Summer 8-2023

The Mediation Effects of Adaptive Blindness Strategies on the Relation Between Institutional Betrayal From Military Sexual Assault and Mental Health Symptoms

Rachel L. Davies
Old Dominion University, rachydavies95@gmail.com

THE MEDIATION EFFECTS OF ADAPTIVE BLINDNESS STRATEGIES ON THE RELATION BETWEEN INSTITUTIONAL BETRAYAL FROM MILITARY SEXUAL ASSAULT AND MENTAL HEALTH SYMPTOMS

by

Rachel L. Davies
B.S. December 2017, Colorado State University
M.S. May 2021, Old Dominion University

A Dissertation Submitted to the Faculties of Norfolk State University and Old Dominion University in Partial Fulfillment of the Requirements for the Degree of

DOCTOR OF PHILOSOPHY

CLINICAL PSYCHOLOGY

VIRGINIA CONSORTIUM PROGRAM IN CLINICAL PSYCHOLOGY
August 2023

Approved by:

Michelle L. Kelley (Director)

Andrew S. Franklin (Member)

Cathy Lau-Barraco (Member)

ABSTRACT

THE MEDIATION EFFECTS OF ADAPTIVE BLINDNESS STRATEGIES ON THE RELATION BETWEEN INSTITUTIONAL BETRAYAL FROM MILITARY SEXUAL ASSAULT AND MENTAL HEALTH SYMPTOMS

Rachel L. Davies
The Virginia Consortium Program in Clinical Psychology, 2023
Director: Dr. Michelle L. Kelley

Military sexual assault is a serious and prevalent issue. The frequency with which military sexual assault occurs and the nature of the response to these events within the military system may contribute to institutional betrayal. Institutional betrayal is the failure of an institution, such as the military, to prevent sexual assault from occurring and/or the failure to support a survivor after sexual assault. Adaptive blindness strategies are forms of coping strategies that help individuals navigate a relationship they depend on when there is a betrayal. Two adaptive blindness strategies are self-blame and minimization. Although the adaptive blindness strategies may allow sexual assault survivors to navigate their experiences with sexual assault and institutional betrayal, it was predicted that both self-blame and minimization would be associated with more depressive symptoms and posttraumatic stress disorder (PTSD) symptoms. Data were collected using an online survey of 153 female service members who endorsed military sexual assault. Self-blame had significant mediation effects on the relation between institutional betrayal for both depressive symptoms and PTSD symptoms suggesting it may act as an adaptive blindness strategy. In contrast, minimization did not mediate the association between institutional betrayal and mental health outcomes. In addition, variables that may possibly impact the utilization of adaptive blindness strategies, specifically, years served and unit support, were analyzed via moderation models. Years served in the military did not have

significant moderation effects on the relation between institutional betrayal and the adaptive blindness strategies. Unit support did significantly moderate the association between institutional betrayal and minimization, specifically, more unit support was associated with increased minimization in response to institutional betrayal. Therefore, minimization may act as an adaptive blindness strategy under conditions of high unit support. These findings should be incorporated into our understanding of how women service members may respond to institutional betrayal regarding sexual assault thus informing Department of Defense's policies and therapists' conceptualization of women service members to provide culturally competent care. The findings also add support for the use of the betrayal trauma theory (Freyd, 1994) with the population of women service members.

ACKNOWLEDGEMENTS

Many people have assisted me on my journey. There were many times in which I was ready to quit; however, due to the support of my parents, fiancée, and Dr. Robin Lewis, I persevered. They were there in my darkest moments and helped me find the light to see that I was very much capable and stronger than I had known at that moment. In addition, my mentor, Dr. Kelley, provided invaluable feedback and guidance on this project and with several other research projects which have helped me grow as a researcher and even a clinician as I continue to work with military service members. Fellow cohort members and some fellow lab members, such as Dr. Sarah Ehlke, have always taken the time to help me understand and learn new skills despite their very busy schedules. I will be indebted to them for any and all career success that I may have in the future.

TABLE OF CONTENTS

Page

Chapter Page

LIST OF TABLES

Table Page

LIST OF FIGURES

Figure Page

CHAPTER 1

INTRODUCTION

Military sexual trauma is a significant problem in the United States military as it is related to several negative health outcomes such as depression, substance use, posttraumatic stress disorder (PTSD), and eating disorders (Breland et al., 2018; Godfrey et al., 2015; Suris & Lind, 2008). Military sexual trauma has been defined in many ways by different researchers and institutions (Suris & Lind, 2008). The Veterans Administration defines military sexual trauma as "experiences of sexual assault or repeated threatening sexual harassment that a Veteran experienced during his or her military service," and they specify it as being against the veteran's will (Veterans Administration, 2020b, p. 1). The Department of Defense defines military sexual trauma as two separate offenses, namely sexual harassment and sexual assault (Department of Defense, 2019a). According to the Department of Defense (2019a), sexual harassment is defined as "...conduct that involves unwanted sexual advances, requests for sexual favors, and deliberate or repeated offensive comments or gestures of a sexual nature..." (p. 2). Sexual assault is "...referred to as a range of crimes, including rape, sexual assault, forcible sodomy, aggravated sexual contact, abusive sexual contact, and attempts to commit these offenses" (Department of Defense 2019b, p. 6).

The difference in operational definitions makes it difficult to obtain an exact estimate of these experiences. To further complicate the ability to obtain accurate estimates of military sexual trauma, different methodology (e.g., in-person interviews, anonymous surveys), different definitions (e.g., more complete and more specific definitions of military sexual trauma yield higher rates), and the type of sample (e.g., treatment seeking samples have higher rates of

military sexual trauma) add to the difficulty of estimating military sexual trauma (Allard et al., 2011; Surís & Lind, 2008).

Wilson (2018) argues that even large-scale datasets from the VA do not accurately reflect rates of military sexual trauma because the data only reflect veterans who are enrolled in the VA and who told their provider about military sexual trauma. Not all those who serve in the military are eligible for VA health care (Huang et al., 2018). For instance, disqualifiers, such as not meeting the required length of time in the military or specific discharge statuses (e.g., other than honorable, dishonorable, bad conduct; Veterans Administration, 2020a), may preclude a veteran from receiving care at the VA which means they do not have the opportunity to disclose military sexual trauma to their provider. In addition, veterans are assigned to different priority groups which affect care due to factors like co-payments and the speed with which a veteran can attain services (Huang et al., 2018; Veterans Administration, 2020a). As a result, these factors are likely to influence how many veterans see VA providers. Taken together, VA estimates of military sexual trauma are likely to underrepresent the rates of military sexual trauma.

In one of the few large-scale studies to examine the prevalence of military sexual trauma, a meta-analysis of 69 studies found that the prevalence rates differ depending on definition (Wilson, 2018). For studies that defined military sexual trauma as the Veterans Administration does, that is, as a combination of sexual harassment and sexual assault, the mean prevalence rate for women was 38.4%; however, when military sexual trauma was defined as sexual harassment and sexual assault separately, the mean prevalence rate for military sexual assault was 23.6%, whereas the mean prevalence rate for military sexual harassment for women was 52.5% (Wilson, 2018). Another way that prevalence can be measured is through the number of formal reports of military sexual assault. There are two types of formal reports that women service members can

make. One is “unrestricted” report resulting in command being notified and proceeding with an investigation or “restricted” report of which command is never informed nor is there an investigation (Department of Defense Sexual Assault Prevention and Response, 2022). Restricted reports allow the service women to obtain medical services, mental health services, and have forensic evidence collected if she were to desire an investigation later. The number of formal sexual assault reports have increased every year since fiscal year 2012. Specifically, 2,828 service members made formal reports regarding sexual assault in fiscal year 2012 and 6,290 service members made formal reports about sexual assault in fiscal year 2020 (Department of Defense Sexual Assault Prevention and Response, 2021).

Why Does Military Sexual Trauma Happen?

Results are inconsistent as to whether there is greater sexual victimization in the military or among civilians. There are some studies, such as Zinzow et al. (2007) that have found the prevalence of sexual assault is higher in the military population than in the civilian population. Bostock and Daley (2007) found from their sample of 2,018 active-duty Air Force women, 28% reported sexual assault over their lifetime which is more than twice the prevalence in the national sample. Powers et al. (2020) found that when there is a higher percentage of military personnel on a base relative to civilian personnel, there were more sexual assault reports. Specifically, for every 1% increase in military personnel, there was a 1% increase in sexual assault reports (Powers et al., 2020).

However, studies that have found differences in the prevalence of sexual assault between military personnel and civilians have received criticism. For example, Rough and Amor (2017) point out that although self-reported surveys from the Department of Defense show higher rates of sexual assault than the Bureau of Justice Statistics’ National Crime Victim Survey,

methodological discrepancies and wording differences (e.g., including the word, “attacked” in the National Crime Victim Survey) may result in inaccurate comparisons. Due to the few methodologically rigorous studies, the debate as to whether military personnel or civilians experience more sexual assault remains (Rough & Amor, 2017). Regardless, if there is no difference between populations, it is still concerning to see no difference because that implies that the rates are similar. It is concerning because often data on civilian women’s sexual victimization is assessed over their lifetime, and military sexual trauma assesses a woman’s sexual victimization in a much shorter span of time because military sexual trauma must occur while she is in the military. Typically, a military career ranges from a few years to 20 years (Suris et al., 2007).

There are a number of reasons why some studies generally report higher rates of sexual assault and sexual harassment in military versus civilian samples. First, women veterans report higher levels of childhood sexual abuse than civilian women (Schultz et al., 2006; Suris & Lind, 2008). The higher prevalence of childhood sexual abuse is important because survivors of childhood sexual abuse are 3.1 times more likely to experience sexual abuse revictimization as adults than those who did not experience childhood sexual abuse (Cloitre et al., 1996). Women with childhood sexual abuse may be drawn to the military because it is a way to escape from traumatic or negative family environments (Hall, 2011). To demonstrate this phenomenon, Sadler et al. (2004) found within their study sample (n = 520) nearly half of the women veterans reported that they joined the military to remove themselves from an abusive and distressing home environment, and 35% of the sample had experienced childhood sexual abuse.

It is curious to see that women who have previously experienced sexual victimization as children would be at higher odds to experience sexual trauma again as one may think they may

be more aware or better able to protect themselves against future experiences. There are a few theories for why sexual revictimization may be higher for those who have been sexually abused as children. Breitenbecher's (2001) review of sexual revictimization theories divide the theories into the following categories: spurious factors, situational or environmental variables, disturbed interpersonal relationships, cognitive attributions, self-blame and self-esteem, coping skills, perception of threat and trauma-related symptomatology, and general psychological adjustment. To further explore one of the interpersonal explanations, women with histories of childhood sexual abuse may struggle to sever connections with abusive individuals and/or may even unconsciously seek abusive individuals because, although not enjoyable or pleasant, those abusive individuals provide a sense of comfort through familiarity (Breitenbecher, 2001). Cognitive attribution theories contend that individuals who were in uncontrollable and negative events, such as in the case of childhood sexual abuse, may not know how to engage in self-protective behaviors for future occurrences because they have learned that there is nothing that they can do to change their situation (Breitenbecher, 2001). These two explanations may be relevant for women in the military who have experienced previous childhood sexual abuse. Specifically, a qualitative study with women veterans found a common theme which was that military sexual harassment is "expected", "constant", and "normal" (Brownstone et al., 2018). Therefore, to compound on the sentiment that sexual harassment seems normalized in the military, women with previous childhood sexual abuse histories may find sexual harassment familiar or may not know how to protect themselves against this behavior.

Another reason for why there may be a higher prevalence rate for sexual assault in the military versus civilian population is the military culture. As part of the process of becoming a member of the military, individuals go through a transition in which they lose their old identities

or parts of their civilian identities and are expected to conform to a military identity (Williams & Bernstein, 2011). This process may result in a feeling of powerlessness (Williams & Bernstein, 2011). To gain back some of the power they have seemingly lost through the transition to the military and compounded by the military cultural themes of hypermasculinity and the emphasis on power attainment in the military, Williams and Bernstein (2011) suggest they may turn to other avenues to regain control of their lives. Another avenue may include overpowering another which can be done through sexually assaulting women (Williams & Bernstein, 2011). In addition, Williams and Bernstein (2011) explain that in training, service members are taught that they should be warriors, and the military idealizes masculinity and strength, resulting in some men internalizing that they need to be hypersexual to prove their masculinity. The emphasis on power attainment and power dynamics may also explain why it is more common for younger and lower enlisted ranks to be at higher odds for experiencing military sexual trauma (Firestone et al., 2012; Suris & Lind, 2008; Wolff & Mills, 2016). In fact, the United States Department of Defense's Sexual Assault Prevention and Response (2019) found that 66% of their sexual assault cases occurred to those in the lowest rank.

Continuing with the military cultural value of hypermasculinity and power, women are not viewed to fit in or fulfil this cultural value which may lead to male service members viewing women service members as less than; therefore, it is perceived to be more acceptable to treat them poorly through sexual harassment or sexual assault. Women veterans in qualitative studies have reported that men have thought of them as weaker (Conard & Scott-Tilley, 2015). Another study found that only 33% (n = 384) of male veterans have positive perceptions about women service member's physical ability to carry out needed tasks (Vogt et al., 2007). Morral et al. (2015) found that nearly 20% of their active-duty sample of women reported that they heard

remarks from military coworkers that women are inferior at certain jobs or should be prevented from having certain jobs. Overall poor perceptions of women from their male counterparts may contribute to sexual harassment because poorer perceptions/attitudes about women in the military was found to have a moderate effect on acceptance of sexual harassment (McCormack & Bennet, 2021; Vogt et al., 2007).

Unique Military Factors Impacting the Healing of Military Sexual Trauma

There are also some studies that suggest military sexual trauma results in worse outcomes. Suris et al. (2007) found that when compared to sexual assault in civilians, those who experienced military sexual assault had more severe depressive symptoms, less satisfaction in three domains of quality of life (e.g., family relations, health, daily activities), higher phobic anxiety, higher hostility, and higher distress. The process of healing from military sexual assault may be different from women who experience sexual assault as civilians which is why it is important not to lump civilian and military sexual assault together and treat or view them in the exact same way. Some unique influences that affect a woman's experience of military sexual assault and healing after the experience are military culture, reporting procedures, and peers' reactions.

The military culture exudes a paternalistic nature which may affect how much an individual believes they are in control over their healing or how they view their trauma. Northcut and Kienow (2014) argue that within the military paternalism is found within the rank structure in that higher ranks are supposed to care and safeguard the lower ranks, and this creates a strong emotional connection to other service members as well which serves functions like protecting the goals of the military even in situations of life and death. This paternalism is important because there is a shift of respecting the individual to trying to preserve the group; therefore, when an

individual reports military sexual trauma, it is interpreted as an attack on the group and members may respond by diminishing the individual through destroying the survivor's sense of personal control over their life (Northcut & Kienow, 2014). Additionally, due to military service members seeing each other as family (Ahern et al., 2015; McCormack & Ell, 2017), some have likened military sexual assault to closely resemble incestual rape in that the service member may experience more emotional distress and betrayal because it is viewed as a betrayal by a trusted "family" member rather than a stranger or coworker (Goodcase et al., 2015). Thus, it may be important to consider service members' time in the service when investigating or working with individuals who have experienced military sexual trauma as it may influence how much they have integrated paternalism with their role in the military.

Another factor that complicates the healing process for military sexual assault are the acts to diminish the woman service member that may arise when the service member tries to make a formal report about military sexual assault. Due to the structure and culture of the military, those in higher ranks and military leaders feel a heavy responsibility for the actions and reputation of their units (Castro et al., 2015); therefore, it is possible that these military leaders may believe they are at fault or responsible for the military sexual trauma occurring within these units, and as a result may work to reduce or minimize the allegations (Dardis et al., 2018).

In addition to the minimization from higher ranks, many women face barriers when trying to make a formal report on their military sexual trauma case. For example, Morral et al. (2015) found that 52% of the women who made a formal report said they experienced retaliation in the form of "social retaliation," "professional retaliation," undesirable administrative actions, and punishments. The retaliation came from the perpetrator (31%), co-workers (31%), and supervisors (21%; Morral et al., 2015). Campbell and Raja (2005) found that 70% of their small

sample (n = 23) of female veterans who reported military sexual assault to the legal system during their time of military service were encouraged not to report the case, and for 65% of these women, the legal system refused to take their report. In a qualitative study with another small sample size, all 16 female veterans who reported military sexual trauma to military personnel experienced at least one negative reaction in response to their disclosure (Dardis et al., 2018). Specifically, the negative reactions they experienced consisted of an unwillingness to help, inaction, retaliation, and victim blaming (Dardis et al., 2018).

Not only does it appear that there are negative reactions when a service member discloses or reports military sexual trauma, there are barriers to being able to report. Ninety-one percent of the female veteran sample from Dardis et al. (2018) who experienced military sexual trauma said they experienced barriers to reporting. Specific barriers included uncertainty in how to make a report given the complicated reporting process, the lack of safe and desirable people to report to (e.g., mostly being men, closely associated with their chain of command), fear of negative consequences, and concern that others may shame them or treat them in a negative manner (Dardis et al., 2018, Morral et al., 2015).

Another explanation why formal military sexual trauma reports by female service members are ignored or lack an active response is due to military values. The military emphasizes accountability as it is often necessary for survival and the health of the unit to ensure that everyone does their job and does it correctly (Adler et al., 2011). However, sometimes this value is so strongly emphasized that it diminishes any external explanations for why a behavior may have occurred. As a result, victim-blaming and rape myths (e.g., focusing on the clothing or behavior of the victim as being the cause for the sexual assault) become the focus rather than the focus on the behavior of the perpetrator. The emphasis on accountability may reinforce the idea

that female veterans who report military sexual trauma are making false claims. For this reason, reports may not be taken as seriously (Perishing, 2003).

The final point to make when discussing the factors that negatively contribute to a women service member's functioning after sexual assault, is the lack of support they may experience from their fellow colleagues. A possible safety net after the minimization about the military sexual assault from higher leadership, difficult reporting procedures, and excessive accountability culture in military, is support from fellow service members. Unfortunately, even reaching out to colleagues may result in the same negative experiences. McCormack and Bennett (2021) argue that there is a presence of gender minimization in the military in which women, who are a minority, experience bias against them and dehumanizing behaviors. This reinforces a channel for sexual abuse against women in the military and supports the minimization of sexual abuse (McCormack & Bennett, 2021). Therefore, if women service members are placed in units in which gender minimization is more pronounced, they may face less supportive reactions when sexual assault occurs. Even among other women service members, there may be some negative reactions to other women's reports of military sexual trauma. In a qualitative study, Burns et al. (2014) found that women veterans who had not experienced military sexual trauma thought that those who had experienced military sexual trauma were irresponsible and inherently deserved it because they should have had their "battle buddy", they drank too much alcohol, or they wore inappropriate attire.

Institutional Betrayal

All of these shortcomings in response to military sexual trauma formal reports described above (e.g., barriers to make official reports, negative reactions to disclosure) serve as secondary victimization for women service members. These shortcomings may lead to institutional

betrayal. Institutional betrayal is the failure of an institution, such as the military, to prevent offenses committed by individuals within the institution or to support those within the institution who have been negatively harmed by those offenses (Smith & Freyd, 2013). Specific behaviors that make up institutional betrayal can include retaliation, creating an environment that normalizes sexual assault and sexual harassment, adding barriers to reporting, covering up the report, failing to respond to the situation with the magnitude it deserves, not instilling preventative measures, and minimizing the behavior via language (e.g., "adult-child sexual contact" versus "rape") (Pinciotti & Orcutt, 2021; Smith & Freyd, 2014).

Smith and Freyd (2014) explain that there are several characteristics of an institution that increase the likelihood of institutional betrayal experiences. These include having a clearly defined membership, being achievement-oriented, and being highly prestigious. The military fits each of these characteristics. The military has clearly defined membership with branches and hierarchical ranks. Each branch has its own uniform distinguishing its members from other branches and from civilians. The prestigiousness comes from the very rigid hierarchical system of the ranks, especially between officer and enlisted, all of which are necessary for military functioning (Hall, 2011). Bootcamp is a method of removing the service member's personal identities and replacing them with a military identity (Demers, 2013). The military is also very achievement oriented. The military places the value of "mission" above all else, even above individual selves, and it is imperative that they maintain a high degree of readiness (Hall, 2011). This value puts individuals at risk for institutional betrayal because the military may value its reputation and the mission over the well-being of its members.

Effects of Institutional Betrayal and Adaptive Blindness Strategies

When discussing institutional betrayal and how individuals may react to this experience, it is important to bring the betrayal trauma theory (Freyd, 1994) into context. Betrayal trauma theory explains that in the face of betrayal from a trusted person, or entity, of which the individual is dependent on, the individual will develop an adaptive blindness to protect themselves against the pain and help them behave in ways that serve to protect the relationship with the organization, so that they can continue to depend and survive on them (Freyd, 1994). Adaptive blindness was originally conceptualized to explain why amnesia associated with childhood sexual trauma may occur (Freyd, 1994); however, other researchers contend that adaptive blindness can be transformed to minimizing the abuse or self-blame because those strategies reduce the fault of the perpetrator or entity (Gagnon et al., 2017).

Although betrayal trauma theory was originally based on relationships between children and parents, this theory is relevant for military sexual trauma because of the power dynamics existing within the military culture. As already noted above, the military creates an environment in which there are power dynamics and reliance on authority for survival through ranks which is similar to the relationship between children and parents (Northcut & Kienow, 2014). Other researchers have also seen the similarity and the relevance of betrayal trauma for military sexual trauma and institutional betrayal (Hamrick et al., 2021; Monteith et al., 2021). Service members may have a need for this adaptive blindness technique because of the culture and structure of the military. For example, the military culture values putting the mission above everything else (Burns et al., 2014; Hall, 2011), which may require women service members to use adaptive blindness in the form of self-blame or minimization to be able to carry out the duties required to complete the mission with other unit members even when they have betrayed her. She will need to trust the fellow military members to help with the mission perhaps with gear, supplies, paperwork, and so

forth, all of which may be more difficult if she blames them or harbors anger and resentment towards them for the assault.

The retaliation and barriers in reporting (Dardis et al., 2018, Morral et al., 2015) associated with institutional betrayal may also lead to feeling a lack of control over their trauma. Self-blame may provide a way for individuals to believe they have control over their trauma because they can imagine the ways they could have acted differently to prevent it; therefore, alluding to the idea that they could have prevented it from happening and may be able to stop it from happening in the future (Janoff-Bulman, 1979). Those who experience a high amount of institutional betrayal may use self-blame as a protective tactic to ensure they can prevent sexual assault from occurring again because they learned that they cannot depend on the military for assistance.

There may be many negative reactions (e.g., victim blaming by saying they should have had their "battle buddy") from peers when confronted with the news that their fellow colleague has been sexually assaulted (Burns et al., 2014). It is conceivable that the female service member may have self-blame associated with her sexual assault before hearing anyone's input; therefore, the negative reactions from others also insinuating blame could strengthen and compound her own self-blame (Ullman, 1996; Ullman et al., 2007). As a result of these negative messages, it is possible that survivors of military sexual assault may internalize the messages of blame for the assault (e.g., blaming their physical appearance) by their peers (Brownstone et al., 2018). In fact, the internalization of self-blame for women service members was so impactful that it led to them cutting their hair, taping their breasts, and gaining weight in an attempt to reduce future sexual assault (Brownstone et al., 2018).

Along with the possible internalization of the self-blame due to the messages of other service members, the survivor may also remain silent about the sexual assault or minimize the seriousness of it in order to maintain unit cohesion (Burns et al., 2014). One could argue that self-blame and minimization are adaptive blindness strategies because these strategies allow women service members to change their own behavior and perspective. This may be perceived as more protective to the women service members because it adjusts how much they depend on their military counterparts as it is less likely that they will receive the support they desire due to presence of gender minimization in the military (McCormack & Bennet, 2021). Unfortunately, unlike a civilian career, a service member cannot change their position or leave the military at any point. Therefore, the attitude that the victim could have done more to prevent sexual assault may illustrate to the survivor of military sexual assault that, although there may be a betrayal with the lack of support and denial of experience, to be accepted and cared for by the group, she must accept blame for putting herself in that situation.

Related to the above, there is a strategy that perpetrators use to silence their victims called Deny, Attack, and Reverse Victim and Offender (DARVO) which includes minimization, rejection of responsibility (e.g., “I don’t know what you’re talking about”), gaslighting (e.g., “You’re just being hypersensitive about it”), and actively confusing the survivor regarding fault (“I can’t believe you’re trying to make this my fault”) (Harsey et al., 2017). These behaviors are similar to what some service members report experiencing as a result of making a formal report about their military sexual trauma (Campbell & Raja, 2005; Dardis et al., 2018; Morral et al., 2015). These behaviors are important to note because Harsey et al. (2017) found that DARVO leads to more self-blame. It may be that the denial of the sexual assault and/or poor mishandling of formal reports of sexual assault that some female service members experience with the

military may confuse the survivor thus leading to self-doubt and self-blame. For example, Campbell and Raja (2005) found female service members reported that the military legal system asked them questions that could be perceived as minimization or shifting blame. To illustrate, 78% said they were asked by the military legal system if they resisted the perpetrator, and 26% said the military legal system questioned about the way they were dressed (Campbell & Raja, 2005). This minimization or gaslighting may lead to confusion about their recount of the trauma and then lead to self-blame.

Factors that May Influence the Relation between Institutional Betrayal and Adaptive Blindness Strategies

There may some factors that influence how strongly institutional betrayal may lead to adaptive blindness strategies such as self-blame or minimization. For example, the length of time in service may be an important factor in increasing the utilization of adaptive blindness strategies because of the investment the service member has placed within the military. There are benefits in staying in the military for longer periods. For example, to earn a lifetime annual annuity, an individual must serve in the military for 20 or more years (United States Government, 2022). If the service member joined after August 1986, under the REDUX plan, and served for 20 years, they are eligible to receive 40% of their base pay averaged over their three years of highest pay (Department of Defense, n.d.). Therefore, an individual who only needs to serve a few more years to attain lifetime annual annuity may feel pressured to remain in the military and may utilize adaptive blindness techniques such as minimization and self-blame to be able to continue to function in that environment where institutional betrayal has occurred.

Another factor that may impact the use of adaptive blindness when faced with institutional blindness is unit support. If the system fails her, but those in her unit are supportive, she may feel more empowered to place the blame for assault and its impact on her on the

perpetrator. Ulman et al. (2007) found that negative social reactions (e.g., treating the survivor differently, making decisions for the survivor, victim-blaming, self-centered responses) contributes to more self-blame in sexual assault survivors. It is suggested that the sexual assault survivor may seek others to help her make sense of the trauma, but when her social support network blames her, she may internalize that blame (Ulman et al., 2007).

Associations between Institutional Betrayal and Depressive and PTSD Symptoms

Additionally, institutional betrayal following a sexual assault may lead to more mental health problems such as depression and PTSD symptoms. Andresen and colleagues (2019) who used a qualitative analysis of the participants' reports for institutional betrayal, and Monteith et al. (2016), who used the *Institutional Betrayal Questionnaire - Version 2* (Smith, 2014), found that the presence of institutional betrayal following a sexual assault in female military service members led to more severe posttraumatic stress disorder symptoms and depressive symptoms. Further, a similar variable, other-directed moral injury, which is the betrayal one feels when someone has committed a moral transgression against them (Currier et al., 2020), fully mediated the relation between military sexual trauma and posttraumatic stress disorder symptoms and depressive symptoms (Frankfurt et al., 2018; Hamrick et al., 2021). Betrayal trauma theory can be used to explain why mental health problems result from institutional betrayal. Specifically, adaptive blindness may lead to poor coping skills such as self-blame, dissociation, or minimization which then result in increased difficulties dealing with mental health issues. To illustrate this point, Frazier et al. (2005) found that when civilian women have more self-blame about their sexual assault, they coped via social withdrawal which increased their distress or how much they were bothered by symptoms related to depression, anxiety, and hostility.

