who highlighted that adverse childhood experiences such as exposure to criminal behavior were associated with mental health problems and PTSD among National Guard soldiers (Bennett et al., 2018). The current study findings contribute to the previous literature by establishing that the years of exposure to ACEs experiences predict the poor psychological well-being of the National Guard post-deployment among military service members and veterans. The findings have addressed the research question by indicating that the years of exposure to ACEs experiences predict the poor psychological well-being of the National Guard post-deployment.

**RQ2: Does the social support system play a role in psychological health post-deployment factoring ACE scores?**

The sample’s findings demonstrated no moderating effects of social support on the relationship between demographic background information and ACE scores. The sample’s findings indicate that social support does not affect the demographical variables such as age, the number of deployments overseas, years of military service, gender, National Guard/ Reserve Service, active military service, military branch, and race, nor does it have an effect on ACEs
scores in psychological health post-deployment. The findings imply that the support system does not influence the ACEs scores or demographic factors.

The implication is that the demographical variables such as the number of deployments overseas, age, years of military service, active military service, military branch, National Guard/Reserve Service, race, and gender, as well as ACEs scores are not affected by the support system that helps the National Guard members developing resilience to overcome the psychological effect of ACEs exposures. The results are significant because they give information regarding the effect of a support system on psychological health post-deployment.

The current study findings concur with the previous empirical literature regarding the effect of support systems on psychological health post-deployment. For instance, Stanley et al., 2019) found an association between avoidance of mental health symptoms and weakened social support systems. It makes sense that those avoiding social settings and situations struggle to develop those critical support systems. Avoiding a crowd might have been a survival skill on the battlefield, but those skills create challenges for combat veterans recovering from PTSD when they come home. Norman et al. (2018) also found that avoidance is a defensive skill individual might use in small doses but can lead to a particular pathology when overused to cope with severe stressors. Avoidant coping skills predict PTSD symptomatology (Stanley et al., 2019). These findings concur with current study results that the support system does not influence the ACEs scores or demographic factors. Canada et al. (2020) and Stanley et al. (2019) reported that many service members returning from combat feel cut off from loved ones and avoid social settings (Canada et al., 2020; Stanley et al., 2019).

A similar study by Canada et al. (2020) and Stanley et al. (2019) was also reported by Murphy et al. (2019) to support current study findings that National Guard service members experienced poor treatment and poor social relationships due to the effects of PTSD symptoms.
Furthermore, Wilson et al. (2018) reported that the active military and the National Guard population presented experiences of loneliness and social isolation due to PTSD or mental health problems resulting from poor social relationships with other people (Wilson et al., 2018). Moreover, Wilson et al. (2018) advocated for interventions to combat loneliness and isolation among active military and National Guard service members to improve their social life and enhance their support systems (Wilson et al. 2018). The findings are consistent with the current study results that a robust support system answers many psychological problems that service members face. According to Bell et al. (2018), social support and perceived burdens are linked to risk or protective factors against negative and positive mental health outcomes (Bell et al. 2018).

However, the studies above concur with the current study findings; some studies are inconsistent in their findings. For example, Kramer et al. (2020) and Norman et al. (2018) reported that active service members with lower levels of resilience might be more likely to have substance abuse issues, attempt suicide, and even complete suicide. Gross et al. (2019) also reported that positive social support systems protect against adverse health outcomes in post-deployment environments. However, the same service members most challenged in developing a positive support system are those with greater ACE scores (Gross et al. (2019). According to Gross et al. (2019), National Guard soldiers have the most significant risk factors associated with PTSD, self-harm, substance abuse related to ACEs, combat exposure, and the development of strong support systems (Gross et al., 2019).

The current study sample findings contribute to the previous literature by establishing that the social support system has no significant statistical effect on the demographical variables such as age, the number of deployments overseas, years of military service, gender, National Guard/ Reserve Service, active military service, military branch, and race; neither does it affect ACEs scores in psychological health post-deployment. The findings have also answered the
research question by indicating that support does not influence the National Guard's psychological health post-deployment. Overall, the data from the sample imply that the support system does not influence the ACEs scores and the demographic factors on a statistical level.