In addition, since one of the criteria for PTSD includes the addition of negative thoughts related to the trauma (American Psychiatric Association, 2013), one would expect that

institutional betrayal could induce more negative thoughts or make negative thoughts more extreme. For example, if the individual was sexually assaulted, they may develop the thought that a certain location (e.g., bars) or a particular group of people (e.g., men) are bad or dangerous. If the individual also experienced institutional betrayal, then the negative thoughts could be expanded. In this case, the individual may develop more extreme negative beliefs to include believing the *world* is bad or dangerous, instead of just one location, and they could believe *people* are bad or dangerous, instead of just men.

The Importance of Studying Institutional Betrayal in Veterans

It is important to recognize that once service members discharge from the military, the effects of institutional betrayal may still be important. In fact, Monteith et al. (2021) showed that the effects of institutional betrayal maintain their harmful effects even after service members have discharged from the military. Specifically, Monteith et al. (2021) found that female veterans who experienced military sexual trauma and reported higher levels of institutional betrayal from the military regarding their military sexual trauma, were less inclined to seek medical health services from the Veterans Administration and had a stronger inclination to use non-Veterans Administration facilities for mental health. This lack of desire to seek medical health services from the Veterans Administration is concerning because research on institutional betrayal on college students has found that institutional betrayal is associated with physical illnesses and symptoms such as headaches and difficulty sleeping (Smith & Freyd, 2017). To compound the possible physical effects from institutional betrayal, military sexual trauma is also associated with several different physical disorders, such as liver disease and chronic pulmonary disease (Kimerling et al., 2007). Therefore, veterans may suffer with the physical ailments and not seek

services because they have extended the mistrust from their institutional betrayal experiences to the Department of Defense/military to the Veterans Administration (Monteith et al, 2021).

Adaptive Blindness Strategies and Depression

As already discussed above, institutional betrayal appears to be linked with self-blame, or at the very least, it has been significantly associated with self-blame in civilian samples who experienced betrayal traumas (Babcock & DePrince, 2012; Quas et al., 2003). Institutional betrayal has also been found to be a mediator of the relation between depression and military sexual trauma in female veterans (Andresen et al., 2019; Monteith et al., 2016). However, it is unknown, to the author's knowledge, if research has been conducted to test whether self-blame mediates the relation between institutional betrayal and depression. According to the betrayal trauma theory, adaptive blindness occurs in order to help the individual to adapt and overcome abuse by a trusted entity or person that they depend on (Freyd, 1994). Although amnesia of the betrayal was originally proposed as the adaptive blindness strategy, some have theorized that there are more adaptive blindness strategies to include self-blame because it allows the survivor to minimize their feelings of blame toward the perpetrator, which allows the individual to continue to work alongside the perpetrator (Gagnon et al., 2017).

Self-blame has been found to be associated with depression in civilian populations in several studies. For example, in college populations consisting of both females and males, self-blame was a core emotion in more than 80% of those who had major-depressive disorder (Zahn et al., 2015). Regarding sexual assault, rape crisis counselors said that behavioral blame was a common response to rape (Janoff-Bulman, 1979) and self-blame was found to mediate the association between incest and post-rape depressive symptoms in incest victims (Frazier, 1991).

Another adaptive blindness strategy, minimization, may lead to more depressive symptoms. Minimization may serve as an adaptive blindness strategy to reduce to perception of harm of the sexual assault, so she may continue to function in a military environment and depend on her military colleagues. However, as she discharges from the military, she may find that strategy no longer works for her. Although Holland et al. (2021) and Walsh Carson et al. (2019) did not find differences in depression among minimizers and non-minimizers, it is important to note there is little research on the minimization of sexual assault. There is also no research, to the author's knowledge, on the relationship between use of minimization their sexual assault and depression. It is possible that those who minimize their sexual assault have more depression because minimization has been found to be a barrier for seeking formal resources like counseling (Holland et al., 2021). It is also possible that those who minimize may have lower endorsement of "rape" or "sexual assault" because minimization may be so intense that that victims may identify their experiences as "miscommunication" or with a similar label rather than identifying the experience as sexual assault or harassment (Littleton et al., 2006). The labeling of sexual assault experiences as a lesser offense (i.e., "accident") is what makes the Department of Veterans Affairs' (2010) definition of military sexual trauma a more effective and accurate way to assess for sexual assault experiences in individuals who may use minimization because it does not include the words "rape" or "sexual assault" but rather "force or the threat of force to have sexual contact with you against your will."

Adaptive Blindness Strategies and PTSD

The adaptive blindness strategy of self-blame has been linked with more severe PTSD symptoms (Frazier, 1990, 2003; Koss et al., 2002; Ullman, 1996). However, the adaptive blindness strategy of minimization is less established and results of studies examining

associations between minimization and PTSD symptoms are inconclusive. Minimization has been found to be linked with more PTSD symptoms in adolescent boys and girls who have been exposed to violence (Springer & Padgett, 2000). Ulman and colleagues (2007) found that avoidance coping, which minimization could be considered as it involves denial, was positively associated with PTSD symptoms in sexual assault survivors. However, interestingly, there has been some conflicting information with how minimization may relate to PTSD symptoms as Walsh Carson and colleagues (2019) reported that minimization with adults who experienced sexual victimization was associated with less PTSD symptoms, yet Holland et al. (2021) found that those who minimized their sexual assault did not report significantly fewer PTSD symptoms than those who did not minimize their sexual assault.

Possible Confounding Variables

It is important to consider other variables that may contribute to the adaptive blindness strategies (i.e., minimization and self-blame), depressive symptoms, PTSD symptoms, or institutional betrayal to attempt to achieve the most accurate model. Therefore, the study examined other variables that have been associated with depression such as deployment status (Conard & Scott-Tilley, 2014; Street et al., 2013), previous treatment for depression (Nelson et al., 2014; Sturmey, 2009), and sexual assault occurring after military service (Goldstein et al., 2017). In addition, the current study examined childhood sexual abuse because it has been linked to self-blame even in adulthood (Babcock & DePrince, 2012; Quas et al., 2003). Further, because a portion of institutional betrayal is based on the poor handling of formal reports of unwanted sexual conduct (Smith & Freyd, 2014), the study also controlled for whether the service member made a formal report to the military about their military sexual assault.

Gaps in the Literature

To the author's knowledge, there has been no research investigating the association between institutional betrayal and self-blame. Self-blame has been found to be associated with betrayal traumas by a trusted individual, but those studies were only in civilian samples. For example, self-blame was higher for both children and adults who had been abused as children by a trusted family member (Babcock & DePrince, 2012; Quas et al., 2003). It is unknown whether institutional betrayal associated with sexual assault, is associated with self-blame. Further, to the author's knowledge, it is unknown if self-blame related to the sexual assault in military populations may be associated with depressive symptoms as this association has not been examined among military women who endorse military sexual trauma. To add, it is also unknown if self-blame related to sexual assault may mediate or may explain the association between institutional betrayal and depressive symptoms.

In addition, although self-blame has been studied in greater detail, the other adaptive blindness strategy of minimization has received less empirical attention. There are no studies investigating how minimization of sexual assault may be connected to PTSD or depressive symptoms in military populations. Further, studies in civilian populations have had conflicting results. Also, it is unknown whether institutional betrayal may be associated with more minimization of sexual assault.

Most studies have assessed military sexual trauma by combining endorsements of sexual assault and sexual harassment (Haskell et al., 2010; Katz et al., 2007; Kimerling et al., 2007; Maguen et al., 2012). Moreover, Monteith et al. (2016) also combined both sexual harassment and assault in their study that examined institutional betrayal and mental health outcomes. In the present study, only those who experienced military sexual assault are included. Grouping

military sexual assault and military sexual harassment as one variable could be problematic because there is a possibility that sexual harassment and sexual assault have different effects. In one of the few studies to examine differences between sexual harassment and sexual assault and outcomes, Blais et al. (2019) found that military sexual harassment and military sexual assault corresponded to the same mental health disorders (i.e., posttraumatic stress disorder, depression, lower sexual functioning); however, the magnitude or severeness of these illnesses were much greater for those who experienced military sexual assault than those who only experienced military sexual harassment. However, it is important to note that service members often experience both military sexual assault and military sexual harassment. In fact, in Morral and colleagues' (2015) study, only 1.29% of women service members experienced sexual assault without any experiences of sexual harassment. Although Morral et al. (2015) found sexual harassment and sexual assault were highly overlapping, those who experienced sexual harassment do not necessarily experience sexual assault. For example, Davies (2020) found that although more than three quarters of the study's sample experienced military sexual harassment (n = 196, 86%), only about half of the sample (n = 101, 44.3%) reported sexual assault while in the military.

Further, because Monteith et al. (2016) did not separate military sexual trauma into sexual harassment and sexual assault, participants answered questions on institutional betrayal considering both of those different experiences as if it was only one experience. The responses to sexual assault from the military could vary significantly from their responses to sexual harassment. For example, the military could act on reports of sexual assault more intensely and have more resources as it is perceived as more serious or more harmful than sexual harassment.

However, few studies have investigated differences in perception of severity of sexual harassment versus sexual assault.

Study Purpose

The purpose of this study was to investigate the relationship between institutional betrayal resulting from military sexual assault, self-blame, minimization, PTSD symptoms, and depressive symptoms. Further, the purpose was to understand if time in the service and unit support may strengthen or buffer the association between institutional betrayal and the adaptive blindness strategies (i.e., minimization and self-blame). To examine these questions, the study utilized four mediational models to examine the direct effects of institutional betrayal and the adaptive blindness strategies (i.e., minimization and self-blame) on mental health symptoms (i.e., PTSD symptoms and depressive symptoms). In addition, the study examined the indirect effects of the adaptive blindness strategies (i.e., minimization and self-blame) on the relation between institutional betrayal and mental health outcomes (i.e., PTSD symptoms and depressive symptoms). The study also utilized four moderation models to examine the moderating effects of time in service and unit support on the relation between institutional betrayal and mental health symptoms (i.e., PTSD symptoms and depressive symptoms).

Specific study aims and hypotheses were as follows. For all aims, the assumed associations or effects within each aim were expected after controlling for deployment status, previous treatment for depression or PTSD, childhood sexual abuse, sexual assault occurring after military service, whether the participant made a formal report about the military sexual trauma to the military, time since most distressing sexual assault, and length of time since discharge.

Aims Related to the Mediational Model with Depression as the Outcome Variable and Self-Blame as the Mediator

Aim 1a: To examine the direct effects of institutional betrayal resulting from military sexual assault on depressive symptoms.

Hypothesis 1a: Women veterans who have higher institutional betrayal from their military sexual assault would report more depressive symptoms than women veterans who report lower institutional betrayal from their military sexual assault.

Aim 1b: To examine the direct effects of institutional betrayal resulting from military sexual assault on self-blame.

Hypothesis 1b: Women veterans who have higher levels of institutional betrayal would endorse more self-blame for their sexual assault than women veterans with lower levels of institutional betrayal.

Aim 1c: To examine if self-blame regarding military sexual assault is associated with depressive symptoms.

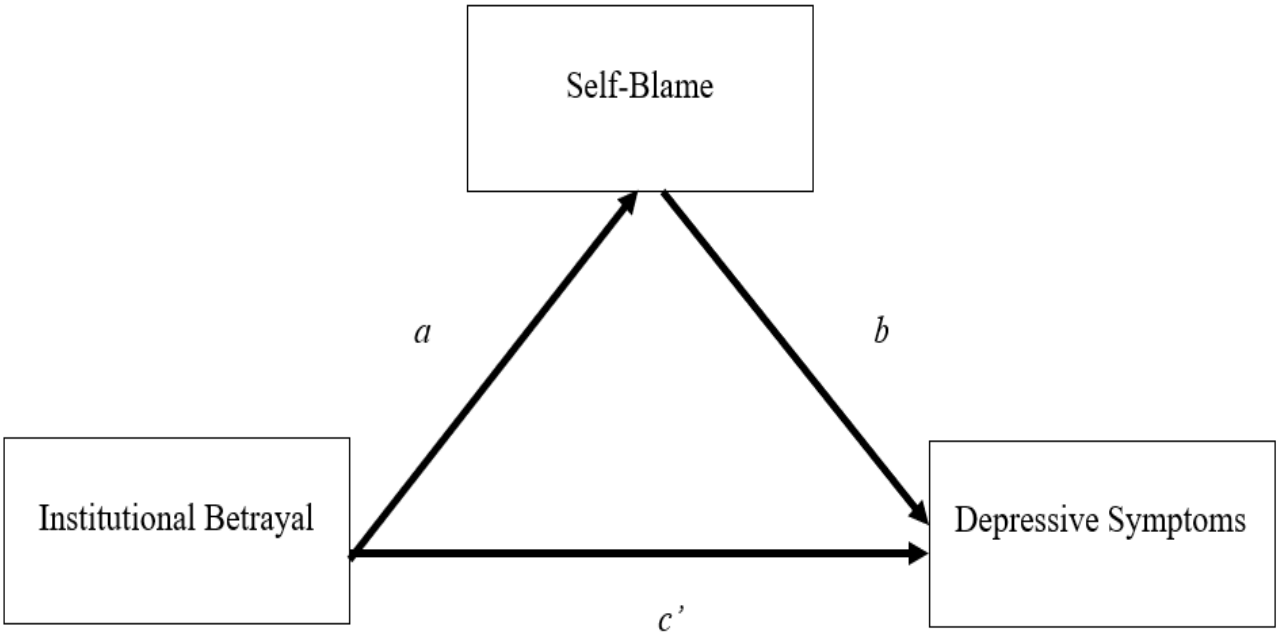
Hypothesis 1c: Women veterans who endorse more self-blame regarding their military sexual assault experience would endorse more depressive symptoms than women veterans who report less self-blame.

Aim 1d: To examine whether self-blame mediates the association between institutional betrayal resulting from military sexual assault and depressive symptoms. See Figure 1 for a visual depiction of the model.

Hypothesis 1d: Self-blame would mediate the relationship between institutional betrayal resulting from military sexual assault and depressive symptoms.

Figure 1

Statistical and Conceptual Model for Aim 1



Note. This figure demonstrates the statistical and conceptual model for Aim 1, which is the mediated model. That is, this figure reflects the hypothesis that self-blame would mediate the relation between institutional betrayal and depressive symptoms. This figure excludes the covariates for simplicity.

Aims Related to the Mediational Model with PTSD Symptoms as the Outcome Variable and Self-Blame as the Mediator

Aim 2a: To examine the direct effects of institutional betrayal resulting from military sexual assault on PTSD symptoms.

Hypothesis 2a: Women veterans who have higher institutional betrayal from their military sexual assault would report more PTSD symptoms than female veterans who have lower institutional betrayal.

Aim 2b: To examine if self-blame regarding military sexual assault is associated with PTSD symptoms.

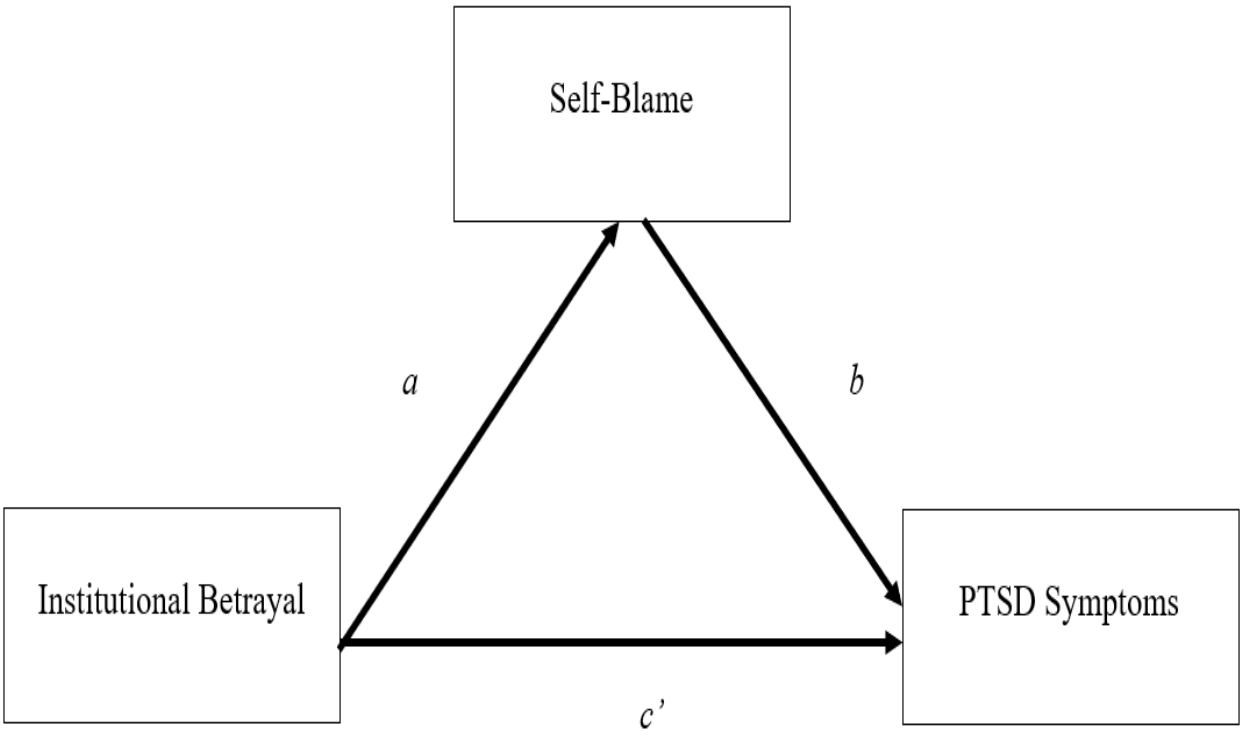
Hypothesis 2b: Women veterans who have more self-blame regarding their military sexual assault experience would report more PTSD symptoms than women veterans who report less self-blame.

Aim 2c: To examine whether self-blame mediates the association between institutional betrayal resulting from military sexual assault and PTSD symptoms. See Figure 2 for the visual depiction of the model.

Hypothesis 2c: Self-blame would mediate the relationship between institutional betrayal resulting from military sexual assault and PTSD symptoms.

Figure 2

Statistical and Conceptual Model for Aim 2



Note. This figure demonstrates the statistical and conceptual model for Aim 1, which is the mediated model. That is, this figure reflects the hypothesis that self-blame would mediate the relation between institutional betrayal and PTSD symptoms. This figure excludes the covariates for simplicity.

Aims Related to the Mediational Model with Depression as the Outcome Variable and Minimization as the Mediator

Aim 3a: To examine the direct effects of institutional betrayal resulting from military sexual assault on minimization.

Hypothesis 3a: Women veterans who have higher levels of institutional betrayal would endorse more minimization for their sexual assault than women veterans with lower levels of institutional betrayal.

Aim 3b: To examine if minimization regarding military sexual assault is associated with depressive symptoms.

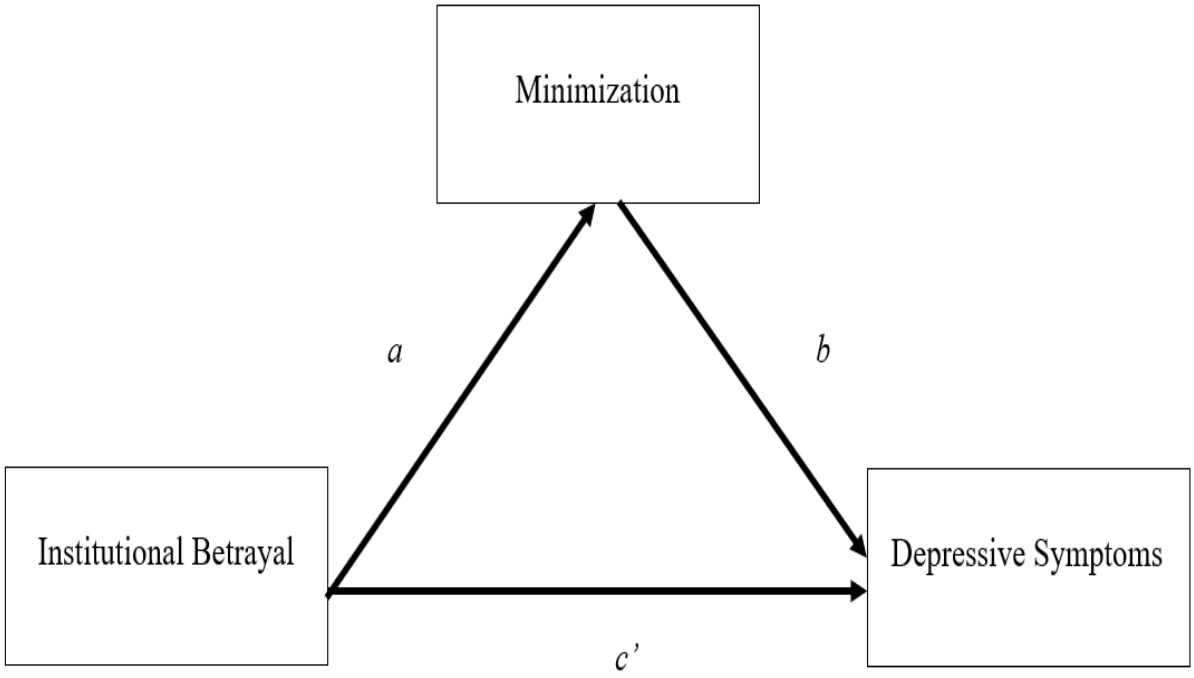
Hypothesis 3b: Women veterans who report more minimization regarding their military sexual assault experience would endorse more depressive symptoms than women veterans who report less minimization.

Aim 3c: To examine whether minimization mediates the association between institutional betrayal resulting from military sexual assault and depressive symptoms. See Figure 3 for the visual depiction of the model.

Hypothesis 3c: Minimization would mediate the relationship between institutional betrayal resulting from military sexual assault and depressive symptoms.

Figure 3

Statistical and Conceptual Model for Aim 3



Note. This figure demonstrates the statistical and conceptual model for Aim 3, which is the mediated model. That is, this figure reflects the hypothesis that minimization would mediate the relation between institutional betrayal and depressive symptoms. This figure excludes the covariates for simplicity.

Aims Related to the Mediational Model with PTSD Symptoms as the Outcome Variable and Minimization as the Mediator

Aim 4a: To examine if minimization regarding military sexual assault is associated with PTSD symptoms.

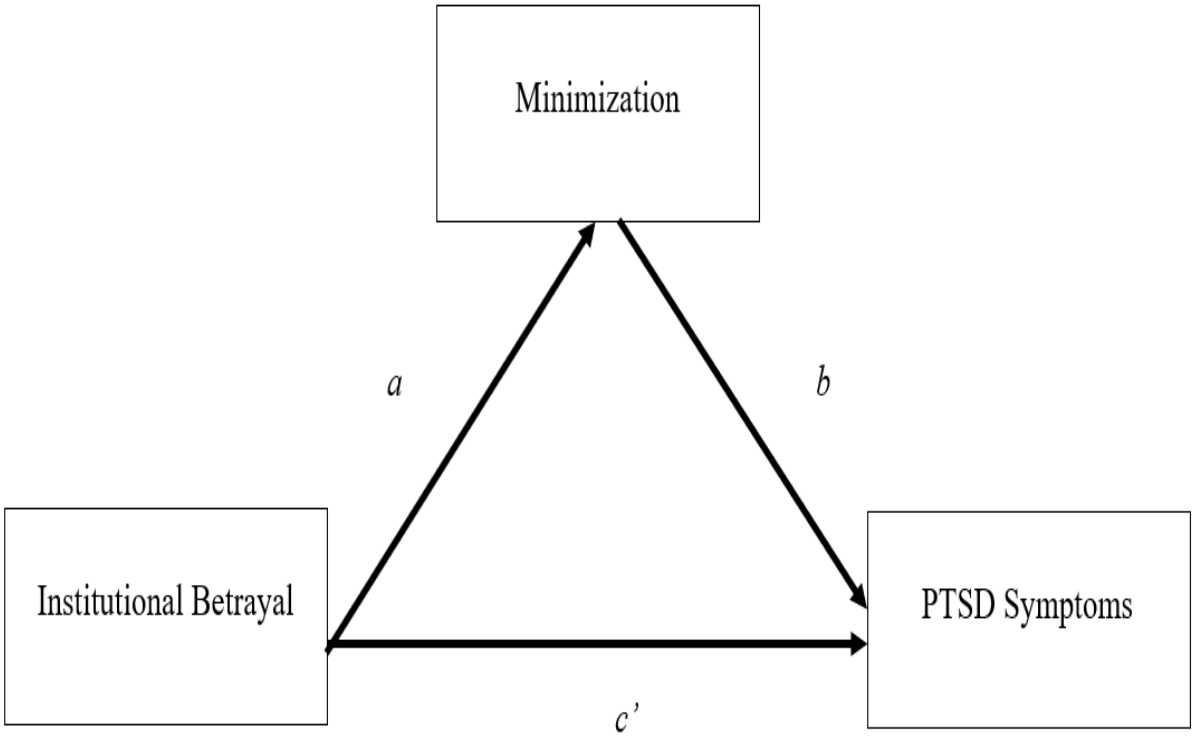
Hypothesis 4a: Women veterans who report more minimization regarding their military sexual assault experience would report more PTSD symptoms than women veterans who endorse less self-blame.

Aim 4b: To examine whether minimization mediates the association between institutional betrayal resulting from military sexual assault and PTSD symptoms. See Figure 4 for the visual depiction of the model.

Hypothesis 4b: Minimization would mediate the relationship between institutional betrayal resulting from military sexual assault and PTSD symptoms.

Figure 4

Statistical and Conceptual Model for Aim 4



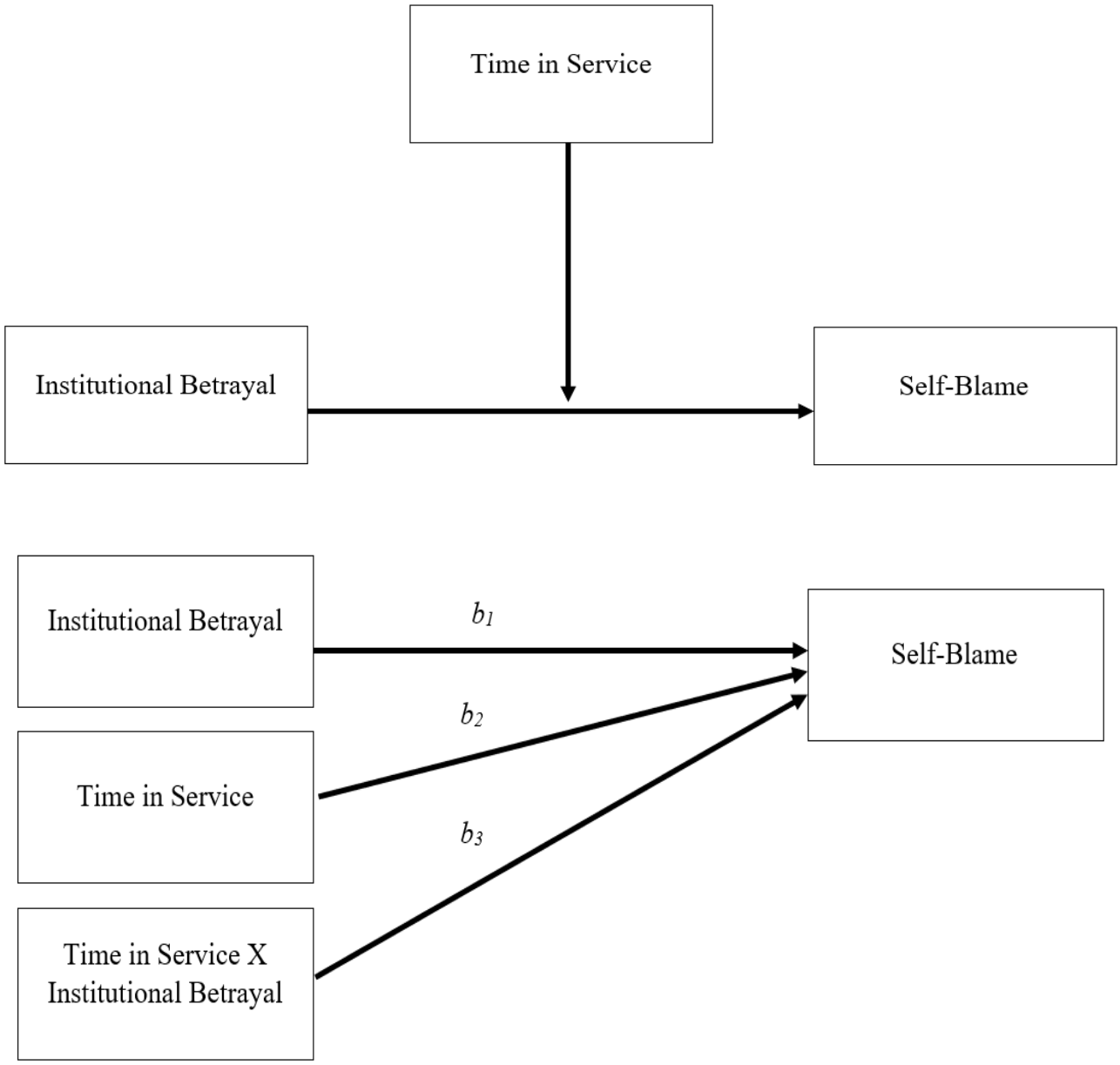
Note. This figure demonstrates the statistical and conceptual model for Aim 4, which is the mediated model. That is, this figure reflects the hypothesis that minimization would mediate the relation between institutional betrayal and PTSD symptoms. This figure excludes the covariates for simplicity.