**RQ 3: Do those with National Guard Deployment have higher ACE scores than those without military service?**

After the analysis, the findings revealed that those that served in the military had greater mean ACE scores than those that did not serve in the military. However, the mean difference was not significant. The findings indicate that those who had served in the military have high ACEs scores compared to those who did not have military service experience or served in the military. The results imply that high ACE scores are found among individuals who had military service experience compared to those who did not serve in the military. The findings are significant because they provide crucial information regarding the differences in ACEs scores between those with National Guard deployment and those who did not have National Guard deployment. Interpretively, the findings imply that ACE scores are more significant among those with National Guard deployment history because of the military combat experiences, which bring back past childhood experience memories.

The above results support the current empirical literature regarding the differences in ACEs scores between individuals with National Guard deployment and those who did not have National Guard deployment. For example, Afifi et al. (2016), Griffith (2014), and Nichter et al. (2021) supported the above findings by establishing that individuals with child abuse in their past were found to be more likely to join the military and show greater rates suicide Arincorayan et al. (2017) reported that certain service members, while in a combat environment, have reported a higher prevalence of three or more ACE scores (Arincorayan et al. 2017). Research with the US Marines found that those with an ACE history showed a greater risk of developing PTSD after
combat exposure (Arincorayan et al., 2017, LeardMann et al., 2010). The research also shows that the higher the ACE score, the greater the risk of developing issues later in life (Aronson et al., 2020). However, some research has shown that even in the most challenging times, some people have the skills to overcome childhood adversity.

The studies that have been explored thus far indicate that ACEs experiences such as contact sexual abuse negatively affected National Guard soldiers, leading to high mental health problems, with the highest rate of ACEs scores being among the National Guard deployment compared to non-national guard. In a study comparable to Arincorayan’s (2017), Portwood et al. (2021) indicated that National Guard soldiers who experienced adverse childhood experiences were at the highest risk of developing mental health issues such as PTSD resulting from ACEs effects of contact sexual abuse. Laird and Alexander (2019) also reported that adverse childhood experiences (ACEs), such as the child’s history of mental illness, were significantly associated with poor mental health outcomes among military service members and National Guard soldiers (Laird and Alexander, 2019). According to Laird and Alexander (2019), childhood experience may contribute to adult emotional and physical health and the development of mental health problems. Similar results to Laird and Alexander (2019) were also reported by Morgan et al. (2022), who revealed that childhood exposure to mental illness could lead to mental health problems among National Guard soldiers, leading to anxiety, depression, suicidality, and PTSD (Morgan et al., 2022).

Overall, the current study findings add to the previous literature by establishing that high ACE scores are found among National Guard members who had military service experience compared to those who did not serve in the military. Whereas previous literature supports the current study findings, some studies have contradicted those findings. For example, according to Arincorayan et al. (2017), while in a combat environment, certain service members have reported
a higher prevalence of three or more ACE scores. In addition, those with an ACE history showed a greater risk of developing PTSD after combat exposure (Arincorayan et al., 2017). However, some research has shown that even in the most challenging times, some people have the resilience skills to overcome their childhood adversity because psychological resilience protects against adverse mental health outcomes (Aronson et al., 2020; Arincorayan et al. 2017).

**Key Findings**

The findings have answered the research question by establishing the relationship between ACEs scores and the mental health of National Guards who had worked in the military. One relationship mentioned but made clear in the research is regarding time from the ACE event. The sample showed that the highest BRS scores were those with the most significant years of military service. For example, those with 20 years of service compared to those with 10 years of service showed that the 20-year service member would score 10 points higher. According to Griffith (2014), those that remembered ACE events such as abuse were 7.5 times more likely to commit suicide when compared to those who did not remember. Therefore, those with the most time from the ACE events showed a greater BRS resilience score among the sample population.