Aim Related to the Moderation Model with Self-Blame as the Outcome Variable and Time in Service as the Moderator

Aim 5a: To examine the moderating effects of time in service on the association with institutional betrayal and self-blame. See Figure 5 for visual depiction of the conceptual and statistical model.

Hypothesis 5a: The positive association between institutional betrayal and self-blame would strengthen as time in service increased.

Figure 5
Statistical and Conceptual Model for Aim 5



Note. This figure demonstrates the statistical and conceptual model for Aim 5, which is a moderated model. That is, this figure reflects the hypothesis that time in service would moderate the relation between institutional betrayal and self-blame. This figure excludes the covariates for simplicity.

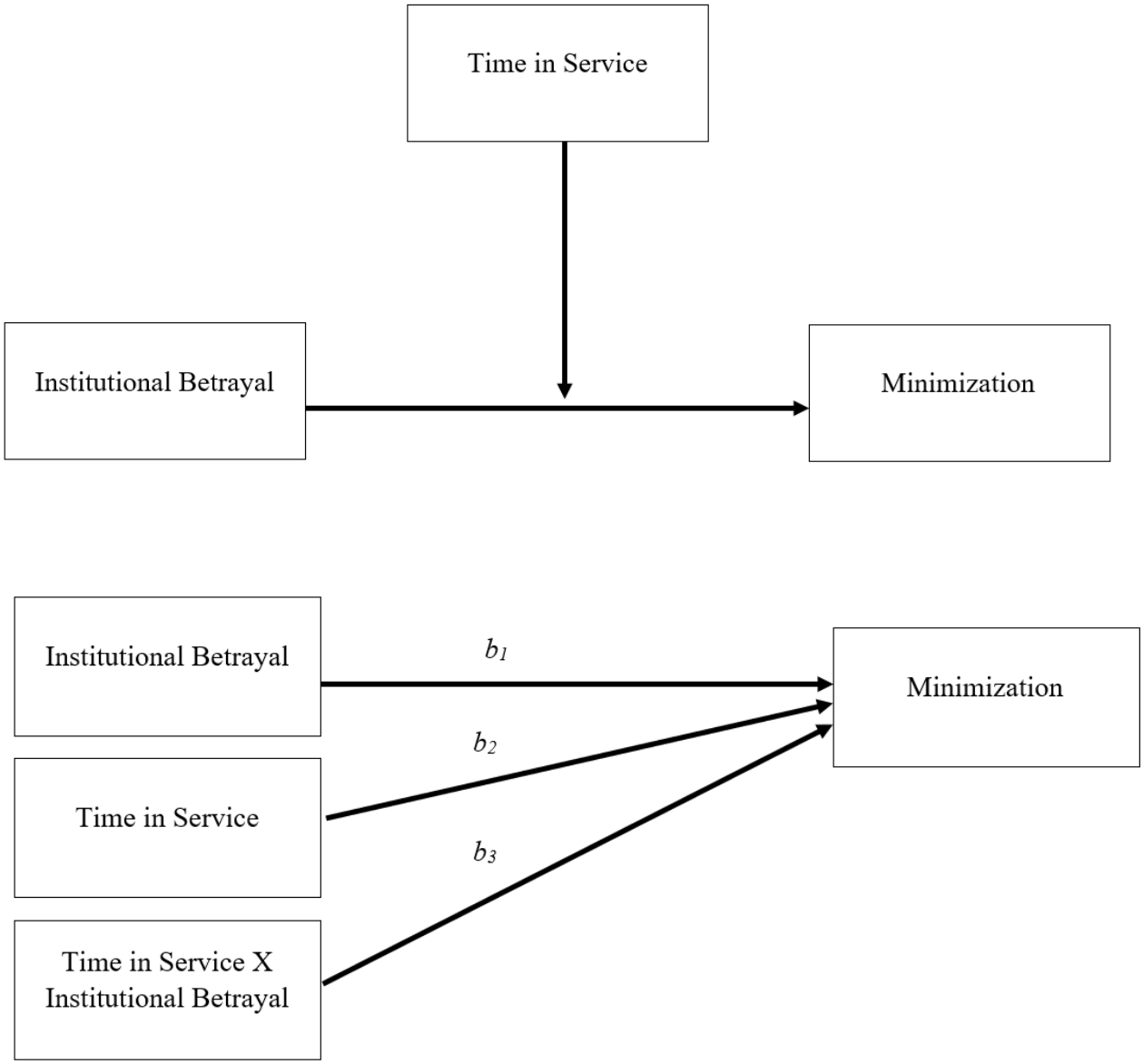
Aim Related to the Moderation Model with Minimization as the Outcome Variable and Time in Service as the Moderator

Aim 6: To examine the moderating effects of time in service on the association with institutional betrayal and minimization. See Figure 6 for visual depiction of the conceptual and statistical model.

Hypothesis 6: The positive association between institutional betrayal and minimization would strengthen as time in service increased.

Figure 6

Statistical and Conceptual Model for Aim 6



Note. This figure demonstrates the statistical and conceptual model for Aim 6, which is a moderated model. That is, this figure reflects the hypothesis that time in service would moderate the relation between institutional betrayal and minimization. This figure excludes the covariates for simplicity.

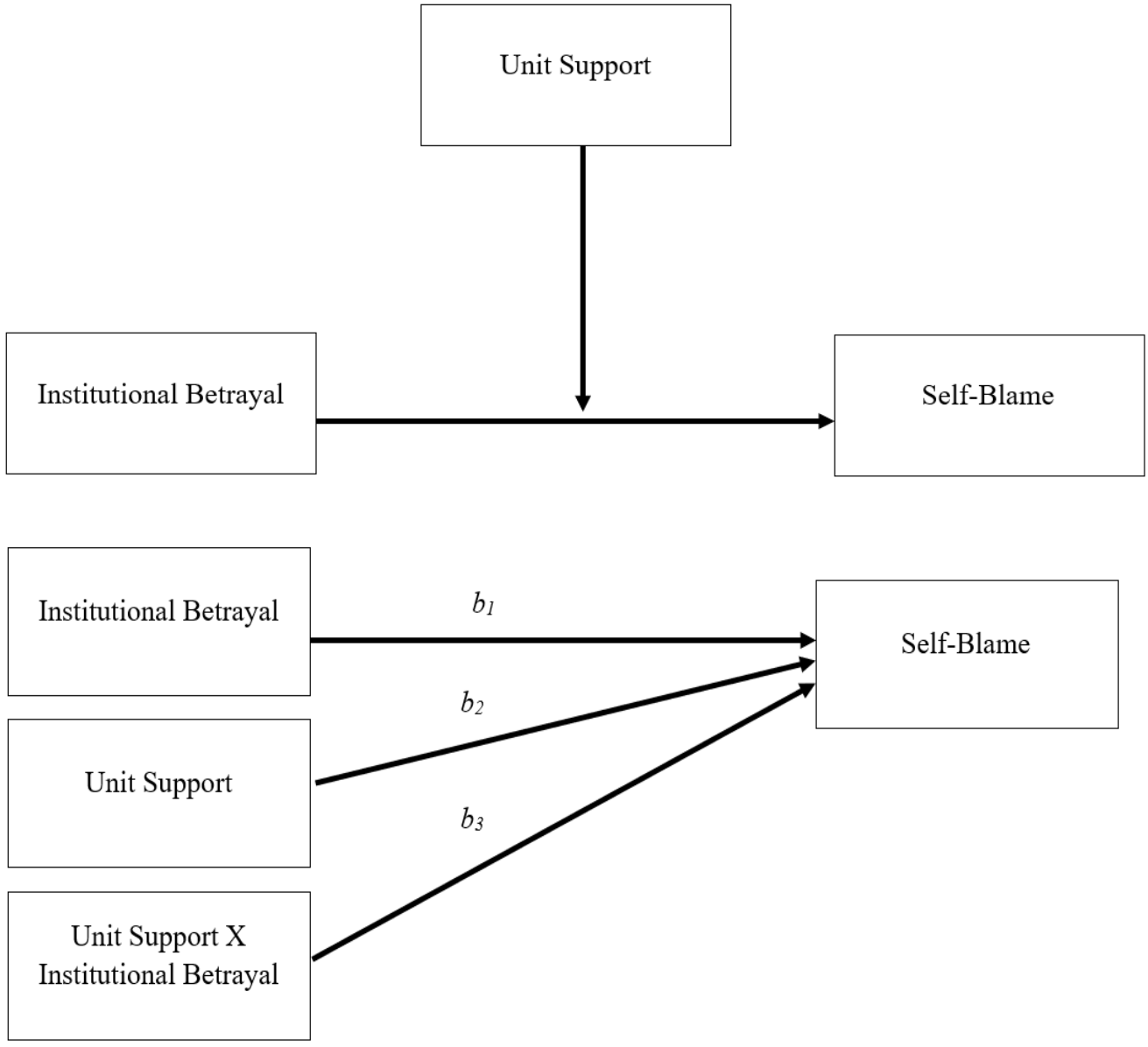
Aim Related to the Moderation Model with Self-Blame as the Outcome Variable and Unit Support as the Moderator

Aim 7: To examine the moderating effects of unit support on the association with institutional betrayal and self-blame. See Figure 7 for visual depiction of the conceptual and statistical model.

Hypothesis 7: The positive association between institutional betrayal and self-blame would be buffered by higher unit support.

Figure 7

Statistical and Conceptual Model for Aim 7



Note. This figure demonstrates the statistical and conceptual model for Aim 7, which is a moderated model. That is, this figure reflects the hypothesis that unit support would moderate the relation between institutional betrayal and self-blame. This figure excludes the covariates for simplicity.

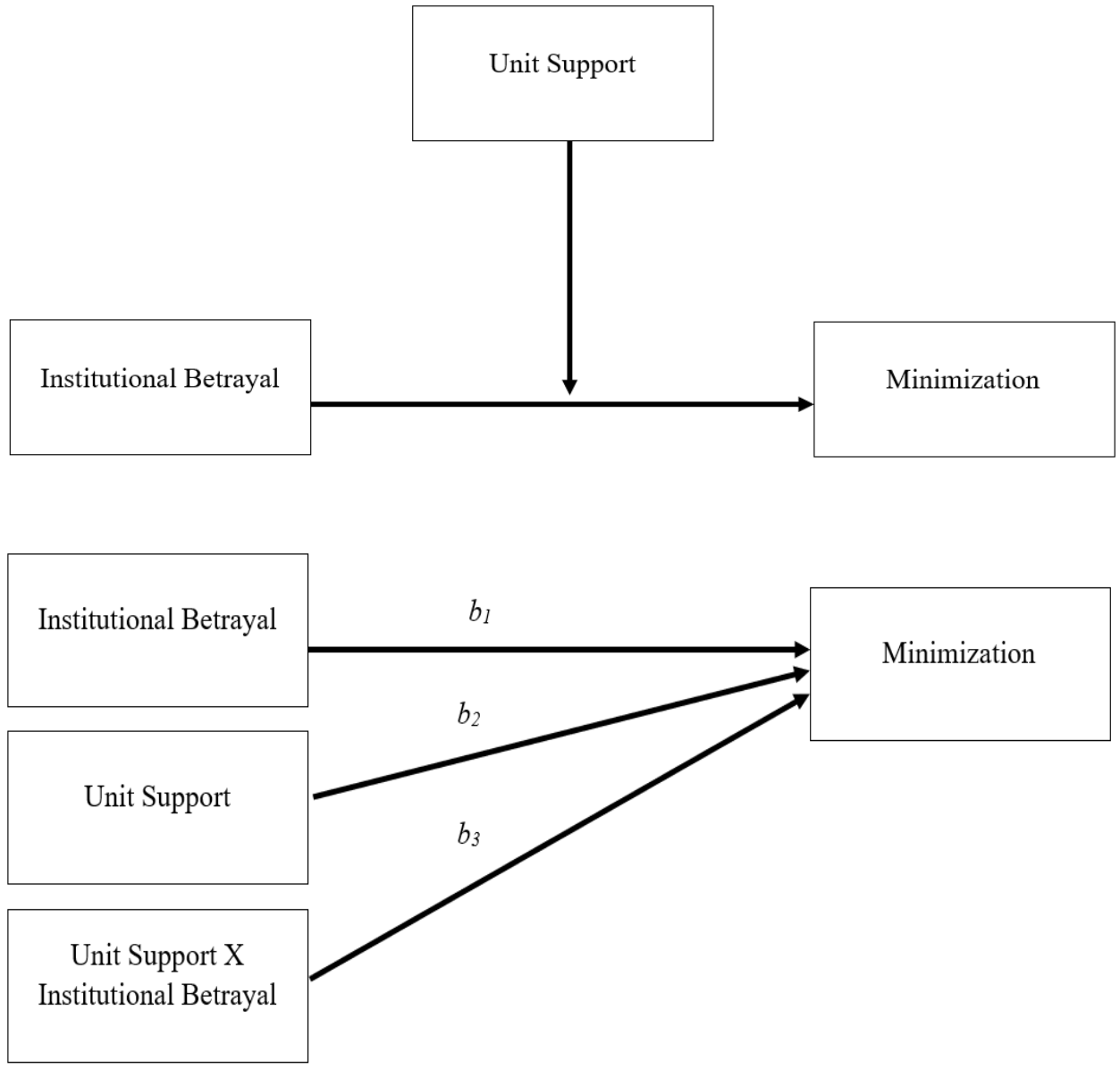
Aims Related to the Moderation Model with Minimization as the Outcome Variable and Unit Support as the Moderator

Aim 8: To examine the moderating effects of unit support on the association with institutional betrayal and minimization. See Figure 8 for visual depiction of the conceptual and statistical model.

Hypothesis 8: The positive association between institutional betrayal and minimization would be buffered by higher unit support.

Figure 8

Statistical and Conceptual Model for Aim 8



Note. This figure demonstrates the statistical and conceptual model for Aim 8, which is a moderated model. That is, this figure reflects the hypothesis that unit support would moderate the relation between institutional betrayal and minimization. This figure excludes the covariates for simplicity.

CHAPTER II

METHOD

Participants and Recruitment

Participants included female veterans and active-duty members. Eligibility criteria included that the participant was 18 years or older and were former military (i.e., veterans). Eligibility criteria included the following: 18 years or older, current or former military members, and endorsed military sexual assault. Depending on the aim, the number of participants ranged from 151 to 153. The average age was 32.37 (*SD* = 8.35) with the youngest being 19 years old and the oldest being 68. General demographic information such as education, ethnicity, sexual orientation, and marital status can be found in Table 1. The average number of years of service was 7.9 (*SD* = 4.65) with the shortest amount being 1 year and the longest was 24. The average time since discharge was 4.25 years (*SD* = 7.16). Other information regarding their military demographics (e.g., military status, branches, deployments) can be found in Table 2.

The majority of participants were recruited from Facebook advertisements (*n* = 91, 59.5%), followed by friend or veteran/military Facebook page (*n* = 36, 23.5%), university announcements (*n* = 13, 2.6%), friend/family member sending the survey link (*n* = 8, 5.2%), and "other" (*n* = 4, 2.6%) with two respondents entering their answers as "email" or the name of someone who referred them. Some also came from the Psychology Department Research Pool (*n* = 12, 7.8%) at the participating university. Student participants could earn research credit. Participants resided all over the US with at least one participant from every state. The states with the most participants included Virginia (*n* = 27, 17.6%) with the highest, followed by California (*n* = 15, 9.8%), and Pennsylvania (*n* = 13, 8.5%). Six or fewer participants resided in all other states.

Table 1

General Sample Demographics

Characteristic	***N*(%)**
Education	
Some high school	15(9.8)
High school/GED	41(26.8)
Some college	45(29.4)
Associates	15(9.8)
Bachelors	33(21.6)
Masters	4(2.6)
Doctorate	0(0.0)
Ethnicity/Race	
Black, African American, Afro-Caribbean, Black African, or other	25(16.3)
Caucasian, white, European American, White European, or other	114(74.5)
East Asian, Asian American, Amerasian, Asian-Caribbean, or other	3(2.0)
Latinx/o/a, Hispanic, Spanish, Latin American, of Spanish speaking-South American/Caribbean heritage, or other	5(3.3)
South Asian, South Asian American, of South Asian heritage, or other	1(0.7)
Middle Eastern, Arab, Non-black North African, or other	1(0.7)
Coloured-South African, Khoi San, Cape Malay, or other	1(0.7)
Mixed (2 or more ethnicities)	3(2.0)
Marital Status	
Single, never married	51(33.3)
Married	92(60.1)
Separated	4(2.6)
Divorced	9(5.9)
Widowed	4(2.6)
Life partner/cohabitating	3(2.0)
Sexual Orientation	
Asexual	0(0.0)
Bisexual	7(4.6)
Gay	5(3.3)
Lesbian	0(0.0)
Pansexual	0(0.0)
Queer	0(0.0)
Straight/heterosexual	140(91.5)
Questioning/unsure	1(0.7)
Not listed above	0(0.0)
Prefer not to say	0(0.0)

Note. $N = 153$. "Other" under ethnicity/race represents other specification within that category. Marital status exceeds 100% because participants could select all relevant options.

Table 2

Military Sample Demographics

Characteristic	***N*(%)**
Military status	
Active duty	37(24.2)
Veteran	73(47.7)
Reserves	3(2.0)
National Guard	2(1.3)
Retired	38(24.8)
Branches	
Air Force	22(14.4)
Air Force Reserves	1(0.7)
Army	59(38.6)
Army Reserves	9(5.9)
Coast Guard	7(4.6)
Marine Corps	17(11.1)
National Guard	3(2.0)
Navy	46(30.1)
Navy Reserves	4(2.6)
Branch not listed	0(0.0)
Deployment	37(24.2)
Korean War	0(0.0)
Vietnam War	0(0.0)
Persian Gulf War	0(0.0)
Afghanistan War (OEF)	18(48.6)
Iraq War (OIF)	10(27.0)
Operation Inherent Resolve	14(37.8)
Humanitarian missions	18(48.6)
Other deployments	4(10.8)

Note. $N = 153$. Participants may have served in more than one branch which is why the overall percentages exceeds 100%. OEF represents Operation Enduring Freedom which is how the US government refers to what most other countries refer to as the Afghanistan War. OIF represents Operation Iraqi Freedom which is how the US government refers to what most other countries refer to as the Iraq War. In addition, deployment location exceeds 100% because some participants deployed to more than one location.

To reduce the possibility of potential participants misrepresenting themselves as service members to attain research credit or a chance at a raffle, five questions were used to assess the validity of the participant's military status. The five military validity questions included the following: "What is the acronym for the locations where final physicals are taken prior to shipping off for basic training?", "What is the acronym for the generic term the military uses for various job fields?", "What do 'Colors' mean?", "True or False?: Enlisted will always salute to senior non-commissioned officers", "What is the name of the test you must take to determine your military job ." Two of the five questions have been used in previous studies. Lynn and Moran (2016) found the questions asking about the location of physicals and the acronym for job fields were effective in reducing non-military members posing as military members to collect survey incentives.

Procedure

The survey was created using Qualtrics. All participants were given a notification statement describing information about the study (e.g., purpose, their rights as participants, and contact information of the researchers) to provide informed consent, and all clients were asked eligibility questions (e.g., affirming that they are 18 years or older). Participants who agreed to participate completed the online survey about their mental health and military sexual trauma experiences. The survey took an average of 33.55 minutes (*SD* = 65.62). After completing the survey, all participants were given mental health resources for veterans. After the resources, student participants were redirected to a separate survey link where they entered a unique identifier and received research credit through the Psychology Department Research Pool, so their data were not directly linked with their identification. Non-students were given an opportunity to enter a raffle of $20.00.

Measures

Demographics. Participants reported their age, years served in the military, years since discharge (for former military members), military status, deployment status (e.g., dichotomous variable with “Yes” indicating one or more deployments and “No” indicating no deployments), education level, and marital status. See Table 1 and Table 2 for more information on demographics.

Military Sexual Assault. Participants were asked the following question to assess for military sexual assault: "While you were in the military did anyone ever use force or the threat of force to have sexual contact with you against your will?" with the response options of “Yes” or “No” (Department of Veterans Affairs, 2010). In addition, I collected information on the category of sexual perpetrator (e.g., military coworker, spouse, stranger). I followed the Veterans Administration (2020b) guidelines of how they define military sexual trauma as they do not exclude individuals who have experienced sexual assault based on the identity of the perpetrator (e.g., military coworker, spouse, stranger), whether the service member was off or on duty at the time of the sexual assault, or location of the assault. Even if the perpetrator is not part of the military, such as a spouse, the military still has influence, albeit smaller influence, on the case and victim. For example, commanders can ban a civilian spouse from coming onto base to protect the service member or find temporary housing for the victim service member (Kamarck et al., 2019). Therefore, if the participant indicates "Yes,” to experiencing military sexual assault, they were administered the following question: "What was your relationship to this person(s)? Check all that apply." The following are the options that they could choose: Stranger, friend or acquaintance, relative, dating partner/boyfriend/girlfriend, spouse, military coworker, military supervisor, and other. See Table 3 for the breakdown of types of perpetrators.

Additionally, the study controlled for sexual assault that occurred after the military by asking the same question to whether they had experienced military sexual assault but modified it to read “After your departure from the military, did anyone ever use force or the threat of force to have sexual contact with you against your will?" In the current sample, 62 (40.5%) women service members reported they experienced sexual assault after discharge. This question was dichotomously coded for 0 to represent the absence of this experience, and 1 to indicate the endorsement of sexual assault after their discharge. Sexual assault after their discharge was included as a covariate in the model.

Further, it was asked if they made a formal report of the military sexual assault by asking, “Did you ever report any of your experiences involving force or the threat of force to have sexual contact with you against your will?” with the following response options: “Yes, made an unrestricted report(s),” “Yes, made a restricted report(s),” “Yes, made both restricted and unrestricted reports,” and “No.” If there was an affirmative response to either unrestricted or restricted report(s), then it was scored as a 1 to indicate a formal report was made. If the participant answered “No” to both unrestricted and restricted report(s), then was scored as a 0 for analyses to indicate no formal report was made. This question was utilized as a covariate in the study’s analyses. See Table 3 for the specific number of types of formal reports of military sexual assault.

One of the covariates related to military sexual assault was how long ago their most distressing military sexual assault occurred. The specific question was, “How long has it been since your MOST distressing instance involving force or the threat of force to have sexual contact against your will while in the military?” and participants had the opportunity to respond in years or be redirected to answer in months if they indicated it occurred less than a year ago. In

the sample, the average time since most distressing military sexual assault was 7.07 years (*SD* = 7.62) with the earliest occurring as little as five months prior to taking the survey and the latest occurring 50 years ago. Another covariate related to military sexual assault was if they sought mental health treatment specifically for their military sexual assault (*n* = 115, 75.2%) or mental health diagnoses (*n* = 116, 75.8%) that are often associated with sexual assault (e.g., depression, PTSD). Mental health treatment for diagnoses were used in the analyses rather than mental health treatment for military sexual assault, but the responses were almost identical most likely indicating that the participants' perceived their mental health diagnoses related to their military sexual trauma.

Table 3

Military Sexual Assault Sample Demographics

Characteristic	***N*(%)**
Most distressing military sexual assault perpetrator	
Stranger	19(12.4)
Friend or acquaintance	21(13.7)
Relative	9(5.9)
Non-military dating partner	11(7.2)
Spouse	1(0.7)
Military coworker	65(42.5)
Military supervisor	25(16.3)
Other	2(1.3)
Formal reports	
Yes, made an unrestricted report(s)	45(29.4)
Yes, made a restricted report(s)	64(41.8)
Yes, have made both restricted and unrestricted reports	16(10.5)
No, never made a formal report	28(18.3)

Note. $N = 153$. Answers for "other" for perpetrator include "He was my spouse and also a military coworker," and "Recruiter."

Childhood Sexual Abuse. Only the sexual abuse scale of the *Childhood Experience of Care and Abuse Questionnaire (CECA-Q)* was administered to assess for unwanted sexual experiences and rape that the participant may have experienced as a child (Smith et al., 2002). There are three items (e.g., "Did anyone force you or persuade you to have sexual intercourse against your wishes before age 17?" and "When you were a child or teenager did you ever have any unwanted sexual experiences?"), and the participant responded with one of three response options (i.e., yes, no, or unsure; Smith et al., 2002). As with Bifulco et al. (2005), the indication of a positive screen for childhood sexual abuse was given a score of 1 by answering "Yes" or "unsure" whereas no is given a score a 0. Item scores were summed together to generate an overall score.

It was decided not to include the follow-up questions asking about severity of the childhood sexual assault as it was not necessary for the purpose of this study. Further, the follow-up questions that assess severity have lower reliability. Bifulco et al. (2005) found reliability to be acceptable for the screening items which are the first three items (r = .70), but lower reliability for severity items which consist of the follow-up questions (r = .61). Coefficients after 1 month of the retesting are considered acceptable if r = .70 or above (Myers & Winters, 2002). Fisher et al. (2011) found fair level of agreement (k = .53) between the results of CECA-Q on sexual abuse and information in independent clinical case notes. Another study investigating test-retest reliability of the CECA-Q found the kappa value to be at .83 (Smith et al., 2002) which according to Landis and Koch (1977) is considered, "almost perfect" agreement. The CECA-Q measure was used to determine childhood sexual abuse and was used as a covariate in the study.

Depressive symptoms. The *Center for Epidemiological Studies Depression Scale (CESD-10)* contains 10 items that assess for depressive symptoms in the past week (Andresen et al., 1994). An example item includes, "I felt that everything I did was an effort" with response anchors being 0 = *rarely or none of the time (less than one day)* to 3 = *most or all of the day (5-7 days)*. The original version is 20 items; however, due to a desire to reduce subject burden, the shorter 10-item survey was administered. Andresen and colleagues (1994) found good predictive accuracy with the CESD-10 to the original CESD-20, and Quiñones et al. (2016) found similar specificity and sensitivity between the two measures in veteran populations. The CESD-10 has been used with veterans (Battles et al., 2018; Hourani et al., 2012; Hourani et al., 2015). In a mixed gender Navy sample, Bravo et al. (2016) found that alphas for CESD-10 ranged from .86 to .88, an acceptable level of internal consistency (Webb et al., 2006). Andresen and colleagues (1994) found a strong correlation between CESD-10 scores from baseline to 12 months follow up (r = .59). Although only the summed score of the items were used to assess for depressive symptoms for the outcome variable, 128 participants (83.7%) met the cut off for a probable indication of a depressive disorder (i.e., a cut off score of 10 or above; Andresen et al., 1994). The internal consistency of this measure in this sample was .72.

Self-blame. The *Rape Attribution Questionnaire* contains a subscale called behavioral self-blame that has five items (e.g., "I just put myself in a vulnerable situation."), and participants have a five-point scale to choose from with 1 = *Strongly disagree* and 5 = *Strongly agree* (Frazier, 2003). The instructions were modified to ask specifically about the military sexual assault that occurred during their service, and their level of self-blame within the past week related to their most distressing military sexual assault. Sigurvinsdottir and Ulman (2015) found within a community sample of women who experienced sexual assault that behavioral

self-blame subscale had a Cronbach's alpha of .83 which is considered a satisfactory score when comparing two groups (Bland & Altman, 1997). Test-and-retest reliability at 3, 10, and 30 days after the event of rape were between .64 to .89 (Koss et al., 2002). According to Cicchetti (1994) these reliability scores are considered in the range of good to excellent. The total self-blame score is used by calculating the mean of the five items. The internal consistency of this measure in this sample was .70.

Institutional betrayal. Only the poor institutional responses scale within the *Institutional and Betrayal and Support Questionnaire (IBSQ;* Smith & Freyd, 2013) was used to assess institutional betrayal. The instructions were modified slightly to pertain to the military's response as the institution and to pertain only to the handling of military sexual assault. Specifically, it reads, "In thinking about the events related to your experiences involving force or threat of force to have sexual contact against your will that occurred DURING your military service described in the previous sections, did the U.S. Military play a role by..." Only 12 of the 26 items were used as the present study was primarily interested in the poor institutional responses specifically to military sexual assault which are the same items that make up the *Institutional Betrayal Questionnaire Version 2* (*IBQ.2*; Smith & Freyd, 2017). The 12 items that were administered assess institutional failures to prevent sexual violence (e.g., "Creating an environment in which this type of experience/s seemed common or normal?") and the institution's acts of mismanaging reports of sexual violence (e.g., "Making it difficult to report the experience/s?"). The other items that were not assessed include positive institutional responses and institutional betrayals related to race and sexual orientation. The response options include, "yes," "no," and "N/A." "Yes" responses were coded as a 1 for a presence of institutional betrayal, and "no" and "N/A" were coded as 0 for the absence of institutional betrayal. The total score was summed from the

12 items scores, with higher total scores indicating more severe perceptions of institutional betrayal.

This measure has demonstrated some convergent validity as evident by its positive association with the scale of "Turning Against" (Reffi et al., 2018) on the Social Reactions Questionnaire (Ullman, 2000) which consists of people isolating themselves away from the victim. This measure has been used previously with female veterans who have experienced military sexual trauma (e.g., Monteith et al., 2016; Monteith et al., 2020). The IBQ.2 had high internal consistency with Cronbach's alpha at .90 for a sample that included both men and women veterans (Monteith et al., 2016). The internal consistency of this measure in this sample was .80.

PTSD symptoms. The *Posttraumatic Stress Disorder Checklist for DSM-5* (PCL-5; Weathers et al., 2013) is a 20-item self-report questionnaire designed to determine PTSD symptoms that correspond with the PTSD symptoms in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM–5; American Psychiatric Association, 2013) that occurred in the past week. Response codes range from "0" (not at all) to "4" (extremely), and then summed with possible scores ranging from 0 to 80; total scores of 31-33 indicate probable PTSD (Weathers et al., 2013). The PCL-5 has demonstrated good reliability and validity in military samples with internal consistency ($\alpha = .96$) and test-re-test reliability ($r = .84$; Bovin et al., 2016). The PCL-5 has been used with women veterans who have experienced military sexual trauma and appears to be valid as Monteith et al. (2016) found high internal consistency with their sample. Further, confirmatory factor analysis has shown that this measure fits with the 7-factor hybrid model indicating symptoms within re-experiencing, avoidance, negative affect,

anhedonia, externalizing behaviors, and anxious and dysphoric arousal symptom clusters (Armour et al., 2014).

The PCL-5 was modified slightly in this study to ensure an understanding of what trauma the participant was referring to as some individuals can experience multiple types of traumas. If the participant indicated that their worst trauma was the military sexual trauma, then they proceeded with the traditional PCL-5. If they indicated they experienced another trauma that was worse, they would answer the same questions on the PCL-5 but were asked to differentiate between the military sexual trauma and their worst trauma. In this sample, 120 (78.4%) of the participants had probable PTSD as determined by a total score of over 33 (Bovin et al., 2016). The internal consistency of this measure in this sample was .88.

Minimization. To the author's knowledge there is no pure measure for the minimization of one's own sexual assault thus to assess for the adaptive-blindness strategy of minimization, the 5-item subscale, "it wasn't really rape" in the *Illinois Rape Myth Acceptance Scale* (Payne et al., 1999) was used. This subscale consists of items measuring the denial of the sexual assault or absolving the responsibility of the perpetrator. The full 45-item measure has convergent validity, according to Baugher et al. (2010), with other similar measures such as Adversarial Sexual Beliefs Scale (r = .74; Burt, 1980), Hostility Toward Women Scale (r = .57; Burt, 1980), Acceptance of Interpersonal Violence Scale (r = .71; Burt, 1980), and Attitudes Toward Violence Scale (r = .50; Lonsway & Fitzgerald, 1994).

It was modified to first person language to correspond with the other adaptive blindness strategy, self-blame, and how it was being measured in the *Rape Attribution Questionnaire* (Frazier, 2003). In addition, the word "rape" was removed since that word was not included when asking for the endorsement or presence of military sexual assault. Instead, to ensure the

participant has the same operational definition for their experience and it remains consistent throughout the study, “rape” was changed to “unwanted sexual contact” to match the Department of Veterans Affairs (2010) wording. Further, “sex” was changed to “unwanted sexual contact” for item 2 and “rapist” was changed to “perpetrator” for item 3. An example item reads, “If I didn’t physically fight back, I can’t really say that it was unwanted sexual contact,” and the participant would respond utilizing a 7-point likert scale in which 1 = *strongly disagree* and 7 = *strongly agree* (Payne et al., 1999). Among U.S. university students, the internal consistency of this subscale is .84 (Navarro & Tewksbury, 2017). The internal consistency in this sample is .85.

Unit support. To measure the social support within the service member’s unit, the “Unit Social Support” subscale within the *Deployment Risk and Resilience Inventory-2 (DDRI-2;* Vogt et al., 2012) was used. There are 12 items (e.g., “People in my unit were trustworthy”) in the measure, and participants have a likert scale of 1 (*strongly disagree*) to 5 (*strongly agree*) for each item which are summed together for a total score. Therefore, the higher the score, the more support they felt from their unit (Vogt et al., 2012). There were modifications as not all service members deploy, so the instructions were changed from “during your most recent deployment” to “during your service.” This measure has been used with women veterans with sexual trauma and indicated high internal consistency ($\alpha = .95$; Monteith et al., 2018). In addition, it has demonstrated predictive validity in a longitudinal study with unit support being associated with less severe mental health symptoms (i.e., PTSD, depression, and anxiety; Vogt et al., 2012). In this sample the internal consistency reliability was .87.

Proposed Statistical Analyses. To determine the number of participants needed to detect effects, the method by described in Jackson (2003) for structural equation modeling was used. The power was calculated using a mediation model as it has more parameters than the

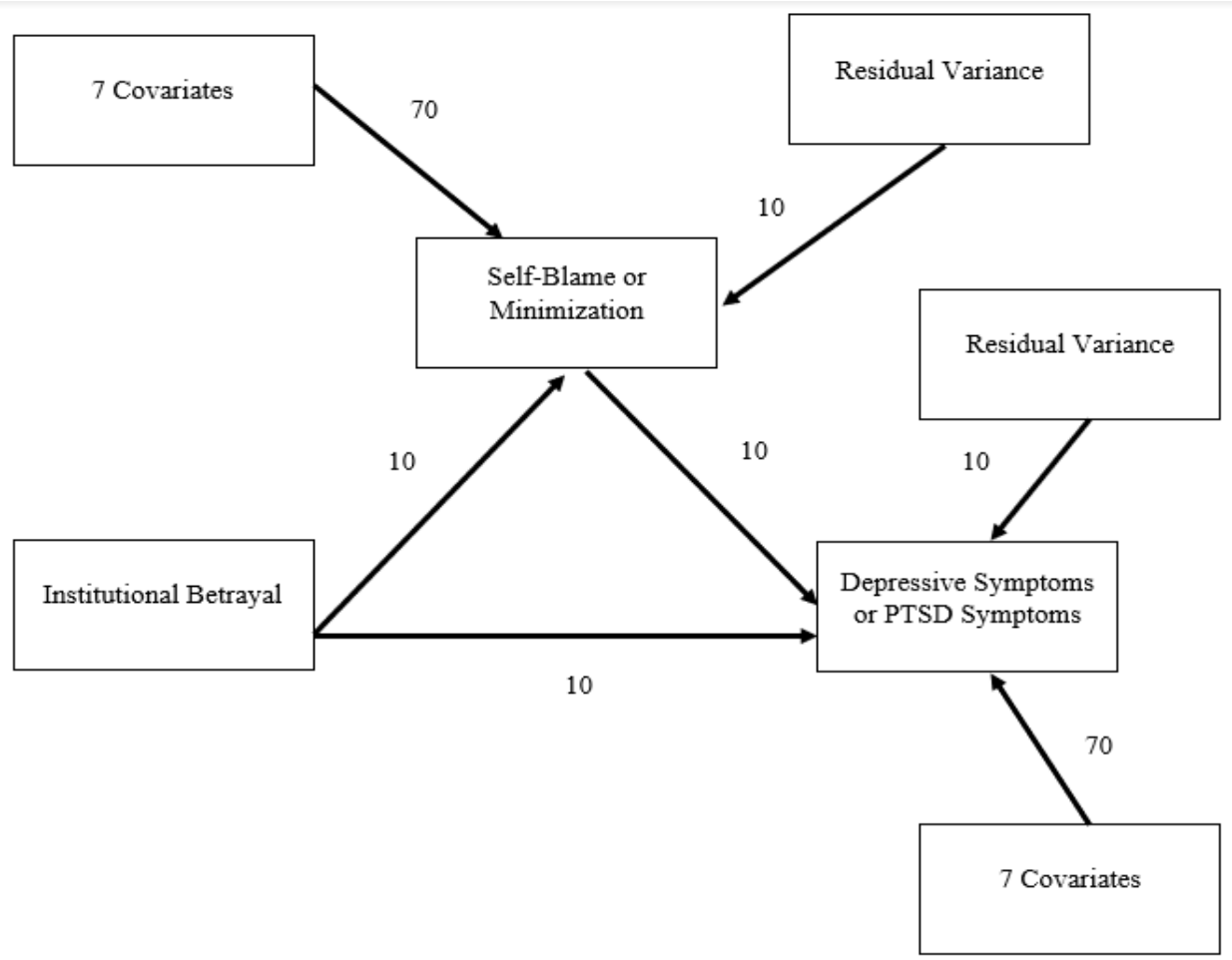
moderation models. According to Jackson (2003), there is a 10:1 ratio indicating that each parameter estimated in the model requires 10 participants. The current study has 22 parameters (i.e., [1] institutional betrayal predicting self-blame/minimization, [2] institutional betrayal predicting depressive symptoms/PTSD symptoms, [3] self-blame/minimization predicting depressive symptoms/PTSD symptoms, [4] the residual variance predicting endogenous variable of depressive symptoms/PTSD symptoms, [5] the residual variance predicting the endogenous variable of self-blame/minimization, [6-13] the 8 covariates (i.e., deployment status, previous treatment for depression or PTSD, childhood sexual abuse, sexual assault occurring after military service, whether they made a formal report about the military sexual trauma to the military, time since most distressing sexual assault, presence of sexual assault in adulthood before military service, and length of time since discharge) predicting depressive symptoms/PTSD symptoms, and [14-22], the 8 covariates (i.e., deployment status, previous treatment for depression or PTSD, childhood sexual abuse, sexual assault occurring after military service, whether they made a formal report about the military sexual trauma to the military, time since most distressing sexual assault, presence of sexual assault in adulthood before military service, and length of time since discharge.) predicting self-blame/minimization. Based on the guidelines by Jackson (2003), the power analysis revealed that 220 participants are sufficient.

However, bivariate correlations were conducted to determine if all covariates contributed something unique to the model. In order to have the most parsimonious model, covariates that were not significantly correlated to any of the main variables (i.e., adaptive blindness strategies, depressive symptoms, PTSD symptoms, or institutional betrayal) were excluded from analyses (i.e., sexual assault before military as an adult). Therefore, the true power needed to detect effects was 200 based on the 20 parameters. See Figure 9 for a clearer depiction of how the

parameters were calculated. Due to the time-constraints of the project, analyses were performed when there were fewer than 200 participants to determine if there were effects, and since there was significant findings, it was deemed appropriate to continue forward despite not having the 200 participants.

Figure 9

Parameters and Required Number of Participants



Note. This figure demonstrates all the parameters and how the power analysis was conducted. The numbers alongside the lines represent the number of participants required due to the added parameter.

CHAPTER III

RESULTS

Data Cleaning. At the conclusion of data collection, there were 948 respondents. However, many of the respondents were scammers. For this reason, an extensive data cleaning procedure was employed which resulted in a usable final sample of 171 participants. There were 15 total steps in cleaning and verifying participants. These steps are described in detail.

In step one of the data cleaning procedure, the author removed 248 respondents because they had duplicate IP addresses. The author utilized the "identify duplicates" function on SPSS and sorted by IP address. The author decided to remove the duplicate(s) and the corresponding "primary" case that was associated with those duplicate IP addresses.

In step two of the data cleaning procedure, the author removed 12 respondents who indicated that they never served in the military as this was a criterion for participation. In step three, the author removed data from six respondents who were under 18 years of age. In step four, the author removed data from 98 respondents who did not identify as a cisgender woman. Seven respondents who selected "self-described" when asked about their gender but wrote an answer that would indicate they are a ciswoman in the open-ended field remained in the usable dataset. The following are responses from participants whose data were included for analysis: "Woman," "Female," "I am a woman, and I am a lesbian. Period," and "Born and still female straight." In step five, 40 respondents were removed because they did not experience military sexual assault.

Step six of the cleaning procedure included several sub steps regarding false information about deployments. The author removed 40 respondents who reported impossible deployments because they reported serving every single war since the Korean War. In addition, the author

removed six respondents who had what was deemed “unrealistic deployments” in which they were deployed to two wars that they could not have possibly served due to the distance in years between the wars/operations by using the Korean War (1950-1953) which is the oldest war listed, and Operation Inherent Resolve which is the youngest operation listed (2014 - present). Respondents’ age to deployment history was compared to verify their ability to have served as indicated. For example, the youngest person alive that could have served Vietnam War at age 17 and be alive today would be 63 years old. Therefore, respondents who were younger than 63 years old and indicated they served the Vietnam War were removed. After doing this sub step for every war and operation, 16 respondents were removed from the dataset due to misreporting their age to the timeframe of the wars they supposedly served. Overall, 62 respondents were removed due to inaccurate or inconsistent deployment responses.

Step seven removed nine respondents who had inconsistent or inaccurate information about how many years they served in the military. This was calculated by looking at the age they joined, years served, and current age. For example, if someone joined at age 30 and served for nine years, then by the time they took the survey, they should be at least 39/38 years old. If they are younger than this, it indicated they made up or falsified their data.

Step eight was designed to remove those who had reported inaccurate or inconsistent information about the number of years from their most distressing military sexual assault and their age. For example, if someone said they are 20 years old, but they reported that their military sexual assault occurred 30 years ago, then that would indicate inaccurate reporting of their military sexual assault. This step did not remove any participants but was included to find another way individuals could have falsified their data.

Step nine was another way to remove duplicates by examining individuals who started and ended the survey at the same exact time to the second (e.g., three "participants" started the survey on September 19th, 2022, at 22:19:27 and ended on September 19th, 2022 at 22:43:42). This step was included to identify duplicates that were most likely bots who are using a program to obscure their IP address which allowed them to pass step one. This step removed 30 respondents. This cleaning method to remove bots is supported by Storozuk et al. (2020).

Step ten removed 137 respondents who did not answer 4 or more of the 5 military validation questions (e.g., "What do 'Colors' mean?") correctly. Step 11 removed four "males" from the dataset. This occurred if the participant indicated, "cisgender female/woman" for the question asking about gender (covered in step 4), but when asked about their sex, they indicated "male." One respondent was removed who wrote "29" in response to self-describe for their sex. Step 12 removed 29 respondents who failed both attention check questions.

Step 13 removed seven respondents who demonstrated insufficient effort. The two-second per item rule was utilized which states that if a participant took a survey and spent less than two seconds on an item, they most likely did not give enough effort (Huang et al., 2012). It was determined that 194 questions were the lowest number of items someone could have received. 194 was multiplied by 2, which is 388 seconds. This is the least amount of time someone should have completed the entire survey.

Step 14 removed 94 more duplicates by removing individuals who ended at the same exact time and started the survey within 10 seconds of each other. This step is slightly different than step nine in that they had to end at the same exact second but did not have to start at the same exact time. An example of some individuals that were removed include participants who

started on September 19th, 2022, at 22:55:24, 22:55:21, 22:55:14, 22:55:12, 22:55:11, 22:55:09… (nine total) and all ended at the same exact time of September 20th, 2022, 00:02:25.

In the final step, step 15, the author removed one respondent who reported she was active duty, but instead of selecting "N/A" for years discharged, she wrote a number for how many years she had been discharged. Individuals who are active duty cannot be discharged otherwise they would identify themselves as retired or veterans.

Missing data and outliers. Univariate outliers were examined via boxplots and indicated by an asterisk by SPSS which denotes the extreme values that are more than 3 standard deviations from the mean. Three outliers were found for the Posttraumatic Stress Disorder Checklist for DSM-5 (Weathers et al., 2013). The participants' total score on the PCL-5 was 0. These scores were adjusted through traditional winsorizing in which extreme scores were replaced with one less than the next lowest value (i.e., 4 in this case). The multivariate outliers were assessed using Cook's D, Mahalanobis distance and studentized deleted residuals. In this case, there was six outliers due to their discrepancy which is measured by studentized deleted residuals. These cases were either more than 3 or less than -3. To address multivariate outliers, six cases were removed which reduced the analytic sample to 165 participants.

PROCESS, the macro system used for the study's moderation and mediation models, addresses missing data through listwise paired deletion. Therefore, if a participant has missing data for one of the variables included in the models, data for that participant was not included in the analyses. It is important to note that because PROCESS addresses missing data with listwise paired deletion, the sample size varies for different models. All measures were completed by at least 153 participants, except for the variable of PTSD symptoms which was completed by 151 participants.

Statistical assumptions. Multicollinearity was checked using VIF and tolerance. The rule of thumb is that an VIF above 10 and a tolerance below 0.2 indicates multicollinearity (O'Brien, 2007). Although VIF and tolerance was checked with the predictor variables that were in the moderation models (i.e., institutional betrayal, unit support, time in service), their corresponding moderator variable (i.e., the product of institutional betrayal and time in service nor the product of institutional betrayal and unit support) was not assessed because inherently there would be some multicollinearity with these variables. None of the variables of interest had a VIF above 10 nor a tolerance of below 0.2. The highest VIF and lowest tolerance were in the models that included unit support and institutional betrayal with a VIF of 1.12 and tolerance of 0.89.

The first assumption is testing for linearity. To conduct a regression, the relationship between the independent and dependent variables must be linear as opposed to a curvilinear relationship. The author conducted scatterplots for each of the individual predictors and the predictors of each aim collectively. To determine if there is a linear relationship between my independent variables collectively, the author plotted the studentized residuals against the unstandardized predicted values. If the scatterplots showed a horizontal band, then the relationship between the dependent variable and the independent variables is most likely linear. There was no evidence of U-shaped residuals. To test whether each of the independent variables had a linear relationship with the dependent variables, partial regression plots were utilized with the dependent variables on the Y axis and the independent variables on the X axis. The plots either showed a linear relationship or no relationship, which is still considered to have met linearity, because the pattern was not curvilinear.

The second assumption, that all relevant variables are included in the model, is less dependent on statistical tests to determine if it is present. Typically, it is met through an in-depth literature review and theoretical support. Other ways that attempt to meet this assumption is by including several covariates in all the models. Further, it could be assumed that if the R-squared values for the overall models were near zero, then the predictor variables are completely useless in predicting the variation in scores for the dependent variables which would suggest the study did not include all relevant variables in the models. Most of the models, including the ones that have no significant findings among the main predictors, have R-squared values in the upper .20's and lower .30's. Acceptable levels for R-squared values in social sciences or studies predicting human behavior is .10 (Ozili, 2022), and all the models are above .10.

The third assumption is that there is no error in measuring the variables of interest. The questionnaires have been widely used and have demonstrated acceptable alphas in previous research; however, it was re-assessed for the specific sample using the Cronbach's alpha on all predictors which found the following acceptable alpha coefficients: Center for Epidemiological Studies Depression Scale ($\alpha = .72$), Post traumatic Stress Disorder Checklist for DSM-5($\alpha = .89$), Rape Attribution Questionnaire ($\alpha = .70$), Institutional and Betrayal and Support Questionnaire using only negative reactions (.80), "It wasn't really rape" subscale of Illinois Rape Myth Acceptance Scale ($\alpha = .85$), Deployment Risk and Resilience Inventory-2 (.87). All Cronbach's alphas were above .70, thus, reliability was acceptable (Cortina, 1993).

The fourth assumption is that there is homoskedacity or that the residuals have constant variance. To check for this assumption, scatterplots were created with the studentized residuals against the unstandardized predicted values. The scatterplots were visually inspected to see if

there was the presence of fan or funnel shaped scatterplots. The scatterplots appear random indicating homoscedasticty.

The fifth assumption is that the residuals are independent, which was tested using Durbin-Watson which has values from 0-4 with problematic values being below 1 and above 3 (Field, 2009). The Durbin-Watson values varied from 1.46 (i.e., the variables in Aim 5 which include self-blame, institutional betrayal, and time in service) to the highest of 2.04 (i.e., the variables in Aim 4 which include PTSD symptoms, institutional betrayal, and minimization). Hence, none of the values were problematic indicating independence of residuals (i.e., no correlation between residuals).

The last assumption is that the residuals must be normally distributed which is tested by normal P-P plots of the studentized residuals. The points seem to be normally distributed because the points were aligned along the diagonal line with little deviation from the line.

Descriptive statistics and covariate decisions. The bivariate correlations are shown in Table 4. More variables were examined than what is shown to determine whether a variable should be included as a covariate. It was decided to exclude sexual assault occurring before military service as an adult because it was not significantly correlated with any of the main predictors nor dependent variables. Removal of this covariate allows for a more parsimonious model. The descriptive statistics of the study variables are shown in Table 5.

Table 4

Bivariate Correlations Among Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Institutional Betrayal	---	.31*	.32**	.34**	-.15	-.31**	-.16*	.09	-.32**	.002	-.01	.18*	.17*	.14
2. Depression Symptoms		---	.52**	.38**	.02	-.21**	.11	.15	-.20**	.16*	.10	-.05	.15	-.07
3. PTSD Symptoms			---	.49**	-.03	-.19*	.01	-.02	-.15	-.06	-.08	.05	.15	-.12
4. Self-Blame				---	-.01	-.10	-.12	.03	-.40**	.03	-.22**	-.07	.18*	.02
5. Minimization					---	.12	.20*	-.20*	.46**	-.18*	.12	-.18*	.01	-.11
6. Unit Support						---	.08	-.13	.22**	-.11	-.06	.05	.03	-.004
7. Years Served							---	-.06	.18*	.18*	.10	-.09	.14	.03
8. Years Since Discharge								---	-.31**	.89**	-.05	.17*	.20**	-.08
9. Reported MSA									---	-.30**	.07	-.09	.010	-.18*
10. Time Since MSA										---	.10	.09	.25**	-.05
11. SA After Military											---	.15	-.16*	-.10
12. Childhood Sexual Abuse												---	.23**	.02
13. Mental Health Treatment													---	.05
14. Deployment														---

Note. $*p < .05$. $**p < .01$.

Table 5

Descriptive Statistics for Study Variables

	M	*SD*	Sample Minimum	Sample Maximum	Measure Minimum	Measure Maximum
1. Institutional Betrayal	5.75	3.25	0.00	12.00	0.00	12.00
2. Depression Symptoms	13.40	4.13	3.00	27.00	0.00	30.00
3. PTSD Symptoms	40.28	12.55	5.00	74.00	0.00	80.00
4. Self-Blame	3.34	0.70	2.00	5.00	1.00	5.00
5. Minimization	19.10	6.45	5.00	31.00	5.00	35.00
6. Unit Support	37.67	8.17	12.00	60.00	12.00	60.00
7. Years Served	7.92	4.65	1.00	24.00	N/A	N/A
8. Years Since Discharge	4.25	7.16	0.00	44.00	N/A	N/A
9. MSA Formal Report	0.82*	0.39	0.00	1.00	0.00	1.00
10. Time Since MSA	7.07	7.62	0.08	50.00	N/A	N/A
11. SA After Military	0.41*	0.49	0.00	1.00	0.00	1.00
12. Childhood Sexual Abuse	1.38	1.28	0.00	3.00	0.00	3.00
13. Mental Health Treatment	0.76*	0.43	0.00	1.00	0.00	1.00
14. Deployment	0.24*	0.43	0.00	1.00	0.00	1.00

Note. Variables that are dichotomous are noted by an asterisk where a score of 1 indicates an affirmative response and 0 indicates the absence of that experience. *M* denotes mean and *SD* denotes standard deviation. Sample maximum and minimum indicates the lowest and highest score within the sample for a particular variable. Measure maximum and minimum indicates the lowest and highest score that one could possibly obtain. N/A represents not applicable.

Statistical Analyses for Mediational Analyses

The macro program, PROCESS Version 4.2, using model 4 on SPSS Version 29 was employed. The covariates used for the mediation analyses were years since discharge, deployment experience, a history of mental health treatment, years since the most distressing military sexual assault, experiences of sexual assault after their military service, childhood sexual abuse severity, and whether they made a formal military sexual assault report. All estimates were bootstrapped with 10,000 bootstrap samples meaning the current sample is re-sampled 10,000 times. Bootstrapping is helpful because it develops a more robust sampling distribution which allows for more accurate estimates of statistics. The author employed 95% confidence intervals to determine if the regression coefficients were significant. If the lower and upper bound of the confidence interval contains 0, then it is not significant.

Statistical analyses for Aim 1. Aim 1 was to test if self-blame mediated the relation between institutional betrayal and depressive symptoms. The overall model for path a, which is X predicting M (i.e., institutional betrayal predicting self-blame), was significant, $F(8, 144) = 7.23$, $p < .001$, $R^2 = .29$, suggesting that 29% of the variance in self-blame is accounted by institutional betrayal and the seven covariates. The main effect of institutional betrayal on self-blame was significant and positive. The only significant covariates for self-blame were the experience of sexual assault after military service, and whether they made a formal report about their military sexual case. Specifically, sexual assault after military service had a negative association with self-blame, $b = -0.26$ (boot $SE = 0.10$), boot 95% CI [-0.47, -0.06]. Making a formal report was negatively associated with self-blame, $b = -0.62$ (boot $SE = 0.20$), boot 95% CI [-1.01, -0.22].