Additionally, the sample population had a more significant rate of ACE events than prior research showing one ACE event for the population. In fact, the original study of the ACE effect was among 52% of adults in the U.S. population who report at least one ACE exposure category (Balio et al., 2018). This sample had an average ACE score of 2.95 among those that have never served. The civilian sample having a greater ACE rate lowered the significance level to the mean score for the military. Additionally, past data shows that the average service member will deploy 2.2 times during military service for 12 months or more (Cunitz et al., 2019). However, the sample mean for those with a military deployment was 1.47. The lower deployment results in the data indicate the decreased level of military deployment in the National Guard population. The
lower number of deployments can be attributed to the end of the operation in Afghanistan and most of Iraq and Syria.

**Limitations of the study**

This study had several limitations. The first limitation was that the study adopted a convenience sampling technique. The limitation is that convenience sampling lacks clear generalizability and is highly vulnerable to selection bias and influence beyond the researcher's control (McCusker, K., & Gunaydin, S. 2015). In addition, convenience sampling has a high level of sampling error (McCusker, K., & Gunaydin, S. 2015). Another limitation is that this used one geographical location to conduct the study. The study included full-time National Guard soldiers, part-time National Guard soldiers that serve once a month, Federal Reserve Members, and veterans from all the groups mentioned above. Having so many diverse groups is a limitation because the study findings may not be generalized to other categories of military service members, such as the active military service member in the United States.

Another limitation of this study was that participants completed the survey from any computer or smart device. As for the survey, the plan was to scan the study QR code. Such data collection method may not provide sincere and genuine responses from the respondents taking the survey online through a computer or smartphone device. Also, the survey took place during the Covid-19 pandemic. The pandemic impacted the National Guard, ACE events, and how the survey could be collected. Also, the survey was collected over a 30-day period. The short time frame was additional limitation to only those that saw the study during that time. Another limitation was regarding placement of questions. The majority of those that stopped taking the survey were those that stopped at the clinical scales. Future studies should consider fewer clinical scale questions, more demographic questions, and different placement of the questions on the survey.
Implications

The study has several implications for the National Guard, fields of research on resilience, and current rates of ACE scores. The Department of Defense (DOD) may use this study’s findings to understand the causes of the high rate of suicide cases among National Guards service members, veterans, as well as that active military service members. These results will help the DOD implement policies and set programs to help those with mental health issues before and after deployment. The VA may also find this research helpful because they could use the data to identify the various needs among the National Guards veterans as well as the active military service members who are still serving in the military. The families of the veterans can also use the study results to aid in their understanding regarding the cause of the mental health issues their partners or family members in the service are facing. Mental health professionals could also use the study’s findings to help National Guards service members in therapy deal with traumatic events and mental health issues attributed to ACEs and combat experiences.

Theoretical Contributions

This study adopted Resilience Theory (RT), which described individuals exposed to adversity or significant threat demonstrating better than predictable outcomes (Van Breda, 2018). The model merges two lines of thinking into one model. The first part of the model brings resilience pioneers, which define resilience as an outcome. The second part of the model is those that define resilience as a process (Garrido, 2020). The research regarding resilience utilizing the outcome definition led to the increasing interest in developing a greater understanding of the mediating processes concerning negative and adversity outcomes that lead to healthier outcomes for some and lesser outcomes for others (Van Breda, 2018). In this regard, the findings add to the theory by establishing that support systems may assist service members in combating mental health-related problems to strengthen their resilience in coping with psychological problems to
enhance their well-being over time. Those with the most military service had the highest BRS scores overall.

**Recommendations for Future Research**

This study generated several recommendations based on limitations and the study's findings. The first limitation was that the study adopted a convenience sampling technique. The limitation is that convenience sampling lacks clear generalizability and is highly vulnerable to selection bias and influence beyond the researcher's control. In addition, convenience sampling has a high level of sampling error and has little credibility. The recommendation is that future studies should adopt larger sampling methods to avoid future selection bias.