The model including path b, which is self-blame predicting depressive symptoms, and path c' (institutional betrayal predicting depressive symptoms while including the mediator in the model) was significant, $F(9, 143) = 5.70$, $p < .001$, $R^2 = .26$. Institutional betrayal had a positive and significant association with depressive symptoms. Self-blame also had a positive and significant association with depressive symptoms. None of the covariates were significantly correlated with depressive symptoms. There was a significant mediation effect indicating that institutional betrayal is associated with depressive symptoms, in part, because of self-blame. Results are displayed in Table 6.

Table 6

Aim 1 Results: Self-Blame as a Mediator of the Relation of Institutional Betrayal and Depressive Symptoms

	b	Boot SE	Boot 95% CI
Path *a*			
Institutional Betrayal→ Self-Blame	**0.05**	**0.02**	**0.02, 0.09**
Path *b*			
Self-Blame → Depressive Symptoms	**1.90**	**0.68**	**0.56, 3.21**
Path *c'*			
Institutional Betrayal → Depressive Symptoms	**0.27**	**0.11**	**0.06, 0.50**
Indirect effects			
Institutional Betrayal → Depressive Symptoms	**0.10**	**0.05**	**0.02, 0.22**

Note. n = 153. Sexual assault after service, years since most distressing military sexual assault, years since discharge, child sexual abuse, reporting military sexual assault, mental health treatment, and deployment, were controlled for but were not reported in the table. Significant paths in bold for emphasis. Estimates were bootstrapped with 10,000 bootstrap samples. Boot *SE* represents the standard error for the bootstrapped sample.

Statistical analyses for Aim 2. Aim 2 was examined whether self-blame mediated the relation between institutional betrayal and PTSD symptoms. The overall model for path a, which is X predicting M (i.e., institutional betrayal predicting self-blame), was significant, $F(8, 142) = 8.42$, $p < .001$, $R^2 = .32$. The main effect of institutional betrayal on self-blame was significant and positive. The only significant covariates were the experience of sexual assault after military service and if they had filed a formal sexual assault report. Specifically, sexual assault after military service had a negative association, $b = -0.26$ (boot $SE = 0.10$), boot 95% CI [-0.45, -0.06], and reporting their military sexual assault case(s) had a negative association with self-blame, $b = -0.71$ (boot $SE = 0.20$), boot 95% CI [-1.09, -0.31].

The model including path b, which is self-blame predicting PTSD symptoms, and path c' (institutional betrayal predicting PTSD symptoms while including the mediator in the model) was significant, $F(9, 141) = 7.86$, $p < .001$, $R^2 = .33$. Institutional betrayal and self-blame had a positive and significant associations with PTSD symptoms. The covariate of deployment was significantly and negatively associated with PTSD symptoms, $b = -5.42$ (boot $SE = 2.39$), boot 95% CI [-10.17, -0.83]. There was a significant mediation effect indicating that institutional betrayal is associated with PTSD symptoms, in part, because of self-blame. See Table 7 for results.

Table 7

Aim 2 Results: Self-Blame as a Mediator of the Relation between Institutional Betrayal and PTSD Symptoms

	b	Boot SE	Boot 95% CI
Path *a*			
Institutional Betrayal→ Self-Blame	**0.05**	**0.02**	**0.01, 0.09**
Path *b*			
Self-Blame → PTSD Symptoms	**9.02**	**1.83**	**5.30, 12.38**
Path *c'*			
Institutional Betrayal → PTSD Symptoms	**0.70**	**0.35**	**0.02, 1.36**
Indirect effects			
Institutional Betrayal → PTSD Symptoms	**0.44**	**0.20**	**0.09, 0.86**

Note. n = 151. Sexual assault after service, years since most distressing military sexual assault, years since discharge, child sexual abuse, reporting military sexual assault, mental health treatment, and deployment, were controlled for but were not reported in the table. Significant paths in bold for emphasis. Estimates were bootstrapped with 10,000 bootstrap samples. Boot *SE* represents the standard error for the bootstrapped sample.

Statistical analyses for Aim 3. Aim 3 tested whether minimization mediated the relation between institutional betrayal and depressive symptoms. The overall model for path a, which is X predicting M (i.e., institutional betrayal predicting minimization), was significant, $F(8, 144) = 6.08$, $p < .001$, $R^2 = .25$. The main effect of institutional betrayal on minimization was negative but not significant. The only significant covariates were childhood sexual abuse and having made a formal report regarding their case. Specifically, childhood sexual abuse had a negative association, $b = -0.95$ (boot $SE = 0.47$), boot 95% CI [-1.88, -0.05], and reporting their military sexual assault case(s) had a positive association with minimization, $b = 6.19$ (boot $SE = 1.88$), boot 95% CI [2.54, 9.91].

The model including path b, which is minimization predicting depressive symptoms, and path c' (institutional betrayal predicting depressive symptoms while including the mediator in the model) was significant, $F(9, 143) = 5.61$, $p < .001$, $R^2 = .26$. Institutional betrayal and minimization had a positive and significant associations with depressive symptoms. The only significant covariate was making a formal report about military sexual assault, which had a negative association with depressive symptoms, $b = -2.51$ (boot $SE = 1.11$), boot 95% CI [-4.68, -0.31]. The mediation effect was not significant, indicating that minimization did not mediate the association between institutional betrayal and depressive symptoms. See Table 8 for results.

Table 8

Aim 3 Results: Minimization as a Mediator of the Relation of Institutional Betrayal and Depressive Symptoms

	b	Boot SE	Boot 95% CI
Path *a*			
Institutional Betrayal→ Minimization	-0.01	0.17	-0.33, 0.33
Path *b*			
Minimization → Depressive Symptoms	**0.20**	**0.06**	**0.07, 0.32**
Path *c'*			
Institutional Betrayal → Depressive Symptoms	**0.38**	**0.12**	**0.14, 0.61**
Indirect effects			
Institutional Betrayal → Depressive Symptoms	-0.001	0.03	-0.07, 0.08

Note. n = 153. Sexual assault after service, years since most distressing military sexual assault, years since discharge, child sexual abuse, reporting military sexual assault, mental health treatment, and deployment, were controlled for but were not reported in the table. Significant paths in bold for emphasis. Estimates were bootstrapped with 10,000 bootstrap samples. Boot *SE* represents the standard error for the bootstrapped sample.

Statistical analyses for Aim 4. Aim 4 was to test if minimization mediated the relation between institutional betrayal and PTSD symptoms. The overall model for path a, which is X predicting M (i.e., institutional betrayal predicting minimization), was significant, $F(8, 142) = 6.55$, $p < .001$, $R^2 = .27$. The main effect of institutional betrayal on minimization was positive and not significant. The significant covariates for minimization were childhood sexual abuse, sexual assault after the military, and making a formal report of military sexual assault. Specifically, childhood sexual abuse had a negative association, $b = -1.05$ (boot $SE = 0.47$), boot 95% CI [-1.98, -0.16]. Sexual assault after military service was positively associated with minimization, $b = 2.03$ (boot $SE = 0.99$), boot 95% CI [0.05, 3.97]. Making a formal military sexual assault report had a positive association with minimization, $b = 6.52$(boot $SE = 1.91$), boot 95% CI [2.84, 10.29].

The model including path b, which is minimization predicting PTSD symptoms, and path c' (institutional betrayal predicting PTSD symptoms while including the mediator in the model) was significant, $F(9, 141) = 3.24$, $p = .001$, $R^2 = .17$. Institutional betrayal had a positive and significant association with PTSD symptoms; however, minimization did not have a significant association with PTSD symptoms. The only significant covariate for PTSD symptoms was experiencing a deployment, $b = -6.07$ (boot $SE = 2.61$), boot 95% CI [-11.18, -0.87]. There was not a significant mediation effect indicating that minimization does not mediate the association between institutional betrayal and PTSD symptoms. See Table 9 for results.

Table 9

Aim 4 Results: Minimization as a Mediator of the Relation of Institutional Betrayal and PTSD Symptoms

	b	Boot SE	Boot 95% CI
Path *a*			
Institutional Betrayal→ Minimization	0.004	0.17	-0.31, 0.35
Path *b*			
Minimization → PTSD Symptoms	0.14	0.21	-0.30, 0.53
Path *c'*			
Institutional Betrayal → PTSD Symptoms	**1.14**	**0.41**	**0.33, 1.94**
Indirect effects			
Institutional Betrayal → PTSD Symptoms	0.001	0.04	-0.09, 0.09

Note. n = 151. Sexual assault after service, years since most distressing military sexual assault, years since discharge, child sexual abuse, reporting military sexual assault, mental health treatment, and deployment, were controlled for but were not reported in the table. Significant paths in bold for emphasis. Estimates were bootstrapped with 10,000 bootstrap samples. Boot *SE* represents the standard error for the bootstrapped sample.

Statistical Analyses for Moderation Analyses

For all moderation analyses, the author used the macro program, PROCESS Version 4.2, using model 1 on SPSS Version 29. Just as with the mediation analyses, the following were included as covariates: years since discharge, deployment experience, a history of mental health treatment, years since the most distressing military sexual assault, experiences of sexual assault after their military service, childhood sexual abuse severity, and whether they made a formal report of their military sexual assault. All estimates were bootstrapped with 10,000 bootstrap samples.

Statistical analyses for Aim 5. Aim 5 examined for the moderation effect of years served in the military on the relation between institutional betrayal and self-blame. The model was significant, $F(10, 142) = 5.79$, $p < .001$, $R^2 = .29$. Neither the direct effect of institutional betrayal nor the direct effect of years served in the military significantly predicted self-blame. Moreover, years of service did not significantly moderate the relation between institutional betrayal and self-blame. The two significant covariates were making a formal military sexual assault report and sexual assault after military service. Making a formal military sexual assault report had a negative association with self-blame, $b = -0.59$ (boot $SE = 0.21$), boot 95% CI [-1.00, -0.17], and experiencing sexual assault after military service was negatively associated with self-blame, $b = -0.24$ (boot $SE = 0.11$), boot 95% CI [-0.46, -0.01]. See Table 10 for results.

Table 10

Aim 5: Years Served as a Moderator of the Relation of Institutional Betrayal and Self-Blame

	b	Boot *SE*	Boot 95% CI
Path b_1			
Institutional Betrayal → Self-Blame	0.06	0.04	-0.02, 0.13
Path b_2			
Years Served → Self-Blame	-0.01	0.02	-0.05, 0.03
Interaction Effects/Path b_3			
Institutional Betrayal X Years Served	-0.001	0.004	-0.01, 0.01

Note. n = 153. Sexual assault after service, years since most distressing military sexual assault, years since discharge, child sexual abuse, reporting military sexual assault, mental health treatment, and deployment, were controlled for but were not reported in the table. Significant paths in bold for emphasis. Estimates were bootstrapped with 10,000 bootstrap samples. Boot *SE* represents the standard error for the bootstrapped sample.

Statistical analyses for Aim 6. Aim 6 examined for the moderation effects of years served in the military on the relation between institutional betrayal and minimization. The overall model was significant, $F(10, 142) = 5.14$, $p < .001$, $R^2 = .27$. Institutional betrayal and years served did not significantly predict minimization. There was no significant moderation effect. The two significant covariates were making a formal report about their military sexual assault and childhood sexual abuse. Reporting military sexual assault had a positive association with minimization, $b = 5.53$ (boot $SE = 1.94$), boot 95% CI [1.67, 9.25]. Childhood sexual abuse had a negative association with minimization, $b = -1.03$ (boot $SE = 0.47$), boot 95% CI [-1.98, -0.11]. See Table 11 for results.

Table 11

Aim 6: Years Served as a Moderator of the Relation of Institutional Betrayal and Minimization

	b	Boot *SE*	Boot 95% CI
Path b_1			
Institutional Betrayal → Minimization	-0.28	0.39	-1.04, 0.49
Path b_2			
Years Served → Minimization	-0.03	0.22	-0.46, 0.39
Interaction Effects/Path b_3			
Institutional Betrayal X Years Served	0.04	0.05	-0.04, 0.13

Note. n = 153. Sexual assault after service, years since most distressing military sexual assault, years since discharge, child sexual abuse, reporting military sexual assault, mental health treatment, and deployment, were controlled for but were not reported in the table. Significant paths in bold for emphasis. Estimates were bootstrapped with 10,000 bootstrap samples. Boot SE represents the standard error for the bootstrapped sample.

Statistical analyses for Aim 7. Aim 7 examined for the moderation effects of unit support on the relation between institutional betrayal and self-blame. The overall model was significant, $F(10, 142) = 6.24$, $p < .001$, $R^2 = .31$. Institutional betrayal significantly and positively predicted self-blame, but unit support did not significantly predict self-blame. There was no significant moderation effect. The only significant covariate was making a formal military sexual assault report which had a negative association with self-blame, $b = -0.61$ (boot $SE = 0.23$), boot 95% CI [-1.05, -0.16]. See Table 12 for results.

Table 12

Aim 7: Unit Support as a Moderator of the Relation of Institutional Betrayal and Self-Blame

	b	Boot *SE*	Boot 95% CI
Path b_1			
Institutional Betrayal → Self-Blame	**0.17**	**0.08**	**0.03, 0.33**
Path b_2			
Unit Support → Self-Blame	0.03	0.02	-0.001, 0.06
Interaction Effects/Path b_3			
Institutional Betrayal X Unit Support	-0.003	0.002	-0.007, 0.001

Note. n = 153. Sexual assault after service, years since most distressing military sexual assault, years since discharge, child sexual abuse, reporting military sexual assault, mental health treatment, and deployment, were controlled for but were not reported in the table. Significant paths in bold for emphasis. Estimates were bootstrapped with 10,000 bootstrap samples. Boot *SE* represents the standard error for the bootstrapped sample.

Statistical analyses for Aim 8. Aim 8 examined for the moderation effects of unit support on the relation between institutional betrayal and minimization. The overall model was significant, $F(10, 142) = 6.08$, $p < .001$, $R^2 = .30$. Institutional betrayal and unit support significantly and negatively predicted minimization. There was a significant moderation effect that was positive indicating that for every one unit increase in unit support, the relation/slope between institutional betrayal and minimization increases by 0.04. The conditional effects of utilizing one standard deviation below the mean (29.48), mean (37.66), and one standard deviation above the mean (45.84) for unit support to describe the effect of institutional betrayal on minimization were not significant; therefore, the individual slopes were not significantly different from zero. The closest conditional effect to significance was when unit support was one standard deviation above the mean, which had an interaction effect of 0.39 (*SE* = 0.20), 95% CI [-0.01, 0.78]. Due to the significant interaction, it is assumed that if one would go higher than one standard deviation above the mean for unit support, there would be a significant slope suggesting that at higher levels of institutional betrayal with very high levels of unit support, one would expect higher minimization. See Figure 10 for a visual depiction of the moderation effects.

The two significant covariates were reporting military sexual assault and childhood sexual abuse. Reporting military sexual assault had a positive association with minimization, *b* = 5.71 (boot *SE* = 1.84), boot 95% CI [1.97, 9.16]. Childhood sexual abuse had a negative association with minimization, *b* = -0.99 (boot *SE* = 0.45), boot 95% CI [-1.91, -0.17]. See Table 13 for results.

Table 13

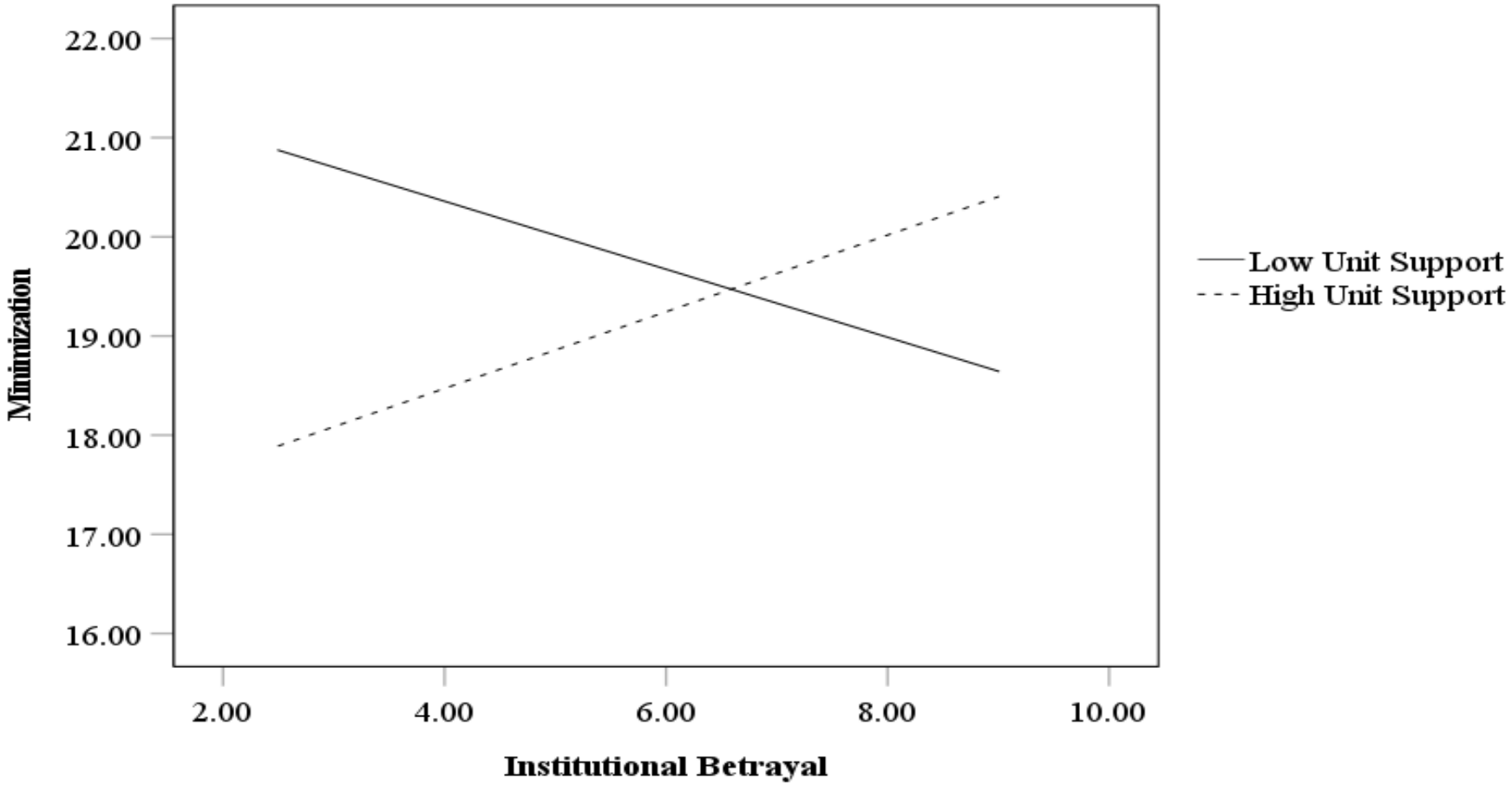
Aim 8: Unit Support as a Moderator of the Association between Institutional Betrayal and Minimization

	b	Boot *SE*	Boot 95% CI
Path b_1			
Institutional Betrayal → Minimization	**-1.66**	**0.66**	**-2.95, -0.35**
Path b_2			
Unit Support → Minimization	**-0.29**	**0.13**	**-0.54, - 0.02**
Interaction Effects/Path b_3			
Institutional Betrayal X Unit Support	**0.04**	**0.17**	**0.01, 0.08**

Note. n = 153. Sexual assault after service, years since most distressing military sexual assault, years since discharge, child sexual abuse, reporting military sexual assault, mental health treatment, and deployment, were controlled for but were not reported in the table. Significant paths in bold for emphasis. Estimates were bootstrapped with 10,000 bootstrap samples. Boot *SE* represents the standard error for the bootstrapped sample.

Figure 10

Aim 8: Moderation Effects of Unit Support and Institutional Betrayal on Minimization



Note. The figure depicts the conditional effects of utilizing "low" and "high" levels of unit support of which "low" denotes 1 standard deviation below the mean (29.48) and "high" denoates 1 standard deviation above the mean (45.83).

CHAPTER IV

DISCUSSION

Betrayal trauma theory posits that in the face of an intimate transgression from a trusted person or organization on which they depend on, an individual will engage in adaptive blindness strategies to help navigate and preserve the relationship (Freyd, 1994). Institutional betrayal experiences have been found to present itself in research through poor reporting procedures and experiences (Dardis et al., 2018), fear and incidents of retaliation when military sexual assault is disclosed (Morral et al., 2015), and creating an environment in which sexual harassment is not punished nor are there attempts to thwart it (Brownstone et al., 2018). The average number of institutional betrayal experiences in this sample (M = 5.75, SD = 3.25) is similar to Monteith et al.'s (2021) average number of experiences of institutional betrayal (M = 6.26, SD = 3.99) of military women who experienced sexual assault. In the case of women service members who experience sexual assault, adaptive blindness strategies may help women navigate their betrayal while an active-duty member. However, adaptive blindness may cause or exacerbate emotional pain in the form of mental health symptoms, such as PTSD symptoms and depressive symptoms. The purpose of the present study was to examine whether two different adaptive blindness strategies, self-blame and minimization, mediated the associations between institutional betrayal and mental health symptoms (i.e., PTSD symptoms and depressive symptoms) among women who endorsed sexual assault while in the military.

In addition, two variables (i.e., unit support and years served in the military) were examined as moderators of the association between institutional betrayal and the two adaptive blindness strategies. Specifically, it was predicted that more unit support would buffer or reduce

the strength of the association between institutional betrayal and the adaptive blindness strategies, whereas years in service would strengthen the relation among these variables.

In addition, seven covariates were included in all analyses to assess if they were associated with adaptive blindness strategies and mental health symptoms. The seven covariates included years since discharge, deployment experience (i.e., if they indicated a deployment or not), a history of mental health treatment, years since the most distressing military sexual assault, experiences of sexual assault after their military service, experiences of childhood sexual abuse, and whether they made a formal report of their military sexual assault, that is, whether they made any type of report (i.e., restricted or unrestricted report versus no formal report). Four covariates (i.e., making a formal report, experiences of sexual assault after their military service, experiences of childhood sexual abuse, and deployments) were significantly correlated with either or both adaptive blindness strategies and/or the mental health outcomes.

Overall, the null hypotheses for Aims 1 and 2 were rejected as institutional betrayal predicted depressive symptoms, PTSD symptoms, and self-blame. Self-blame predicted PTSD symptoms and depressive symptoms, and it mediated the association between institutional betrayal and mental health outcomes. The results regarding Aims 3 were mixed in that the findings failed to reject the null hypotheses relating to Aim 3a and Aim 3c as institutional betrayal did not have a significant relation with minimization nor was there a significant mediation effect with minimization on the association between institutional betrayal and depressive symptoms. However, the results indicated that null hypothesis for Aim 3b is rejected as minimization had a significant positive effect on depressive symptoms. The study results failed to reject all null hypotheses for Aim 4 because minimization was not significantly associated with PTSD symptoms, nor did it significantly mediate the association between

institutional betrayal and PTSD symptoms. The study failed to reject Aims 5 and Aim 6 because there were no significant moderation effects with years in service. The study failed to reject the null hypothesis for Aim 7 as there was no significant moderation effect of unit support on the relation between institutional betrayal and depressive symptoms. However, the study rejected the null hypothesis for Aim 8 as there was a moderation effect of unit support on the relation between institutional betrayal and PTSD symptoms.

The Adaptive Blindness Strategy of Self-Blame

The present study findings found that participants who reported more symptoms of institutional betrayal endorsed more self-blame. This finding aligns with previous research by Relyea and Ullman (2013) who found self-blame was a common response to "hostility" (e.g., blame, stigma, or infantilization) among civilian women who reported sexual assault. The positive association between institutional betrayal and self-blame found in the present study supports the assertion that self-blame may operate as an adaptive blindness strategy for those who experienced military sexual assault and institutional betrayal while in the military.

Self-blame may function as an adaptive blindness strategy for a few reasons. In response to institutional betrayal, women may utilize self-blame to make sense of the trauma (Ulman et al., 2007) especially if the military responds to the sexual assault in an unexpected or unsupportive way. In addition, women who experience military sexual assault may recognize that the military places its reputation above responding to sexual assault appropriately or supportively. As a result, to align with the military's response, to avoid conflict in one's job and with the military, and to remain a respected military member, she may utilize self-blame to help navigate the aftermath of the sexual assault (e.g., making sense of the trauma, reducing distress). Related to the point above, the military culture emphasizes placing the mission above everything

else (Burns et al., 2014; Hall, 2011). Thus, to avoid interfering with the larger military mission, and to prevent being perceived as a problem, women service members may engage in more self-blame to manage their trauma experience.

Institutional Betrayal and the Adaptive Blindness Strategy of Self-Blame on Depressive Symptoms

Corresponding to previous research (Andresen et al., 2018; Monteith et al., 2016) institutional betrayal was associated with more depressive symptoms. One of the explanations for why institutional betrayal may be directly associated with depressive symptoms is because many individuals join the military because they seek to belong and there is an emphasis of protecting one another (Lofgreen et al., 2017). Therefore, sexual assault is a betrayal, and the failure of the military to protect survivors after the offense adds as a secondary betrayal. The failure to protect and support women service members after sexual assault contrasts with the espoused values of loyalty and safety. From this perspective, the betrayal and hurt are inescapable and may lead to powerlessness and helplessness (Lofgreen et al., 2017) which are associated with more depression (Zauszniewski & Rong, 1999). Further, it is possible that women service members who experience sexual assault may internalize feelings of worthlessness, which is a symptom of depression (American Psychiatric Association, 2013), as she may wonder why she was not valued enough to be protected.

Further, the results indicate that self-blame is positively associated with depressive symptoms. This finding corresponds to cross-sectional research with civilian samples that has found self-blame is positively associated with depressive symptoms (Branscombe et al., 2003; Frazier, 1991; Wilson et al., 2017). In addition, the findings correspond with a longitudinal research study with a civilian sample that demonstrated that self-blame from sexual assault predicted more depressive symptoms six months later (Alix et al., 2019).

Although the cross-sectional design used in the present study does not allow for causality inferences, findings are consistent with a mediational model as there was an indirect effect of self-blame on the association between institutional betrayal and depressive symptoms. In addition to women utilizing self-blame as an adaptive blindness strategy to navigate unsupportive reactions from the military (i.e., institutional betrayal), women may also utilize self-blame to help navigate her experience of sexual assault as she may not be receiving support from the military. For example, to reduce the sense of fear or to regain control, women may try to analyze why the sexual assault occurred. Janoff-Bulman (1979) suggested that self-blame develops because it helps the victim regain the belief that they have control, and thus the belief that she can reduce the likelihood of rape occurring in the future (Janoff-Bulman, 1979). The belief that sexual assault can be controlled and prevented in the future is seen when women service members bind their breasts, cut their hair, and gain weight to reduce future revictimization (Brownstone et al., 2018). Although self-blame may give women a sense of control, it may lead to the development of guilt for the fall-out and challenges that arise from the rape/sexual assault especially when it is compounded with institutional betrayal. Guilt may then lead to harsh self-criticism and poor view of one's worth (Janoff-Bulman, 1979). The negative self-evaluation of one's worth is relevant because feelings of worthlessness and guilt are symptoms of major depressive disorder (American Psychiatric Association, 2013).

Institutional Betrayal and the Adaptive Blindness Strategy of Self-Blame on PTSD Symptoms

Similar to the findings from the model examining depressive symptoms as an outcome measure, institutional betrayal and self-blame were positively associated with PTSD symptoms. In addition, self-blame significantly mediated the relation between institutional betrayal and PTSD symptoms. The finding that institutional betrayal was positively associated with PTSD symptoms in female military service members corresponds to Smith and Freyd's finding (2013)

that civilian women who experienced sexual assault and institutional betrayal had more PTSD symptoms. Similar to the findings with depression as the outcome measure, women service member's beliefs about the protection and loyalty from the military are shattered. As a result, she may experience powerlessness and helplessness (Lofgreen et al., 2017) which may contribute to PTSD symptoms (Salcioglu et al., 2017). It is also possible that institutional betrayal may result in extending negative cognitions more globally. That is, rather than what happened was the failure of one person, the survivor may begin to believe that "All men are bad, or all military men are bad." However, institutional betrayal represents a systematic failure/transgression which may lead the survivor to extend her thinking to "All people are bad." More global negative cognitions may lead to even more avoidance behaviors (i.e., avoiding external factors that remind them of the trauma or internal factors like emotions or thoughts associated with the trauma) which then supports the maintenance of PTSD symptoms (Ehlers & Clark, 2000).

The positive relationship between self-blame related to one's sexual assault and PTSD symptoms has been empirically established in numerous studies (Frazier, 1990, 2003; Koss et al., 2002; Ullman, 1997); however, the finding that self-blame explains some of the association between institutional betrayal on PTSD symptoms is new to the literature. This finding suggests that women service members who endorse institutional betrayal may utilize self-blame to cope via an adaptive blindness strategy to make sense of the trauma. Self-blame resulting from one's sexual assault may serve to increase PTSD symptoms. Self-blame could be considered a cognitive distortion involving the meaning of the event (e.g., I was not careful enough, and if I had done something else, the sexual assault would have never occurred; Iverson et al., 2015). Cognitive distortions often increase and maintain PTSD symptoms by engaging in more avoidant behaviors (Ehlers & Clark, 2000). By engaging in more avoidant behaviors, cognitive distortions

are reinforced as accurate beliefs (e.g., if a woman wakes up several times in the night to see if her door is locked and she is not sexually assaulted again, then she believes she is successfully reducing her risk which reinforces the behavior and belief). In fact, the premise of the evidence-based treatment of cognitive processing therapy (Resick et al., 2014) is to reduce cognitive distortions through challenging the cognitive distortions to reduce PTSD symptoms. Self-blame tends to involve self-criticism which may develop into rumination and pathological guilt (Pole et al., 2005). Pathological guilt is considered PTSD symptom within Criterion D (American Psychiatric Association, 2013).

Factors Associated with Self-Blame as an Adaptive Blindness Strategy in Response to Institutional Betrayal

Possible factors that may impact the association between institutional betrayal and whether self-blame may be used as an adaptive blindness strategy include unit support and years in military service. However, neither variable had direct effects nor moderation effects involving self-blame and institutional betrayal. There are two possible reasons for the lack of significant findings with unit support. First, military peers may have little impact on decisions regarding the handling of a sexual assault case, which is largely determined by one's immediate supervisor or law enforcement. Therefore, it appears that beliefs about institutional betrayal are a more important determinant of self-blame than support from one's unit. Second, different types of unit support may affect self-blame. In the present study, unit support was measured by *The Deployment Risk and Resilience Inventory-2* (Vogt et al., 2012). This measure assesses a more general sense of support (e.g., "I felt valued by my fellow unit members"). It is possible that unit support may have had a moderation effect if the measurement of unit support analyzed the military peers' positive or negative reactions to the disclosure of the sexual assault. It is also possible that some women service members did not share their sexual assault experiences with

their peers; therefore, they never had the opportunity for their unit to exhibit support or to reduce her feelings of self-blame.

It was expected that more years of military service would strengthen the relation between institutional betrayal and self-blame because women who had more years of military service may have felt a greater connection to the military. For this reason, more years of service was expected to be related to greater self-blame as self-blame would serve as an adaptive blindness strategy in the face of institutional betrayal and allow the veteran to maintain her relationship to the military. The other reason why years of military service was expected to strengthen the association between institutional betrayal and self-blame was because more years of military service was expected to intensify the pressure to maintain the relationship with the military to receive a military retirement pension. For the service member to receive a pension, a military member must remain in the military for at least 20 years. It is possible that the pension is not a strong concern or value in comparison to safety; therefore, years of military service was not a significant determinant of whether to use self-blame as an adaptive blindness strategy. In addition, other variables besides years of military service that may strengthen the level of connection one feels towards the military which, in turn, may impact the association between institutional betrayal and self-blame. Examples of these variables include leadership support or style, stressful unit experiences, such as combat or the injury or death of a unit member, or belief in how well a unit can successfully perform a mission (Fors Brandebo et al., 2022).

Other Variables that may Influence Self-Blame

Only two of the covariates were significantly related to self-blame. Specifically, experiencing sexual assault after the military and making a formal report had negative associations with self-blame. It was expected that making a formal report of sexual assault would be associated with greater self-blame; however, in contrast to expectations, having made a

formal report was associated with lower self-blame. To help understand the findings of how formal reports interacted with self-blame, it is helpful to understand how the military construes the two types of formal reports. In restricted reports, command (i.e., military leaders and higher-ranking military personnel) and law enforcement are not notified (Department of Defense Sexual Assault Prevention and Response, 2022). In unrestricted reports, command and law enforcement are notified and proceed with an investigation (Department of Defense Sexual Assault Prevention and Response, 2022). In the present study, the covariate was simply assessed as whether a formal report was made regardless if the report was restricted or unrestricted as compared to no report.

In previous research, making a formal report appeared to include many negative experiences (e.g., victim blaming, retaliation; Campbell & Raja, 2005) that was assumed to induce self-blame. It is possible that in previous eras of service, there were many negative experiences with making a formal report; however, in more recent years, the procedures could have improved. The data for the present study were collected in 2022, and the women in the present sample were generally young, with an average age of 32.37. Thus, women in the current study did not serve in the same time period as the sample in Campbell and Raja's (2005) study. It is possible that women who made a formal report in this present sample experienced greater support and were less likely to experience uncomfortable, derogatory, or blaming comments than women in the past. To illustrate, Campbell and Raja's (2005) sample most likely did not have the option to make a restricted report as restricted reports were developed in June of 2005 (Ryan, 2008). In the present study, most participants who stated that they had made a formal report said that they had made a restricted report (41.8%) as compared to an unrestricted report (29.4%).

Research has suggested that women who file restricted reports have higher satisfaction ratings than unrestricted reports (Mengeling, et al., 2014). Those who file restricted reports may not experience the same victim-blaming experiences as those who made unrestricted reports because military leaders have a huge sense of responsibility for the actions and reputations of their units (Castro et al., 2015) and may work to reduce the allegations (Dardis et al., 2018). Those with restricted reports will primarily work with individuals like victim advocates or forensic nurses. The difference in personnel handling the report may affect the victim's perception. In civilian populations, victim advocates and forensic nurses have more satisfactory ratings than patrol officers, detectives, and State's Attorney's Office Staff (Henninger et al., 2020). Specifically, victim advocates and forensic nurses have higher ratings on being respectful, believing the victims' stories, being sensitive to different cultural factors, and explaining procedures clearly (Henninger et al., 2020). The difference in personnel involved may yield one explanation to the unexpected finding that those who made formal reports in the current study had less self-blame as victim advocates/forensic nurses may have provided more supportive responses. As a result of those supportive responses, women service members may have felt validated and thus less likely to blame themselves.

A final explanation for why formal reports were associated with less self-blame was because it provided an emotional corrective experience. The theory of emotional change posits that an emotional corrective experience can aid with post-trauma healing. The initial emotions experienced during the aftermath of the rape/sexual assault (e.g., fear, disgust, sadness, anger) are experienced but are exposed to a safer and supportive environment allowing her to create new meaning of the event (Greenberg, 2012). Restricted reports involve victim advocates who may have more training (Miller et al., 2018) and thus may respond more supportively to sexual

assault survivors than that of command leaders. Perhaps in a more supportive environment, she may internalize less self-blame.

Also, findings indicate those who experience sexual assault after their military service report less self-blame. This finding was also contrary to expectations as it would be assumed that repeated sexual assault experiences would serve as confirmation for a previously held belief about fault (Söchting et al., 2004). It is possible that a repeated experience of sexual assault may show the individual that no matter what they do, they may still be a victim of sexual assault, thus allowing to place less blame on themselves and more blame on the perpetrator(s).

General Discussion of Self-Blame as an Adaptive Blindness Strategy

Taken together, study findings suggest self-blame may serve as an adaptive blindness strategy among women veterans who experience institutional betrayal. In addition, self-blame was associated with more depressive and PTSD symptoms. This finding may benefit clinicians who work with these survivors and suggest the importance of understanding the degree to which women service members blame themselves for the sexual assault as greater self-blame was associated with more depression and PTSD symptoms. It is important for clinicians to understand factors that may influence how their clients perceived or managed their experience of sexual assault to help develop an individualized approach in conjunction with evidence-based treatment. One of the factors that may impact the client's journey of healing from sexual assault, per results of current study, is the presence of institutional betrayal. Institutional betrayal was associated with self-blame; therefore, it may be helpful for the clinician to provide challenging questions, as utilized in the cognitive-behavioral therapy approach (Foa & Olasov Rothbaum, 1998), to reduce self-blame. For example, in the beginning of treatment, it may be important to acknowledge the importance of the value of accountability to both the survivor, as she may assume self-blame to understand her role in the traumatic event and to the military (Adler et al.,

2011). It may be useful to apply the shared value of accountability to point out a discrepancy in that there does not appear to be any accountability placed on the perpetrator, especially if he is also part of the military. It is assumed that the more rightful responsibility and blame that is placed on the perpetrator would decrease self-blame resulting in possibly fewer depressive symptoms and/or PTSD symptoms, per current study's findings. The rationale is that targeting cognitive distortions, such as self-blame, may reduce PTSD symptoms and depressive symptoms (Iverson et al., 2015).

Knowing that institutional betrayal predicted self-blame and, in turn, self-blame contributed to both PTSD symptoms and depressive symptoms results in a better understanding of the associations of sexual assault among military women. It is also important to understand the implications for this finding among military women specifically. Unlike civilian women, military women are not allowed to leave their jobs if they have sexual assault experiences because they could be labeled as "absent without leave (AWOL)" and if so, could face prison time. Therefore, when military women seek the support of the military institution to assist with the handling of the military sexual assault, and instead face institutional betrayal, it may serve as a continuing experience of being in a "no-win" situation that women often experience due to being in a male dominated field (Bell et al., 2014). Women may feel conflicted with trying to be feminine to be associated with a "good" or "real" woman; however, they may also feel a pull to be masculine to be a "good" or "real" service member (Herbert, 1998). Institutional betrayal may serve as a message that the women are being problematic and interfering with the mission when they disclose their sexual assault. Therefore, women may utilize self-blame to navigate her circumstances given that there is already a burden to be recognized as competent to their male counterparts (Herbert, 1998).

Support groups led by clinicians who can facilitate conversations acknowledging the difficulties of navigating a male-dominated field with masculine cultural values in combination with their experiences of military sexual assault. Conversations like these may serve as validation for some women and help relinquish the use of self-blame. Women service members have reported that provider validation was one of the most powerful sources of support and explained that it was because it was such a relief to understand how they were not at fault for their sexual assault (Cichowski et al., 2019). Some clinicians may feel helpless or unsure on how to mend or heal a betrayal that they did not partake in, nor will the survivors likely receive any acknowledgement from the individuals from the military who partook in their institutional betrayal. However, being able to involve the knowledge from this study to help women understand the context of their trauma and provide validation can be healing and hopefully reduce the mental health symptoms as a result. Being able to provide an emotional corrective experience (Greenberg, 2012) for women service members may be especially important. Women service members report that VAs appear to be male dominated, and VA staff engage in microaggressions such as by assuming that the women are not veterans and are there for support to a male veteran (Cichowski et al., 2019). By ensuring that therapy spaces are women-centered, or at least aware of women veterans, may serve as validation that they are valued, respected, and wanted in that space. It may allow them to feel safe and open up about their experiences of institutional betrayal allowing the therapist to challenge misconceptions about their degree of fault (i.e., self-blame) and thus reduce mental health symptoms.

The Adaptive Blindness Strategy of Minimization

Minimization was measured by the degree of which the participant thought her sexual assault experience could be considered an unwanted sexual contact due to the level of physical

violence, injuries obtained, or resistance she exhibited. For example, someone with high minimization would strongly agree with the statement, "If I didn't physically fight back, I can't really say that it was unwanted sexual contact," (Payne et al., 1999). Minimization was not discussed as an adaptive blindness strategy in the original betrayal trauma theory (Freyd, 1994). However, minimization may serve as an adaptive blindness strategy in that it helps reduce the intensity or perception of harm of the sexual assault allowing the women service member to feel less betrayed and continue to rely on her military colleagues.

Findings from the current study indicated that minimization did not act as an adaptive blindness strategy in response to institutional betrayal unless specific conditions existed. Women service members appeared to only utilize minimization as an adaptive blindness strategy when she also reported very high unit support. It is unclear why minimization did not appear to serve as an adaptive blindness strategy overall. The only explanation that the writer can surmise is that it would be harder to minimize the sexual assault when the consequences are so pervasive in terms of mental health symptoms and distress. Therefore, minimization may not be as useful as self-blame to make sense of the trauma.

Minimization and Depressive Symptoms

Minimization was positively associated with depressive symptoms; however, the association between institutional betrayal and depressive symptoms was not explained by minimization (i.e., no mediation effects). Empirical research on the association between minimization and depressive symptoms has been limited. Both studies that have investigated the association between minimization and depressive symptoms did not find any association (Holland et al., 2021; Walsh Carson et al., 2019); therefore, the results of this study differ from previous research.

One of the reasons for why higher minimization scores was associated with more depressive symptoms may be because survivors may believe their sexual assault was not serious enough to use resources such as mental health treatment (Holland et al., 2021). In turn, mental health would be expected to reduce depressive symptoms. Minimization can also be considered a cognitive avoidance coping strategy as it is a response to deny or reduce the seriousness of a crisis or its consequences (Cronkite & Moos, 1995). Cognitive avoidance coping was associated with greater depressive symptoms among college women in a longitudinal study (Blalock & Joiner, 2000). It is possible that cognitive avoidance strategies, such as minimization, when used to cope with stressors, such as sexual assault, may lead to depression because they create a negative self-view. That is, survivors may perceive a low sense of control over external events that happen to them leading to more helplessness and emotional distress (Blalock & Joiner, 2000).

Minimization and PTSD Symptoms

Minimization was not associated with PTSD symptoms, nor did minimization mediate the association between institutional betrayal and PTSD symptoms. This finding is surprising as minimization was expected to be associated with more PTSD symptoms as minimization appears to be related to cognitive avoidance, one of the criteria for PTSD symptoms (American Psychiatric Association, 2013). The lack of significant findings may be because if women service members minimize their sexual assault experience (e.g., view it as an “accident” or misunderstanding), they may not experience as much distress. A qualitative study found that college women who do not want to label their experience as rape was partly due to the perceived consequences of identifying their experience as such because to do so would result in the discomfort of viewing the perpetrator as a rapist, feeling less control, or feeling more traumatized (Peterson & Muehlenhard, 2011).

Another possible reason for the lack of findings in the current study for the association with minimization and PTSD symptoms may be because minimization is more complex than how it is measured in the current study. In fact, other studies seem to have difficulties with deciphering how minimization plays a role in PTSD symptoms as there are mixed empirical findings. Walsh Carson et al. (2019) found minimization was associated with fewer PTSD symptoms in college women who reported sexual victimization, yet Holland et al. (2021) found no differences on PTSD symptoms between college women and men sexual assault survivors who used minimization versus those who did not use minimization. There may be variables that lead to minimization of one's own sexual assault that were not assessed in the current study, such as high tolerance of sexual harassment, rape myth acceptance, benevolent sexist beliefs (LeMaire et al., 2016), alcohol use by both parties, initial sexual activity before the sexual assault, and viewing the perpetrator as a "good guy" (Dardis et al., 2021). The current study only assessed minimization based on how physically violent the sexual assault was (e.g., "An unwanted sexual contact experience probably didn't happen if I had no bruises or marks," Payne et al., 1999). A more inclusive measurement of minimization to comprise of multiple factors that lead to minimization may produce different findings regarding minimization and its impact on PTSD symptoms. For example, including an item that assesses minimization on drinking (e.g., "We were both drunk, so I can't say it was an unwanted sexual contact") and minimization based on the perpetrator (e.g., "The person was my friend. I don't think he would mean any harm to me, so it must not be an unwanted sexual contact") may increase the construct validity of minimization. Unfortunately, no measure exists that assessed the aforementioned items to the author's knowledge. Therefore, the study's analyses may have treated individuals who minimize

their sexual assault for different reasons (e.g., drinking) as the same as those who do not minimize their sexual assault at all.

Factors Associated with Minimization as an Adaptive Blindness Strategy in Response to Institutional Betrayal

Years of military service did not have a significant direct effect on minimization, nor did it moderate the association between institutional betrayal and minimization. However, unit support was negatively associated with minimization. Supportive fellow service members may provide compassion and challenges for remarks insinuating minimization by the survivor, thus, reducing women's use of minimization. Moreover, Walsh et al. (2014) found higher unit support was associated with reduced odds of sexual harassment and sexual assault during deployments. It is possible that unit support may reduce the instances of sexual harassment and sexual assault in those units which reduce the normalization, and thus minimization, of sexual assault experiences.

Although unit support had a negative direct effect on minimization, there was a positive moderation effect of unit support on the relation between institutional betrayal and minimization; however, the conditional effects of using the average, and one standard deviation above and below the mean were not significant. The only simple slope that neared significance was when unit support was "high" (i.e., 1 standard deviation above the mean). Therefore, it can be inferred that this effect was weak, and that while the conditional effects were not significant, perhaps at very high levels of unit support moderation may be found.

With that caveat, this moderation effect can be conceptualized in two different ways. The first conceptualization is that when women service members experience high levels of institutional betrayal, they internalize the message that sexual assault is not important and/or the handling of sexual assault interferes with the mission. Castro et al. (2015) suggested that due to the high emphasis placed on the value of performance in the military, command may deny the

seriousness of the sexual assault if the perpetrator is good at their job. If the high performing perpetrator is removed from the unit, it may put the unit at risk of failing their mission. If the survivor feels connected to her unit due to high unit support, she may not want to harm her unit's ability to complete the mission. In order to do that, she may minimize her sexual assault. This conceptualization corresponds with the betrayal trauma theory (Freyd, 1994).

An alternative conceptualization for this moderation effect is based on "battle buddies." A qualitative study found that service women depended more-so on their buddy system than their male counterparts (Cheney et al., 2015). In fact, one participant explained that senior leadership informed the women service members that a particular unit had high instance of rape, so it was highly recommended that they had a woman battle buddy when moving around in the unit to reduce the likelihood of rape (Cheney et al., 2015). This response from the senior leadership could be considered institutional betrayal in that the message given to the women is to protect themselves rather than stop the perpetrator(s) from sexually assaulting. Therefore, women service members who are highly connected with their fellow service members may want to protect their "battle buddies" especially if there is high institutional betrayal because she knows the military will not protect them. If she can minimize her own sexual assault experience, it may be easier for her to remain in the unit, so she can continue to protect her fellow service women as a battle buddy.

Other Influential Factors on Minimization

Of the seven covariates examined, three covariates had significant associations with minimization. These were making a formal report (either restricted, unrestricted, or both unrestricted and unrestricted reports) of sexual assault, sexual assault after the military, and childhood sexual abuse. Formal reports of sexual assault had a positive association with minimization indicating that women who made formal reports tended to minimize their sexual

assault more than those who did not make a formal report. It was an intriguing finding as formal reports had the opposite effect for the other adaptive blindness strategy of self-blame. That is, stating that they had made a formal report of their sexual assault was associated with more minimization of their own sexual assault. This finding might be related to the policies involved in making a formal report that allows women to get access to medical care if they desire (Mengeling et al., 2014); however, after going through the process, she may be led to believe that her sexual assault was not that severe, particularly if she did not need medical attention at the time. For example, if her sexual assault was not physically violent and/or did not lead to injuries (e.g., no bruises, no cuts, no bleeding, no broken bones), she may minimize her own sexual assault after realizing through the reporting procedure that others have needed care for those injuries and that the questions asked about physical injury. Combined with this effect is that those who made an unrestricted report in which command is notified and an investigation is opened, may have had more negative experiences reinforcing minimization. Those with unrestricted reports may be prone to minimization if command dismissed the case if command does not feel there is sufficient evidence. For example, Mengeling and colleagues (2014) found that their military sample of unrestricted reports included experiences such as being told to "forget about it," to not discuss their experience with anyone else, and had the unrestricted report investigator make remarks that implied it was her fault. All of these experiences could possibly lead a service woman to think that her sexual assault was not serious or that she may have exaggerated the harm of the experience and lead to more minimization. In fact, a qualitative study found that individuals who made formal reports said that they experienced negative comments in the reporting process (e.g., denial of their experiences, indicating that it would ruin

the perpetrator's life) which led to questioning themselves about the seriousness of it (Holland et al., 2021).

Childhood sexual abuse was another covariate that was significantly related to minimization with more childhood sexual abuse experiences contributing to less minimization. Originally, it was thought that those who had experienced child sexual abuse would have higher minimization scores based on the betrayal trauma theory that states that adaptive blindness strategies are utilized when the individual depends on the relationship with the perpetrator (Freyd, 1994). Specifically, it was believed that individuals who experienced sexual abuse as a child may have been forced or learned to cope with sexual abuse via minimization (Walsh et al., 2010) which may have predisposed them to minimization in response to military sexual assault. However, the study results indicated the opposite, in that those who had experienced childhood sexual abuse reported less minimization of their military sexual assault as compared to participants who had not experienced childhood sexual abuse.

It is possible that the women service members have previously processed the childhood sexual abuse with a different perspective because adaptive blindness strategies (e.g., minimization or self-blame) are no longer needed as they are not dependent on their perpetrator anymore (Freyd, 1994). In fact, there may be similar parallels with the childhood sexual abuse and military sexual assault. If they did not physically fight against their perpetrators as children due to their powerlessness (e.g., physically being weaker or dependent on the perpetrator) or due to threats from their perpetrators, they may not dismiss or minimize the sexual assault as adults if they did not fight back either. In other words, having experienced childhood sexual abuse may give them a better understanding of this experience. For this reason, women who experienced childhood sexual abuse may not employ adaptive blindness strategies (i.e., minimization).

It should be noted that the present study used a modified version of the *Illinois Rape Myth Acceptance Scale* (Payne et al., 1999) to assess for minimization. This measure assesses minimization primarily for those who did not have a physically violent military sexual assault experience because the questions are centered around injuries and physical violence. There is a myth that if one did not fight back or does not have physical injuries, then they must minimize their experience and not label it as rape or sexual assault. For example, a high minimizer would strongly agree with the statement, "An unwanted sexual contact experience probably didn't happen if I had no bruises or marks." That belief is incorrect in that it can very much be considered assault, rape, or an unwanted sexual contact experience. In fact, some women do not fight back leading to less injury because of a survival response. Tonic immobility is an evolutionary protective defense mechanism that inhibits movement to make prey less visible and inhibit aggression in predators, so they abandon their attack-kill responses (Herzog & Burghardt, 1974). It is suggested that humans, just like animals, also have tonic immobility. In fact, it is most well-known in sexual assault cases with survivors reporting that they lost the ability to move or call for help and is coined the "rape induced paralysis" (Burgess & Holmstrom, 1976). Adults who were sexually abused as children may recognize that it does not matter if they did not have injuries or fought back because of what they have learned through reflecting on their own childhood sexual abuse.

The final covariate was sexual assault after the military which had a positive association with minimization. After repeated sexual assault experiences in adulthood, some individuals may use minimization to help cope with the distress associated with the repeated sexual assault. It is possible that women find it easier to cope with their sexual assault experiences if they label their sexual assault experiences as an "accident," "misunderstanding" or any other label other than

rape because if they were to label it as rape, their view of the perpetrator may be shattered, they may feel less control, and feel more traumatized (Peterson & Muehlenhard, 2011).

General Discussion of Minimization

Overall, minimization did not appear to operate as an adaptive blindness strategy unless under conditions of high unit support. Although minimization was directly associated with depressive symptoms, minimization was not associated with PTSD symptoms. Further, minimization did not have an indirect effect on the relationship between institutional betrayal and depressive symptoms or PTSD symptoms. Therefore, there are less clinical implications that can be derived for minimization. It may be important for clinicians treating sexual assault survivors who are utilizing minimization and have depressive symptoms to examine their sexual assault characteristics to help target any cognitive distortions that are complicating their depressive symptoms. For example, since minimization was based on denying it was an "unwanted sexual contact" due to the lack of physical violence, the absence of a weapon, lack of resistance, or lack of injuries, it may be helpful for the clinician to provide the client psychoeducation on some misconceptions about sexual assault to help reduce minimization. Per the current study's findings, if minimization is reduced, depressive symptoms may improve. For example, those with high minimization of their sexual assault may benefit from a supportive counselor who assists with identifying or explaining reasons for why the women did not fight back if that was their reason for minimization. Further, it may be useful to explain that some women utilize a freezing response as a coping strategy when experiencing sexual assault, and that the freezing response may have helped them survive during the trauma. Having the client understand that they acted in ways to help themselves during the sexual trauma helps them establish stronger self-esteem (Burgess & Holmstrom, 1976). In turn, stronger self-esteem may reduce depressive symptoms (Orth & Robins, 2013).

The other take-away from the current study's finding about the positive association between minimization and depressive symptoms is understanding that even among those who minimize their sexual assault, they still exhibit psychological distress via depressive symptoms. It may be important for military police, victim advocates, command, etc., to be aware that even when minimization occurs to still offer mental health services to the survivor and not let the minimization deter them away from providing services.

General Discussion of Entire Study

Although this study utilized a cross-sectional design which inherently has the limitation of not being able to infer causality, results were consistent with the betrayal trauma theory (Freyd, 1994). Specifically, the findings suggest that self-blame may function as a form of adaptive blindness as it was significantly associated with institutional betrayal; however, overall, results from the models that examined minimization did not support minimization as an adaptive blindness strategy. Minimization may only operate as an adaptive blindness strategy in specific circumstances such as when there is increasingly more unit support.

The results indicate the significance of considering cultural factors, like being a member of the military, that complicate or alter one's response to sexual assault that may be crucial knowledge for researchers or clinicians. For example, the response to sexual assault from one's workplace for civilians may not be as crucial as the response from the military for service members. The military workplace environment is very different from other entities such as universities or other employment settings. The separation between work and leisure time is more ill-defined than in civilian world (Gidycz et al., 2018). Service members are more immersed in their workplace than civilians as some service members are on duty 24/7, live on base, and socialize with their military peers off duty and on duty (Gidycz et al., 2018). Also, unlike other

work settings like colleges, most college students do not have differences in power with each other in the same way that military service members do because the military has norms and culture around rank hierarchy that are very prominent (Gidycz et al., 2018). Therefore, it can be inferred that involving the military to intervene and handle the complex rank structure, work duties, and life on base after the experience of military sexual assault is vital to service members. The current study demonstrates the significance of the way the military conducts itself when handling military sexual assault because, if handled poorly, may lead to greater institutional betrayal. As established in this study, institutional betrayal is associated with service members' mental health (i.e., depressive symptoms and PTSD symptoms) via the adaptive blindness strategy of self-blame even years after their discharge.