Another recommendation is that future studies use additional geographical locations to conduct the study. The use of different settings or additional allows the generalizability of study findings. The study included full-time National Guard soldiers, part-time National Guard soldiers that serve once a month, Federal Reserve Members, and veterans from all the groups mentioned above. This is a limitation because the study findings may not be generalized to other categories of military service members, such as the active military service member in the United States. The recommendation is that future research should include all military service members and active service members.

The researcher recommends that the Department of Defense stakeholders develop various support systems to assist military service members with PTSD complications. In addition, various settlement mechanisms should be outlined for the retired veterans to support those finding decent housing and care after retiring getting medically discharged from military service. Furthermore, future studies should be conducted to promote a greater understanding of the resilience mechanisms to be adopted by military service suffering from mental health issues. Future studies should also be conducted to understand the resilience differences among
American military service members compared to types of military service branches. Additionally, those branches with high clinical score could get early interventions.

**Conclusion**

The problems addressed in this study were the mental health issues, and the alarming suicide rates among American Service Members, during the war on terror, which have encouraged both awareness and the need for more research on resiliency skills and risk factors for those serving (Applewhite et al., 2016; Garrido, 2020; LeardMann et al., 2010). The purpose of this quantitative causal-comparative study was to add to the literature that assesses the role of adverse childhood experiences and combat exposure, specifically involving part-time service members in the National Guard.

The study examined the relationship between mental health problems, ACE scores, type of military service, and demographic background information. After conducting the analysis, the findings indicated that a one-unit increase in years of military experience corresponds to an overall average increase in BRS. The BRS findings are statistically significant and have implications on future research. The BRS results mean those with more military years of experience have greater resilience skills than fellow soldiers with fewer years of military experience. Further, the results revealed no moderating effects of social support on the relationship between demographic background information and ACE scores. Additionally, although those who served in the military had greater mean ACE scores than those who did not, the mean difference was not significant. However, the study sample population showed higher ACEs scores than civilians in the original data set. These findings also provide a strong indication that ACE scores could be on the rise in the civilian population. The findings of this research provide a strong basis and reference point for future researchers to understand the
reasons for the high suicide rate among American military service members and the resilience differences among various service members.


combat exposure on mental health conditions among new post-9/11


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Appendix A: Survey

**Demographic and Service Information:**

1. Age? 18 to 100
2. Number Deployments overseas? 1 to 20
3. Years of military service? 1 to 40
4. Gender? Male or Female or other
5. National Guard Service or Reserve Service? Yes or No
6. Active Military Service other than basic and AIT, Yes or No
7. Military Branch? Army, Navy, Air Force, Marines, Space Force, Coast Guard, Never Served
8. Race?
**PCL-5**

**Instructions:** Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

<table>
<thead>
<tr>
<th>In the past month, how much were you bothered by?</th>
<th>Not at all</th>
<th>A little bit</th>
<th>Moderately</th>
<th>Quite a bit</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Repeated, disturbing, and unwanted memories of the stressful experience?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. Repeated, disturbing dreams of the stressful experience?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. Feeling very upset when something reminded you of the stressful experience?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. Avoiding memories, thoughts, or feelings related to the stressful experience?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. Trouble remembering important parts of the stressful experience?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>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)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. Blaming yourself or someone else for the stressful experience or what happened after it?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. Loss of interest in activities that you used to enjoy?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. Feeling distant or cut off from other people?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15. Irritable behavior, angry outbursts, or acting aggressively?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16. Taking too many risks or doing things that could cause you harm?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17. Being &quot;superalert&quot; or watchful or on guard?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18. Feeling jumpy or easily startled?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19. Having difficulty concentrating?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20. Trouble falling or staying asleep?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Adverse Childhood Experience (ACE) Questionnaire

Finding your ACE Score

While you were growing up, during your first 18 years of life:

1. Did a parent or other adult in the household often …
   Swear at you, insult you, put you down, or humiliate you?
   or
   Act in a way that made you afraid that you might be physically hurt?
   Yes    No      If yes enter 1   ____