The natural healing process from sexual trauma may become more difficult due to the institutional betrayal and the adaptive blindness strategies thus requiring mental health treatment to help treat those factors. Mental health providers who work with survivors should assess if there are experiences of institutional betrayal, and how the survivor may have internalized or made sense of the institutional betrayal. It may be useful for clinicians to use the *Institutional Betrayal Questionnaire Version 2* (*IBQ.2*; Smith & Freyd, 2017) in their intake sessions to help contextualize the clients' military sexual trauma. If the clinician found that the client utilized minimization or self-blame in response to institutional betrayal experiences, clinicians should incorporate specific interventions that addresses these issues, particularly, in light of the fact that institutional betrayal was associated with depression and PTSD symptoms. Although it is out of the scope of this study to suggest which specific interventions may be the most helpful, there are established interventions for military sexual assault that address self-blame and the effects of injustice such as the Warrior Renew group therapy (Katz, 2016). In addition, it is recommended,

no matter what therapeutic orientation or intervention that is utilized, that the therapist utilizes an approach that includes empathy, collaboration, and positive regard in order to create a safe working relationship with the military sexual assault survivor (Siville, 2020). This approach is considerably important due to experiences with institutional betrayal, so that the clinician can provide a corrective emotional experience for the client (Siville, 2020).

Future Directions

Findings from this study reinforce the importance of continuing to understand the factors in policies, programs, and procedures that help reduce institutional betrayal associated with sexual assault. For example, Sadler and colleagues (2018) argue that improving leadership in the military is vital in the prevention and better handling of sexual assault in the military. They explain that sexual assault is more common among units with a laissez-faire style of leadership that shows indifference to sexual harassment as it creates a culture of acceptance of those behaviors (Sadler et al., 2018). Commissioned officers who engaged in behaviors like "not taking reports of sexual assault seriously," "not demonstrating zero tolerance for sexual harassment within the unit" and "not exhibiting support for service members seeking mental health care" had the highest odds of sexual assault in the military (Sadler et al., 2017). Sadler and colleagues (2018) argue for the importance of instilling more transformational leadership to cultivate a better organizational culture that does not allow sexual assault and sexual harassment. Clearly, understanding and implementing transformational leadership around sexual assault is important to examine in future research.

In addition, it appears important to continue to address the impact of institutional betrayal on service members' mental health based on the present study's results. The Department of Defense values research on military sexual assault as illustrated by the fact that they conduct

their own studies investigating prevalence, prevention, and promotion of quality responses to sexual assault every year (Department of Defense Sexual Assault Prevention and Response, 2022). In fact, future studies on military sexual assault and institutional betrayal may find less instances of institutional betrayal with younger service members as there are several new measures being taken in response to studies about sexual assault in the military. For example, President Biden's January 2022 Executive Order made sexual harassment a military offense (Department of Defense Sexual Assault Prevention and Response, 2022). In addition, each of the Military Departments will have an entity, Office of Special Trial Counsel, that will prosecute those who conceal sexual assault cases or reports occurring after December 27, 2023 (Department of Defense Sexual Assault Prevention and Response, 2022). The above-mentioned policies should be assessed for the effectiveness of reducing institutional betrayal.

Since making a formal report was related to adaptive blindness strategies (i.e., making a formal report led to more minimization and less self-blame), it may be important for future researchers to examine characteristics of formal reports and how it impacts mental health, institutional betrayal, and adaptive blindness strategies. Although this study did not assess satisfaction with the handling of their formal reports of sexual assault, it did assess satisfaction with formal reports on sexual harassment. Of the 115 survivors who reported their sexual harassment, the average satisfaction was 2.43 (SD = 1.02) which is between a score of 2 (i.e., "Somewhat satisfied") and 3 (i.e., "Neither satisfied nor dissatisfied."). It would be curious to see if different levels of satisfaction with the reports affected institutional betrayal and thus affected other outcomes like mental health or adaptive blindness strategies. As mentioned previously most of the sample who made a formal report used restricted reports in which command and law enforcement are not involved. Based on the research findings that victim advocates and forensic

nurses are associated with more positive evaluations than police (Henninger et al., 2021; Mengeling et al., 2014), it may be important to see how the type of report may influence the perception of institutional betrayal and therefore different outcomes.

Although beyond the scope of this dissertation, the present study asked why individuals did not make a formal report on their military sexual assault experiences. The responses varied to include personal reasons related to their relationship/perception to the sexual assault such as "Wanted to pretend it didn't happen" and "I didn't think it was serious enough to report (I wasn't raped)" to more fear-based responses like "Scared," "Scared he was in [sic] instructor in AIT," "I was young and scared." "I was worried that no one would believe me," "Fear for my life" "My command would have ruined my life," and "Afraid of retaliation." Another reason that arose on why they decided not to report was that they thought nothing of use would result from the report (e.g., "Reports are useless. My military colleagues have reported them," "It doesn't feel useful," "It didn't seem like a priority," "Because the report doesn't help," and "Because it doesn't do any good"). It may be important to examine whether women who did not make a formal report had units, bases, or commands that engaged in other behaviors that may elicit institutional betrayal (e.g., mocked previous individuals who reported to the survivors). It may be important for the military community to be aware since formal reports were associated with less self-blame, and self-blame was associated with mental health outcomes.

This study investigated two factors that may impact the relation between institutional betrayal and the adaptive blindness strategies, namely unit support and years of service in the military. Another important factor to consider is reason for joining the military. For example, if a service woman joined because she values honor and loyalty, she may be more impacted by institutional betrayal and her military sexual assault because those beliefs were shattered (Smith

& Freyd, 2014). Others may have joined because they wanted to make the military their career (i.e., serve 20+ years), and the experience of military sexual assault or institutional betrayal altered their dream thus leading to unfilled expectations and feelings of loss and grief which may impact their presentation of symptoms (Foynes et al., 2018).

There are most likely many other adaptive blindness strategies that may be utilized within the women service member population. For example, the *Young Schema Questionnaire* (Louis et al., 2018) may exhibit potential adaptive blindness strategies, such as the self-sacrifice schema, in which individuals have a worldview of sacrificing their own needs and comfort for others. An example item from this measure is, "I am a good person because I think of others more than of myself" (Louis et al., 2018). Individuals with this type of perspective may use a strategy of excessive caregiving to avoid the acknowledgment of the betrayal. Parentification, a similar concept to excessive caregiving, in which children experience a role reversal and fulfil the role as a parent to their own parents or siblings often results because of some type of trauma such as emotional neglect (Hooper, 2007). This type of parentified or excessive care taking behavior may be seen with women service members. No other studies, to the writer's knowledge, have investigated any type of adaptive blindness strategy as a mediator between institutional betrayal and mental health symptoms; therefore, it is unknown how the effect size of self-blame or minimization compares with other types of possible adaptive blindness strategies or coping strategies. Once more studies have been conducted investigating these relationships, it may be important to assess the most influential or strongest adaptive blindness strategies.

Another variable to examine for future studies is positive institutional responses which is measured in *Institutional and Betrayal and Support Questionnaire* (Smith & Freyd, 2013). Examples of items that measure support from the institution include, "Apologizing for what

happened to you?" and "Meeting your needs for support and accommodations" (Smith & Freyd, 2013). Previous research has indicated that positive social reactions in response to sexual assault resulted in increased perceived control over recovery for the survivor which then led to less PTSD symptoms (Ullman & Peter-Hagene, 2014). It can be more influential and beneficial to inform an institution on what are they doing well to increase that behavior rather than solely focusing on deficiencies.

It is also crucial to consider other cultural components when assessing adaptive blindness strategies and military sexual trauma. Men are heavily neglected with studies involving military sexual trauma as historically military sexual trauma is associated with women service members (Hoyt et al., 2009). Men's military sexual assault experiences often differ from women's experiences. For example, unlike women, men are more likely to experience military sexual assault from a perpetrator of the same sex while women are more likely to experience opposite sex assault (Street et al., 2007). The perpetrator being of the same sex may lead to men to question their sexuality (O'Brien et al., 2015). There are many myths about rape with men such as the notion, "Real men/strong men don't get raped," "A man can't be raped by a woman," and "Male rape is not serious" (O-Brien et al., 2015). These myths and unique experiences for men may increase their use of adaptive blindness strategy as military sexual assault is less accepted and supported for them.

Limitations

The most critical study limitation is the cross-sectional design that limits the inference of causality of the variables. As an attempt to limit this weakness, the instructions were very specific and attempted to reduce some of the ambiguity of the relation of the variables. For example, many people can experience multiple traumas; therefore, the participants were asked to

decipher which PTSD symptoms were associated with their military sexual assault and which symptoms were associated with their other trauma by filling out separate measures of PTSD symptoms. Only PTSD symptoms specifically related to the participants' military sexual assault was included in the analyses. However, despite the specificity of instructions, the direction of the associations cannot be inferred due to the lack of a longitudinal or experimental design.

Another limitation was power. A priori power analyses indicated at least 200 participants were needed. Despite arduous recruitment efforts, the sample was approximately 50 participants short of meeting that target recruitment. Nevertheless, several of the mediation models produced significant effects. Moreover, power was sufficient for the moderation models, which required only 110 participants. Another study that investigated sexual assault also had to continue with their analyses despite having fewer participants than indicated in their power analysis (Walsh & Bruce, 2011). Although research on sexual assault survivors participating in research has indicated that participants have a "positive" experience with little psychological or physiological distress over the short or long term (Nielsen et al., 2016), sexual assault is a sensitive topic for many. Some women service members may be reluctant to take a survey involving questions about their sexual assault.

Although power was sufficient for most analyses, power was low for the mediation models. It is important to note that minimization may function similarly to an adaptive blindness strategy; however, due to the lack of power, the effects may not have been found because minimization had a smaller effect compared to other adaptive blindness strategy of self-blame. Using Fritz and MacKinnon's (2007) guide for the required numbers of participants given the effect size of pathway *a* and *b*, it was determined for Aim 3, in which there was a small effect for pathway *a* and a medium-large effect for pathway *b*, 412 participants are needed to detect effects

using the percentile bootstrap test of mediation. Since Aim 4 had small effects for both pathways, it was determined that 558 participants would be needed to detect effects when using the percentile bootstrap test of mediation (Fritz & MacKinnon, 2007). Further, due to lower power, PTSD symptoms and depressive symptoms were not examined as covariates for each other in the appropriate models (i.e., Aims 1-4), especially since they had a large correlation of .52 (Cohen, 1998) in this study.

Although the data were thoroughly cleaned, many scammers and bots responded to the survey. Unfortunately, this is a common issue in recent online surveys. Storozuk et al. (2020) described the signs that a study may be infected with bots which included an improbable influx of participants within a short window of time, multiple respondents starting and ending at the same exact time, and non-sensical or identical responses from other respondents. Those were all similar signs within the current data set. Titcher et al. (2015) recommended a few strategies to reduce the internet fraud to include attention checks (which were added prior to the bot incident), CAPTCHAs (which were added after the bot incident to reduce future incidents), examining eligibility of IP addresses (which was conducted during the cleaning process), and modifying the design to require face-to-face interviews (which was never incorporated in this study). Future researchers may want to implement other strategies to reduce bots such as by requiring interested participants to contact the researchers directly via email rather than publicly providing the link (Pozzar et al., 2020). Bots will still email the researchers, but it is easier to spot the bot emails as the subject lines are badly written or meaningless, utilize key words from the advertisement, have poor grammar in the body of the email, etc. (Storozuk et al., 2020). It is important to have multiple strategies to reduce or catch bots in studies because bots can learn (Storzuk et al., 2020), which appeared evident in the current study's data as well. Many of the respondents took the

survey multiple times to learn the correct answers to the eligibility questions. Therefore, it is possible, despite the strict cleaning process, it could be that some data may have included bots rather than real women service members.

The measure for self-blame, the *Rape Attribution Questionnaire* (Frazier, 2003) had a Cronbach's alpha of .70. Although still within the acceptable range of reliability (Cortina, 1993), it is lower than desired. It may be that this measure does not fit well with the culture of military women who have experienced military sexual assault. When assessing the individual items and how they correlate with each other, there was no specific item that stood out as uncorrelated with the others. Rather, all items were relatively low in their correlation to each other. The highest correlation was with item 5 (i.e., "I didn't do enough to protect myself.") and item 3 (i.e., "I just put myself in a vulnerable situation.") at 0.426. The lowest correlation was with item 1 (i.e., "I used poor judgement.") and item 2 ("I should have resisted more.") at 0.155; however, both items had higher correlations with the other three items. Future researchers may wish to examine self-blame with a different measure or supplement it with another self-blame measure. The Posttraumatic Cognitions Inventory (Foa et al., 1999) has a subscale that measures self-blame with slightly higher internal consistency ($\alpha = .86$) with military women who have experienced military sexual assault (Holliday et al., 2014).

CHAPTER V

CONCLUSION

This study explored the relations between institutional betrayal, adaptive blindness strategies (i.e., minimization and self-blame) and mental health outcomes (i.e., depressive symptoms and PTSD symptoms). The results supported hypotheses that self-blame appears to be an adaptive blindness strategy used in response to institutional betrayal and helps explain the association between institutional betrayal and mental health symptoms (i.e., depressive symptoms and PTSD symptoms) in women survivors of military sexual assault. Overall, the finding suggests that institutional betrayal may affect one's perception of their sexual assault which, in turn, may lead to more mental health symptoms, and that self-blame may partially explain the associations between institutional betrayal and mental health symptoms.

Less support was found for the hypothesis that minimization may explain the association between institutional betrayal and mental health symptoms. Minimization only acted as an adaptive blindness strategy when the service member endorsed high unit support. The more unit support the women service member experiences increases the likeliness to utilize minimization to continue to protect the other service members because if the survivor is relocated to another unit, her "battle buddy" may be left with fewer protections. Minimization may also be utilized as an adaptive blindness strategy to protect the unit because if the perpetrator is vital to the success of the mission, and the service member reports or recognizes the sexual assault, it may lead to the removal of the perpetrator thus risking the success of the mission.

Taken together these findings are important and add to our understanding of how women service members may respond to institutional betrayal in the response to sexual assault which can inform the Department of Defense's policies and inform therapists' conceptualization of

women service members to individualize therapy to their specific needs. The findings also add support to use the betrayal trauma theory (Freyd, 1994) with the population of women service members as self-blame appears to function like an adaptive blindness strategy in response to an institutional betrayal.

REFERENCES

Adler, A. B., Bliese, P. D., McGurk, D., Hoge, C. W., & Castro, C. A. (2011). Battlemind debriefing and Battlemind training as early interventions with soldiers returning from Iraq: Randomization by platoon. *Sports, Exercise, and Performance Psychology, 1*, 66-83. https://doi.org/10.1037/2157-3905.1.S.66

Ahern, J., Worthen, M., Masters, J., Lippman, S. A., Ozer, E. J., & Moos, R. (2015). The challenges of Afghanistan and Iraq veterans' transition from military to civilian life and approaches to reconnection. *PloS One, 10*, 1-13. https://doi.org/10.1371/journal.pone.0128599

Alix, S., Cossette, L., Cyr, M., Frappier, J. Y., Caron, P. O., & Hébert, M. (2019). Self-blame, shame, avoidance, and suicidal ideation in sexually abused adolescent girls: A longitudinal study. *Journal of Child Sexual Abuse*, *29*(4), 432-447. https://doi.org/10.1080/10538712.2019.1678543

Allard, C. B., Nunnink, S., Gregory, A. M., Klest, B., & Platt, M. (2011). Military sexual trauma research: A proposed agenda. *Journal of Trauma & Dissociation, 12*(3), 324-345. https://doi.org/10.1080/15299732.2011.542609

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). https://doi.org/10.1176/appi.books.9780890425596

Andresen, E. M., Malmgren, J. A., Carter, W. B., & Patrick, D. L. (1994). Screening for depression in well older adults: Evaluation of a short form of the CES-D. *American Journal of Preventive Medicine, 10*(2), 77-84. https://doi.org/10.1016/S0749-3797(18)30622-6

Andresen, F. J., Monteith, L. L., Kugler, J., Cruz, R. A., & Blais, R. K. (2019). Institutional betrayal following military sexual trauma is associated with more severe depression and specific posttraumatic stress disorder symptom clusters. *Journal of Clinical Psychology*, *75*(7), 1305-1319. https://doi.org/10.1002/jclp.22773

Armour, C., Tsai, J., Durham, T. A., Charak, R., Biehn, T. L., Elhai, J. D., & Pietrzak, R. H. (2014). Dimensional structure of DSM-5 posttraumatic stress symptoms: Support for a hybrid Anhedonia and Externalizing Behaviors model. *Journal of Psychiatric Research, 61,* 106-113. http://doi.org/10.1016/j.jpsychires.2014.10.012

Babcock, R. L., & DePrince, A. P. (2012). Childhood betrayal trauma and self-blame appraisals among survivors of intimate partner abuse. *Journal of Trauma & Dissociation, 13*(5), 526–538. https://doi.org/10.1080/15299732.2012.694842

Battles, A. R., Bravo, A. J., Kelley, M. L., White, T. D., Braitman, A. L., & Hamrick, H. C. (2018). Moral injury and PTSD as mediators of the associations between morally injurious experiences and mental health and substance use. *Traumatology*, *24*(4), 246-254. https://dx.doi.org/10.1037/trm0000153

Baugher, S. N., Elhai, J. D., Monroe, J. R., & Gray, M. J. (2010). Rape myth acceptance, sexual trauma history, and posttraumatic stress disorder. *Journal of Interpersonal Violence*, *25*(11), 2036-2053. https://doi.org/10.1177/0886260509354506

Bell, M. E., Turchik, J. A., & Karpenko, J. A. (2014). Impact of gender on reactions to military sexual assault and harassment. *Health & Social Work, 39*(1), 25-33. https://doi.org/10.1093/hsw/hlu004

Bifulco, A., Bernazzani, O., Moran, P. M., & Jacobs, C. (2005). The Childhood Experience of Care and Abuse Questionnaire (CECA. Q): Validation in a community series. *British*

Journal of Clinical Psychology, *44*(4), 563-581. https://doi.org/10.1348/014466505X35344

Blais, R. K., Brignone, E., Fargo, J. D., Livingston, W. S., & Andresen, F. J. (2019). The importance of distinguishing between harassment-only and assault military sexual trauma during screening. *Military Psychology*, *31*(3), 227–232. https://doi.org/10.1080/08995605.2019.1598218

Blalock, J. A., & Joiner, T. E. (2000). Interaction of cognitive avoidance coping and stress in predicting depression/anxiety. *Cognitive Therapy and Research*, *24*, 47-65. https://doi.org/10.1023/A:1005450908245

Bland, J. M., & Altman, D. G. (1997). Statistics notes: Cronbach's alpha. *British Medical Journal*, *314*(7080), 570-572. https://doi.org/10.1136/bmj.314.7080.572

Bostock, D. J., & Daley, J. G. (2007). Lifetime and current sexual assault and harassment victimization rates of active-duty United States Air Force women. *Violence Against Women, 13*(9), 927-944. https://doi.org/10.1177/1077801207305232

Bovin, M. J., Marx, B. P., Weathers, F. W., Gallagher, M. W., Rodriguez, P., Schnurr, P. P., & Keane, T. M. (2016). Psychometric properties of the PTSD Checklist for Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition (PCL-5) in veterans. *Psychological Assessment, 28*(11), 1379-1391. https://doi.org/10.1037/pas0000254

Branscombe, N. R., Wohl, M. J., Owen, S., Allison, J. A., & N'gbala, A. (2003). Counterfactual thinking, blame assignment, and well-being in rape victims. *Basic and Applied Social Psychology, 25*(4), 265-273. https://doi.org/10.1207/S15324834BASP2504_1

Bravo, A. J., Kelley, M. L., & Hollis, B. F. (2016). Social support, depressive symptoms, and hazardous alcohol use among Navy members: An examination of social support as a

protective factor across deployment. *Journal of Social and Clinical Psychology, 35*(8), 693-704. https://doi.org/10.1521/jscp.2016.35.8.693

Breitenbecher, K. H. (2001). Sexual revictimization among women: A review of the literature focusing on empirical investigations. *Aggression and Violent Behavior, 6*(4), 415-432. https://doi.org/10.1016/S1359-1789(00)00014-8

Breland, J. Y., Donalson, R., Li, Y., Hebenstreit, C. L., Goldstein, L. A., & Maguen, S. (2018). Military sexual trauma is associated with eating disorders, while combat exposure is not. *Psychological Trauma: Theory, Research, Practice, and Policy, 10*(3), 276-281. https://doi.org/10.1037/tra0000276

Brownstone, L. M., Holliman, B. D., Gerber, H. R., & Monteith, L. L. (2018). The phenomenology of military sexual trauma among women veterans. *Psychology of Women Quarterly, 42*(4), 399-413. https://doi.org/10.1177/0361684318791154

Burgess, A. W., & Holmstrom, L. L. (1976). Coping behavior of the rape victim. *American Journal of Psychiatry, 133*, 413– 418. https://doi.org/10.1176/ajp.133.4.413

Burns, B., Grindlay, K., Holt, K., Manski, R., & Grossman, D. (2014). Military sexual trauma among US servicewomen during deployment: A qualitative study. *American Journal of Public Health, 104*(2), 345-349. https://doi.org/10.2105/AJPH.2013.301576

Burt, M. R. (1980). Cultural myths and supports for rape. *Journal of Personality and Social Psychology, 38*, 217-230. https://doi.org/10.1037/0022-3514.38.2.217

Campbell, R., & Raja, S. (2005). The sexual assault and secondary victimization of female veterans: Help-seeking experiences with military and civilian social systems. *Psychology of Women Quarterly, 29*, 97-106. https://doi.org/10.1111/j.1471-6402.2005.00171.x

Castro, C. A., Kintzle, S., Schuyler, A. C., Lucas, C. L., & Warner, C. H. (2015). Sexual assault in the military. *Current Psychiatry Reports, 17*(7), Article 54. https://doi.org/10.1007/s11920-015-0596-7

Cheney, A. M., Reisinger, H. S., Booth, B. M., Mengeling, M. A., Torner, J. C., & Sadler, A. G. (2015). Servicewomen's strategies to staying safe during military service. *Gender Issues, 32*, 1-18. https://doi.org/10.1007/s12147-014-9128-8

Cicchetti, D. V. (1994). Guidelines, criteria, and rules of thumb for evaluating normed and standardized assessment instruments in psychology. *Psychological Assessment, 6*(4), 284-290. https://doi.org/10.1037/1040-3590.6.4.284

Cichowski, S., Ashley, M., Ortiz, O., & Dunivan, G. (2019). Female veterans' experiences with VHA treatment for military sexual trauma. *Federal Practitioner, 36*(1), 41-47. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6366579/

Cloitre, M., Tardiff, K., Marzuk, P. M., Leon, A. C., & Portera, L. (1996). Childhood abuse and subsequent sexual assault among female inpatients. *Journal of Traumatic Stress, 9*(3), 473-482. https://doi.org/10.1007/BF02103659

Cohen, J. (1998). *Statistical power analysis for the behavioral sciences.* Academic Press.

Conard, P., & Scott-Tilley, D. (2015). The lived experience of female veterans deployed to the Gulf War II. *Nursing Forum, 50*(4), 228-240. https://doi.org/10.1111/nuf.12097

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology, 78*(1), 98-104. https://doi.org/10.1037/0021-9010.78.1.98

Cronkite, R. C., & Moos, R. H. (1995). Life context, coping processes, and depression. In E. E. Beckham & W. R. Leber (Eds.), *Handbook of Depression* (2nd ed.). New York: Guilford Press

Currier, J. M., Isaak, S. L., & McDermott, R. C. (2020). Validation of the Expressions of Moral Injury Scale-Military version-Short Form. *Clinical Psychology & Psychotherapy*, *27*(1), 61-68. https://doi.org/10.1002/cpp.2407

Dardis, C. M., Kraft, K. M., & Gidycz, C. A. (2021). "Miscommunication" and undergraduate women's conceptualizations of sexual assault: A qualitative analysis. *Journal of Interpersonal Violence*, *36*(1-2), 33-61. https://doi.org/10.1177/0886260517726412

Dardis, C. M., Reinhardt, K. M., Foynes, M. M., Medoff, N. E., & Street, A. E. (2018). "Who are you going to tell? Who's going to believe you?" Women's experiences disclosing military sexual trauma. *Psychology of Women Quarterly*, *42*(4), 414-429. https://doi.org/10.1177/0361684318796783

Davies, R. L. (2020). *The effects of military sexual trauma and depressive symptoms on reintegration* [Master Thesis, Old Dominion University]. Digital Commons. https://doi.org/10.25777/ycjk-jp42

Demers, A. L. (2013). From death to life: Female veterans, identity negotiation, and reintegration into society. *Journal of Humanistic Psychology*, *53*(4), 489-515. https://doi.org/10.1177/0022167812472395

Department of Defense (2019a). *Appendix F: Sexual harassment assessment.* https://www.sapr.mil/sites/default/files/Appendix_F_Sexual_Harassment_Assessment.pdf

Department of Defense (2019b). *Department of Defense annual report on sexual assault in the military: Fiscal year 2018* (Report No. 7-1ED0167). https://www.sapr.mil/sites/default/files/DoD_Annual_Report_on_Sexual_Assault_in_the_Military.pdf

Department of Defense (n.d.). *Military compensation.* https://militarypay.defense.gov/Pay/Retirement/

Department of Defense Sexual Assault Prevention and Response (2021, March 15). *Department of Defense Annual Report of Sexual Assault in the Military.* https://www.sapr.mil/sites/default/files/DOD_Annual_Report_on_Sexual_Assault_in_the_Military_FY2020.pdf

Department of Defense Sexual Assault Prevention and Response (2022, July 2). *Department of Defense Annual Report of Sexual Assault in the Military.* https://www.sapr.mil/sites/default/files/public/docs/reports/AR/DOD_Annual_Report_on_Sexual_Assault_in_the_Military_FY2021.pdf

Department of Veterans Affairs (2010). *VHA directive 2010–033: Military sexual trauma (MST) programming.* Washington, DC. file:///C:/Users/19705/Downloads/36C25819R0003-006.pdf

Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder. *Behaviour Research and Therapy, 38*, 319-345. http://dx.doi.org/10.1016/S0005-7967(99)00123-0

Field, A.P. (2009). *Discovering statistics using SPSS: (and sex and drugs and rock 'n' roll)* (3rd ed.). London:Sage.

Firestone, J. M., Miller, J. M., & Harris, R. (2012). Implications for criminal justice from the 2002 and 2006 Department of Defense gender relations and sexual harassment surveys.

American Journal of Criminal Justice, 37(3), 432–451. https://doi.org/10.1007/s12103-010-9085-z

Fisher, H. L., Craig, T. K., Fearon, P., Morgan, K., Dazzan, P., Lappin, J., Hutchinson, G., Gillian, A. D., Jones, P. B., McGuffin, P., Murray, R. M., & Morgan, C. (2011). Reliability and comparability of psychosis patients' retrospective reports of childhood abuse. *Schizophrenia Bulletin*, *37*(3), 546-553. https://doi.org/10.1093/schbul/sbp103

Foa, E. B., & Olasov Rothbaum, B. (1998). *Treating the trauma of rape.* The Guilford Press.