2. Did a parent or other adult in the household often …
   Push, grab, slap, or throw something at you?
   or
   Ever hit you so hard that you had marks or were injured?
   Yes    No      If yes enter 1   ____

3. Did an adult or person at least 5 years older than you ever …
   Touch or fondle you or have you touch their body in a sexual way?
   or
   Try to or actually have oral, anal, or vaginal sex with you?
   Yes    No      If yes enter 1   ____

4. Did you often feel that …
   No one in your family loved you or thought you were important or special?
   or
   Your family didn’t look out for each other, feel close to each other, or support each other?
   Yes    No      If yes enter 1   ____

5. Did you often feel that …
   You didn’t have enough to eat, had to wear dirty clothes, and had no one to protect you?
   or
   Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
   Yes    No      If yes enter 1   ____

6. Were your parents ever separated or divorced?
   Yes    No      If yes enter 1   ____

7. Was your mother or stepmother:
   Often pushed, grabbed, slapped, or had something thrown at her?
   or
   Sometimes or often kicked, bitten, hit with a fist, or hit with something hard?
   or
   Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?
   Yes    No      If yes enter 1   ____

8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?
   Yes    No      If yes enter 1   ____

9. Was a household member depressed or mentally ill or did a household member attempt suicide?
   Yes    No      If yes enter 1   ____

10. Did a household member go to prison?
    Yes    No      If yes enter 1   ____

   Now add up your “Yes” answers:      _____  This is your ACE Score
Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1988)

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

Circle the “1” if you **Very Strongly Disagree**
Circle the “2” if you **Strongly Disagree**
Circle the “3” if you **Mildly Disagree**
Circle the “4” if you are **Neutral**
Circle the “5” if you **Mildly Agree**
Circle the “6” if you **Strongly Agree**
Circle the “7” if you **Very Strongly Agree**

1. There is a special person who is around when I am in need. 1 2 3 4 5 6 7 SO
2. There is a special person with whom I can share my joys and sorrows. 1 2 3 4 5 6 7 SO
3. My family really tries to help me. 1 2 3 4 5 6 7 Fam
4. I get the emotional help and support I need from my family. 1 2 3 4 5 6 7 Fam
5. I have a special person who is a real source of comfort to me. 1 2 3 4 5 6 7 SO
6. My friends really try to help me. 1 2 3 4 5 6 7 Fri
7. I can count on my friends when things go wrong. 1 2 3 4 5 6 7 Fri
8. I can talk about my problems with my family. 1 2 3 4 5 6 7 Fam
9. I have friends with whom I can share my joys and sorrows. 1 2 3 4 5 6 7 Fri
10. There is a special person in my life who cares about my feelings. 1 2 3 4 5 6 7 SO
11. My family is willing to help me make decisions. 1 2 3 4 5 6 7 Fam
12. I can talk about my problems with my friends. 1 2 3 4 5 6 7 Fri

The items tended to divide into factor groups relating to the source of the social support, namely family (Fam), friends (Fri) or significant other (SO).

References


### Brief Resilience Scale (BRS)

<table>
<thead>
<tr>
<th>Respond to each statement below by circling one answer per row.</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRS 1 I tend to bounce back quickly after hard times.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>BRS 2 I have a hard time making it through stressful events.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>BRS 3 It does not take me long to recover from a stressful event.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>BRS 4 It is hard for me to snap back when something bad happens.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>BRS 5 I usually come through difficult times with little trouble.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>BRS 6 I tend to take a long time to get over setbacks in my life.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Scoring:** Add the value (1-5) of your responses for all six items, creating a range from 6-30. Divide the sum by the total number of questions answered (6) for your final score.

**Total score:** _____ / 6

**My score:** _____ (average)

<table>
<thead>
<tr>
<th>BRS Score</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00 - 2.99</td>
<td>Low resilience</td>
</tr>
<tr>
<td>3.00 - 4.30</td>
<td>Normal resilience</td>
</tr>
<tr>
<td>4.31 - 5.00</td>
<td>High resilience</td>
</tr>
</tbody>
</table>