Fors Brandebo, M., Börjesson, M., & Hilmarsson, H. (2022). Longitudinal studies on cohesion in a military context–A systematic review. *Military Psychology*, *34*(6), 732-741. https://doi.org/10.1080/08995605.2022.2041995

Foynes, M. M., Makin-Byrd, K., Skidmore, W. C., King, M. W., Bell, M. E., & Karpenko, J. (2018). Developing systems that promote veterans' recovery from military sexual trauma: Recommendations from the Veterans Health Administration national program implementation. *Military Psychology, 30*(3), 270-281. https://doi.org/10.1080/08995605.2017.1421818

Frankfurt, S. B., DeBeer, B. B., Morissette, S. B., Kimbrel, N. A., La Bash, H., & Meyer, E. C. (2018). Mechanisms of moral injury following military sexual trauma and combat in post-9/11 US war veterans. *Frontiers in Psychiatry, 9,* Article 520. https://doi.org/10.3389/fpsyt.2018.00520

Frazier, P. A. (1990). Victim attributions and post-rape trauma. *Journal of Personality and Social Psychology, 59*, 298–304. https://doi.org/10.1037/0022-3514.59.2.298

Frazier, P. A. (1991). Self-blame as a mediator of postrape depressive symptoms. *Journal of Social and Clinical Psychology, 10*(1), 47–57. https://doi.org/10.1521/jscp.1991.10.1.47

Frazier, P. A. (2003). Perceived control and distress following sexual assault: A longitudinal test of a new model. *Journal of Personality and Social Psychology*, *84*(6), 1257-1269. https://doi.org/10.1037/0022-3514.84.6.1257

Frazier, P. A., Mortensen, H., & Steward, J. (2005). Coping strategies as mediators of the relations among perceived control and distress in sexual assault survivors. *Journal of Counseling Psychology, 52*(3), 267–278. https://doi.org/10.1037/0022-0167.52.3.267

Freyd, J. J. (1994). Betrayal trauma: Traumatic amnesia as an adaptive response to childhood abuse. *Ethics & Behavior*, *4*(4), 307-329. https://doi.org/10.1207/s15327019eb0404_1

Fritz, M. S., & MacKinnon, D. P. (2007). Required sample size to detect the mediated effect. *Psychological Science*, *18*(3), 233-239. https://doi.org/10.1111/j.1467-9280.2007.01882.x

Gagnon, K. L., Lee, M. S., & DePrince, A. P. (2017). Victim–perpetrator dynamics through the lens of betrayal trauma theory. *Journal of Trauma & Dissociation*, *18*(3), 373-382. https://doi.org/10.1080/15299732.2017.1295421

Gidycz, C. A., Wyatt, J., Galbreath, N. W., Axelrad, S. H., & McCone, D. R. (2018). Sexual assault prevention in the military: Key issues and recommendations. *Military Psychology, 30*(3), 240-251. https://doi.org/10.1080/08995605.2018.1489663

Godfrey, K. M., Mostoufi, S., Rodgers, C., Backhaus, A., Floto, E., Pittman, J., & Afari, N. (2015). Associations of military sexual trauma, combat exposure, and number of deployments with physical and mental health indicators in Iraq and Afghanistan veterans. *Psychological Services, 12*(4), 366-377. http://doi.org/10.1037/ser0000059

Goldstein, L. A., Dinh, J., Donalson, R., Hebenstreit, C. L., & Maguen, S. (2017). Impact of military trauma exposures on posttraumatic stress and depression in female

veterans. *Psychiatry Research*, *249*, 281-285. https://doi.org/10.1016/j.psychres.2017.01.009

Goodcase, E. T., Love, H. A., & Ladson, E. (2015). A conceptualization of processing military sexual trauma within the couple relationship. *Contemporary Family Therapy*, *37*(3), 291-301. https://doi.org/10.1007/s10591-015-9354-6

Greenberg, L. S. (2012). Emotions, the great captains of our lives: Their role in the process of change in psychotherapy. *American Psychologist*, *67*(8), 697-707. https://doi.org/10.1037/a0029858

Hall, L. K. (2011). The importance of understanding military culture. *Social Work in Health Care*, *50*(1), 4-18. https://doi.org/10.1080/00981389.2010.513914

Hamrick, H. C., Ehlke, S. J., Davies, R. L., Higgins, J. M., Naylor, J., & Kelley, M. L. (2021). Moral injury as a mediator of the associations between sexual harassment and mental health symptoms and substance use among women veterans. *Journal of Interpersonal Violence*, *37*(11-12), 107–135. https://doi.org/10.1177/0886260520985485

Harsey, S. J., Zurbriggen, E. L., & Freyd, J. J. (2017). Perpetrator responses to victim confrontation: DARVO and victim self-blame. *Journal of Aggression, Maltreatment & Trauma*, *26*(6), 644-663. https://doi.org/10.1080/10926771.2017.1320777

Haskell, S. G., Gordon, K. S., Mattocks, K., Duggal, M., Erdos, J., Justice, A., & Brandt, C. A. (2010). Gender differences in rates of depression, PTSD, pain, obesity, and military sexual trauma among Connecticut war veterans of Iraq and Afghanistan. *Journal of Women's Health*, *19*, 267-271. https://doi.org/10.1089/jwh.2008.1262

Henninger, A. L., Iwasaki, M., Carlucci, M. E., & Lating, J. M. (2020). Reporting sexual assault: Survivors' satisfaction with sexual assault response personnel. *Violence Against Women, 26*(11), 1362-1382. https://doi.org/10.1177/1077801219857831

Herbert, M. S. (1998). *Camouflage isn't only for combat: Gender, sexuality, and women in the military*. New York: New York University Press.

Herzog Jr, H. A., & Burghardt, G. M. (1974). Prey movement and predatory behavior of juvenile western yellow-bellied racers, Coluber constrictor mormon. *Herpetologica*, *30*(3), 285-289. https://bcreptilesandamphibians.trubox.ca/wp-content/uploads/sites/1420/2022/01/herzog_burghardt_1974.pdf

Holland, K. J., Cipriano, A. E., Huit, T. Z., Volk, S. A., Meyer, C. L., Waitr, E., & Wiener, E. R. (2021). "Serious enough"? A mixed-method examination of the minimization of sexual assault as a service barrier for college sexual assault survivors. *Psychology of Violence*, *11*(3), 276-285. https://doi.org/10.1037/vio0000377

Holliday, R., Link-Malcolm, J., Morris, E. E., & Surís, A. (2014). Effects of cognitive processing therapy on PTSD-related negative cognitions in veterans with military sexual trauma. *Military Medicine, 179*(10), 1077-1082. https://doi.org/10.7205/MILMED-D-13-00309

Hooper, L. (2007). Expanding the discussion regarding parentification and its varied outcomes: Implications for mental health research and practice. *Journal of Mental Health Counseling*, *29*(4), 322-337. https://doi.org/10.17744/mehc.29.4.48511m0tk22054j5

Hourani, L. L., Williams, J., Forman-Hoffman, V., Lane, M. E., Weimer, B., & Bray, R. M. (2012). Influence of spirituality on depression, posttraumatic stress disorder, and

suicidality in active duty military personnel. *Depression Research and Treatment, 1,* 1-9. https://doi.org/10.1155/2012/425463

Hourani, L., Williams, J., Bray, R., & Kandel, D. (2015). Gender differences in the expression of PTSD symptoms among active duty military personnel. *Journal of Anxiety Disorders, 29,* 101-108. https://doi.org/10.1016/j.janxdis.2014.11.007

Hoyt, T., Klosterman Rielage, J., & Williams, L. F. (2011). Military sexual trauma in men: A review of reported rates. *Journal of Trauma & Dissociation, 12*(3), 244-260. https://doi.org/10.1080/15299732.2011.542612

Huang, G., Kim, S., Muz B. & Gasper, J. (2018). *2017 survey of veteran enrollees' health and use of health care.* Westat.

Huang, J. L., Curran, P. G., Keeney, J., Poposki, E. M., & DeShon, R. P. (2012). Detecting and deterring insufficient effort responding to surveys. *Journal of Business and Psychology, 27*(5), 99-114. https://doi.org/10.1007/s10869-011-9231-8

Iverson, K. M., King, M. W., Cunningham, K. C., & Resick, P. A. (2015). Rape survivors' trauma-related beliefs before and after cognitive processing therapy: Associations with PTSD and depression symptoms. *Behaviour Research and Therapy, 66,* 49-55. http://doi.org/10.1016/j.brat.2015.01.002

Jackson, D. L. (2003). Revisiting sample size and number of parameter estimates: Some support for the N: q hypothesis. *Structural Equation Modeling, 10*(1), 128-141. https://doi.org/10.1207/S15328007SEM1001_6

Janoff-Bulman, R. (1979). Characterological versus behavioral self-blame: Inquiries into depression and rape. *Journal of Personality and Social Psychology, 37*(10), 1798-1809. https://doi.org/10.1037//0022-3514.37.10.1798

Kamarck, K. N., Ott, A., & Sacco, L. N. (2019, December 4). *Military families and intimate partner violence: Background and issues for congress.* Congressional Research Service. https://fas.org/sgp/crs/natsec/R46097.pdf

Katz, L. S. (2016). Efficacy of Warrior Renew group therapy for female veterans who have experienced military sexual trauma. *Psychological Services*, *13*(4), 364-372. https://doi.org/10.1037/ser0000103

Katz, L. S., Bloor, L. E., Cojucar, G., & Draper, T. (2007). Women who served in Iraq seeking mental health services: Relationships between military sexual trauma, symptoms, and readjustment. *Psychological Services*, *4*, 239-249. https://doi.org/10.1037/1541-1559.4.4.239

Kimerling, R., Gima, K., Smith, M. W., Street, A., & Frayne, S. (2007). The Veterans Health Administration and military sexual trauma. *American Journal of Public Health*, *97*(12), 2160-2166. https://doi.org/10.2105/AJPH.2006.092999

Koss, M. P., Figueredo, A. J., & Prince, R. J. (2002). Cognitive mediation of rape's mental, physical and social health impact: Tests of four models in cross-sectional data. *Journal of Consulting and Clinical Psychology*, *70*(4), 926-941. https://doi.org/10.1037//0022-006X.70.4.926

Landis, J. R., & Koch, G. G. (1977). An application of hierarchical kappa-type statistics in the assessment of majority agreement among multiple observers. *Biometrics*, 363-374. https://doi.org/10.2307/2529786

LeMaire, K. L., Oswald, D. L., & Russell, B. L. (2016). Labeling sexual victimization experiences: The role of sexism, rape myth acceptance, and tolerance for sexual

harassment. *Violence and Victims, 31*(2), 332-346. http://doi.org/10.1891/0886-6708.VV-D-13-00148

Littleton, H. L., Axsom, D., Breitkopf, C. R., & Berenson, A. (2006). Rape acknowledgment and postassault experiences: How acknowledgment status relates to disclosure, coping, worldview, and reactions received from others. *Violence and Victims, 21*(6), 761–778. https://doi.org/10.1891/vv-v21i6a006

Lofgreen, A. M., Carroll, K. K., Dugan, S. A., & Karnik, N. S. (2017). An overview of sexual trauma in the US military. *Focus, 15*(4), 411-419. https://doi.org/10.1176/appi.focus.20170024

Lonsway, K. A., & Fitzgerald, L. F. (1994). Rape myths: In review. *Psychology of Women Quarterly, 18*, 133-164. https://doi.org/10.1111/j.1471-6402.1994.tb00448.x

Lynn, B. M.D., & Morgan, J. (2016). Using Amazon's Mechanical Turk (MTurk) to recruit military veterans: Issues and suggestions. *The Military Psychologist*, *31*(3), 10-14. file:///C:/Users/19705/Downloads/MPNFall2016MTurk.pdf

Maguen, S., Cohen, B., Ren, L., Bosch, J., Kimerling, R., & Seal, K. (2012). Gender differences in military sexual trauma and mental health diagnoses among Iraq and Afghanistan veterans with posttraumatic stress disorder. *Women's Health Issues*, *22*(1), e61-e66. https://doi.org/10.1016/j.whi.2011.07.010

McCormack, L., & Bennett, N. L. (2021). Relentless, aggressive, and pervasive: Exploring gender minimization and sexual abuse experienced by women ex-military veterans. *Psychological Trauma: Theory, Research, Practice, and Policy*, *15*(2), 237–246. http://doi.org/10.1037/tra0001157

McCormack, L., & Ell, L. (2017). Complex psychosocial distress postdeployment in veterans: Reintegration identity disruption and challenged moral integrity. *Traumatology, 23,* 240-249. https://doi.org/10.1037/trm0000107

Mengeling, M. A., Booth, B. M., Torner, J. C., & Sadler, A. G. (2014). Reporting sexual assault in the military: Who reports and why most servicewomen don't. *American Journal of Preventive Medicine*, *47*(1), 17-25. https://doi.org/10.1016/j.amepre.2014.03.001

Miller, L. L., Farris, C., & Williams, K. M. (2018). Challenges to evaluating US military policy on sexual assault and sexual harassment. *Military Psychology*, *30*(3), 193-205. https://doi.org/10.1080/08995605.2017.1421821

Monteith, L. L., Bahraini, N. H., Matarazzo, B. B., Soberay, K. A., & Smith, C. P. (2016). Perceptions of institutional betrayal predict suicidal self-directed violence among veterans exposed to military sexual trauma. *Journal of Clinical Psychology*, *72*(7), 743-755. https://doi.org/10.1002/jclp.22292

Monteith, L. L., Hoffmire, C. A., Holliday, R., Park, C. L., Mazure, C. M., & Hoff, R. A. (2018). Do unit and post-deployment social support influence the association between deployment sexual trauma and suicidal ideation? *Psychiatry Research, 270,* 673-681. https://doi.org/10.1016/j.psychres.2018.10.055

Monteith, L. L., Holliday, R., Schneider, A. L., Miller, C. N., Bahraini, N. H., & Forster, J. E. (2021). Institutional betrayal and help-seeking among women survivors of military sexual trauma. *Psychological Trauma: Theory, Research, Practice, and Policy, 13*(7), 814–823. https://doi.org/10.1037/tra0001027

Monteith, L. L., Schneider, A. L., Holliday, R., & Bahraini, N. H. (2020). Assessing institutional betrayal among female veterans who experienced military sexual trauma: A Rasch

analysis of the Institutional Betrayal Questionnaire 2. *Journal of Interpersonal Violence, 36*(23–24), 10861–10883. https://doi.org/10.1177/0886260520983959

Morral, A. R., Gore, K. L., & Schell, T. L. (Eds.) (2015). *Sexual harassment in the military: Volume 2. Estimates for Department of Defense service members from the 2014 RAND Military Workplace Study.* https://www.rand.org/content/dam/rand/pubs/research_reports/RR800/RR870z2-1/RAND_RR870z2-1.pdf

Myers, K., & Winters, N. C. (2002). Ten-year review of rating scales. I: Overview of scale functioning, psychometric properties, and selection. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*(2), 114–122. https://doi.org/10.1097/00004583-200202000-00004

Navarro, J. C., & Tewksbury, R. (2017). Mythbusters: Examining rape myth acceptance among US university students. *Journal of Student Affairs Research and Practice, 54*(4), 343-356. http://doi.org/10.1080/19496591.2017.1289094

Nelson, C. B., Abraham, K. M., Walters, H., Pfeiffer, P. N., & Valenstein, M. (2014). Integration of peer support and computer-based CBT for veterans with depression. *Computers in Human Behavior, 31*, 57-64. https://doi.org/10.1016/j.chb.2013.10.012

Nielsen, L. H., Hansen, M., Elklit, A., & Bramsen, R. H. (2016). Sexual assault victims participating in research: causing harm when trying to help? *Archives of Psychiatric Nursing, 30*(3), 412-417. https://doi.org/10.1016/j.apnu.2016.01.017

Northcut, T. B., & Kienow, A. (2014). The trauma trifecta of military sexual trauma: A case study illustrating the integration of mind and body in clinical work with survivors of

MST. *Clinical Social Work Journal, 42*, 247-259. https://doi.org/10.1007/s10615-014-0479-0

O'Brien, R. M. (2007). A caution regarding rules of thumb for variance inflation factors. *Quality & Quantity*, *41*(5), 673-690. https://doi.org/10.1007/s11135-006-9018-6

O'Brien, C., Keith, J., & Shoemaker, L. (2015). Don't tell: Military culture and male rape. *Psychological Services*, *12*(4), 357-365. http://doi.org/10.1037/ser0000049

Orth, U., & Robins, R. W. (2013). Understanding the link between low self-esteem and depression. *Current Directions in Psychological Science*, *22*(6), 455-460. https://doi.org/10.1177/0963721413492763

Ozili, P. K. (2022, June 17). *The acceptable R-square in empirical modelling for social science research.* The Social Science Research Network. https://mpra.ub.uni-muenchen.de/115769/

Payne, Diana L., Lonsway, Kimberly A., & Fitzgerald, Louise F. (1999). Rape myth acceptance: Exploration of its structure and its measurement using the Illinois Rape Myth Acceptance Scale. *Journal of Research in Personality, 33*(1), 27-68. https://dx.doi.org/10.1006/jrpe.1998.2238

Pershing, J. L. (2003). Why women don't report sexual harassment: A case study of an elite military institution. *Gender issues, 21*(4), 3-30. http://dx.doi.org/10.1007/s12147-003-0008-x

Peterson, Z. D., & Muehlenhard, C. L. (2011). A match-and-motivation model of how women label their nonconsensual sexual experiences. *Psychology of Women Quarterly*, *35*(4), 558-570. https://doi.org/10.1177/0361684311410210

Pinciotti, C. M., & Orcutt, H. K. (2021). Institutional betrayal: Who is most vulnerable? *Journal of Interpersonal Violence, 36*(11-12), 5036-5054. https://doi.org/10.1177/0886260518802850

Pole, N., Best, S. R., Metzler, T., & Marmar, C. R. (2005). Why are Hispanics at greater risk for PTSD? *Cultural Diversity and Ethnic Minority Psychology, 11*(2), 144-161. https://doi.org/10.1037/1099-9809.11.2.144

Powers, R. A., Moule Jr, R. K., Dodge, C. E., & Boggess, L. N. (2020). Structuring the invisible war: Base and community influences on military sexual assault occurrence. *American Journal of Preventive Medicine, 59*(2), 204-210. https://doi.org/10.1016/j.amepre.2020.03.003

Pozzar, R., Hammer, M. J., Underhill-Blazey, M., Wright, A. A., Tulsky, J., Hong, F., Gundersen, D. A., & Berry, D. L. (2020). Threats of bots and other bad actors to data quality following research participant recruitment through social media: Cross-sectional questionnaire. *Journal of Medical Internet Research, 22*, Article e23021. https://doi.org/10.2196/23021

Quas, J. A., Goodman, G. S., & Jones, D. P. (2003). Predictors of attributions of self-blame and internalizing behavior problems in sexually abused children. *Journal of Child Psychology and Psychiatry, 44*(5), 723-736. https://doi.org/10.1111/1469-7610.00158

Quiñones, A. R., Thielke, S. M., Clark, M. E., Phillips, K. M., Elnitsky, C., & Andresen, E. M. (2016). Validity of Center for Epidemiologic Studies Depression (CES-D) scale in a sample of Iraq and Afghanistan Veterans. *SAGE Open Medicine, 4*, 1-8. https://doi.org/10.1177/2050312116643906

Reffi, A. N., Pinciotti, C. M., & Orcutt, H. K. (2018). Psychometric properties of the Institutional Betrayal Questionnaire, Version 2: Evidence for a two-factor model. *Journal of Interpersonal Violence, 35*(11-12), 5659 – 5684. https://doi.org/10.1177/0886260518805771

Relyea, M., & Ullman, S. E. (2013). Unsupported or turned against: Understanding how two types of negative social reactions to sexual assault relate to postassault outcomes. *Psychology of Women Quarterly, 39*(1), 37-52. https://doi.org/10.1177/0361684313512610

Resick, P. A., Monson, C. M., & Chard, K. M. (2014). *Cognitive processing therapy: Veteran/military version: Therapist's manual.* Washington, DC: Department of Veterans Affairs.

Rough, J. A., & Armor, D. J. (2017). Sexual assault in the US military: Trends and responses. *World Medical & Health Policy, 9*(2), 206-224. https://doi.org/10.1002/wmh3.228

Ryan, D. (2008, March 18). *DoD releases sexual assault report.* U.S. Army. https://www.army.mil/article/7982/dod_releases_sexual_assault_report

Sadler, A. G., Booth, B. M., Mengeling, M. A., & Doebbeling, B. N. (2004). Life span and repeated violence against women during military service: Effects on health status and outpatient utilization. *Journal of Women's Health, 13,* 799-811. https://doi.org/10.1089/jwh.2004.13.799

Sadler, A. G., Lindsay, D. R., Hunter, S. T., & Day, D. V. (2018). The impact of leadership on sexual harassment and sexual assault in the military. *Military Psychology, 30*(3), 252-263. https://doi.org/10.1080/08995605.2017.1422948

Sadler, A. G., Mengeling, M. A., Booth, B. M., O'Shea, A. M., & Torner, J. C. (2017). The relationship between US military officer leadership behaviors and risk of sexual assault of Reserve, National Guard, and active component servicewomen in nondeployed locations. *American Journal of Public Health, 107*(1), 147-155. https://doi.org/10.2105/AJPH.2016.303520

Salcioglu, E., Urhan, S., Pirinccioglu, T., & Aydin, S. (2017). Anticipatory fear and helplessness predict PTSD and depression in domestic violence survivors. *Psychological Trauma: Theory, Research, Practice, and Policy, 9*(1), 117-125. https://doi.org/10.1037/tra0000200

Schultz, J. R., Bell, K. M., Naugle, A. E., & Polusny, M. A. (2006). Child sexual abuse and adulthood sexual assault among military veteran and civilian women. *Military Medicine, 171*(8), 723-728. https://doi.org/10.7205/milmed.171.8.723

Sigurvinsdottir, R., & Ullman, S. E. (2015). Social reactions, self-blame, and problem drinking in adult sexual assault survivors. *Psychology of Violence, 5*(2), 192-198. https://doi.org/10.1037/a0036316

Siville, C. (2020). *Military sexual trauma in veterans: Consequences, treatment, and therapeutic implications* (Publication No. 594). [Doctoral dissertation, National Louis University]. Digital Commons. https://digitalcommons.nl.edu/diss/594?utm_source=digitalcommons.nl.edu%2Fdiss%2F594&utm_medium=PDF&utm_campaign=PDFCoverPages

Smith, C. P. (2014, April). Unawareness and expression of interpersonal and institutional betrayal. Paper presented at The Western Psychological Association, Portland, OR.

Smith, C. P., & Freyd, J. J. (2013). Dangerous safe havens: Institutional betrayal exacerbates sexual trauma. *Journal of Traumatic Stress*, *26*(1), 119-124. https://doi.org/10.1002/jts.21778

Smith, C. P., & Freyd, J. J. (2014). Institutional betrayal. *American Psychologist*, *69*(6), 575-587. https://doi.org/10.1037/a0037564

Smith, C. P., & Freyd, J. J. (2017). Insult, then injury: Interpersonal and institutional betrayal linked to health and dissociation. *Journal of Aggression, Maltreatment & Trauma*, *26*(10), 1117-1131. https://doi.org/10.1080/10926771.2017.1322654

Smith, N., Lam, D., Bifulco, A., & Checkley, S. (2002). Childhood Experience of Care and Abuse Questionnaire (CECA. Q). *Social Psychiatry and Psychiatric Epidemiology*, *37*(12), 572-579. https://doi.org/10.1007/s00127-002-0589-9

Söchting, I., Fairbrother, N., & Koch, W. J. (2004). Sexual assault of women: Prevention efforts and risk factors. *Violence Against Women*, *10*(1), 73-93. https://doi.org/10.1177/1077801203255680

Springer, C., & Padgett, D. K. (2000). Gender differences in young adolescents' exposure to violence and rates of PTSD symptomatology. *American Journal of Orthopsychiatry, 70*(3), 370–379. https://doi.org/10.1037/h0087637

Storozuk, A., Ashley, M., Delage, V., & Maloney, E. A. (2020). Got bots? Practical recommendations to protect online survey data from bot attacks. *The Quantitative Methods for Psychology, 16*(5), 472–481. https://doi.org/10.20982/tqmp.16.5.p472

Street, A. E., Gradus, J. L., Giasson, H. L., Vogt, D., & Resick, P. A. (2013). Gender differences among veterans deployed in support of the wars in Afghanistan and Iraq. *Journal of General Internal Medicine*, *28*(2), 556-562. https://doi.org/10.1007/s11606-013-2333-4

Street, A. E., Gradus, J. L., Stafford, J., & Kelly, K. (2007). Gender differences in experiences of sexual harassment: Data from a male-dominated environment. *Journal of Consulting and Clinical Psychology, 75*(3), 464-474. https://doi.org/10.1037/0022-006X.75.3.464

Sturmey, P. (2009). Behavioral activation is an evidence-based treatment for depression. *Behavior Modification, 33*(6), 818-829. https://doi.org/10.1177/0145445509350094

Suris, A., & Lind, L. (2008). Military sexual trauma: A review of prevalence and associated health consequences in veterans. *Trauma, Violence, & Abuse, 9*(4), 250-269. https://doi.org/10.1177/1524838008324419

Suris, A., Lind, L., Kashner, T. M., & Borman, P. D. (2007). Mental health, quality of life, and health functioning in women veterans: Differential outcomes associated with military and civilian sexual assault. *Journal of Interpersonal Violence*, *22*(2), 179-197. https://doi.org/10.1177/0886260506295347

Teitcher, J. E., Bockting, W. O., Bauermeister, J. A., Hoefer, C. J., Miner, M. H., & Klitzman, R. L. (2015). Detecting, preventing, and responding to "fraudsters" in internet research: Ethics and tradeoffs. *The Journal of Law, Medicine & Ethics, 43*(1), 116–133. https://doi.org/10.1111/jlme.12200

Ullman, S. E. (1996). Social reactions, coping strategies, and self-blame attributions in adjustment to sexual assault. *Psychology of Women Quarterly, 20*(4), 505-526. https://doi.org/10.1111/j.1471-6402.1996.tb00319.x

Ullman, S. E. (2000). Psychometric characteristics of the Social Reactions Questionnaire: A measure of reactions to sexual assault victims. *Psychology of Women Quarterly, 24*(3), 257-271. https://doi.org/10.1111/j.1471-6402.2000.tb00208.x

Ullman, S. E., & Peter-Hagene, L. (2014). Social reactions to sexual assault disclosure, coping, perceived control, and PTSD symptoms in sexual assault victims. *Journal of Community Psychology*, *42*(4), 495-508. https://doi.org/10.1002/jcop.21624

Ullman, S. E., Townsend, S. M., Filipas, H. H., & Starzynski, L. L. (2007). Structural models of the relations of assault severity, social support, avoidance coping, self-blame, and PTSD among sexual assault survivors. *Psychology of Women Quarterly*, *31*(1), 23-37. https://doi.org/10.1111/j.1471-6402.2007.00328.x

United States Department of Defense's Sexual Assault Prevention and Response (2019). *Appendix B: Statistical data on sexual assault.* https://www.sapr.mil/sites/default/files/3_Appendix_B_Statistical_Data_on_Sexual_Assault.pdf

United States Government. (2022, November 10). *Military pay and pensions.* https://www.usa.gov/militarypay?_gl=1%2A1caneas%2A_ga%2AMTkwMTIxMjM4Ny4xNjcwNzAwOTA5%2A_ga_GXFTMLX26S%2AMTY3MDcwMDkwOS4xLjEuMTY3MDcwMTI5OS4wLjAuMA.

Veterans Administration (2020a, September 17). *Eligibility for VA care.* https://www.va.gov/health-care/eligibility/

Veterans Administration (2020b, November). *Military sexual trauma.* https://www.mentalhealth.va.gov/docs/mst_general_factsheet.pdf

Vogt, D., Bruce, T. A., Street, A. E., & Stafford, J. (2007). Attitudes toward women and tolerance for sexual harassment among reservists. *Violence Against Women*, *13*(9), 879-900. https://doi.org/10.1177/1077801207305217

Vogt, D., Smith, B. N., King, D. W., & King, L. A. (2012). *The Deployment Risk and Resilience*

Inventory-2 (DRRI-2) [Measurement instrument]. Veterans Administration. http://www.ptsd.va.gov

Walsh Carson, K., Babad, S., Brown, E., Brumbaugh, C., Castillo, B., & Nikulina, V. (2019). Why women are not talking about it: Reasons for nondisclosure of sexual victimization and associated symptoms of posttraumatic stress disorder and depression. *Violence Against Women, 26*(3-4), 271-295. https://doi.org/10.1177/1077801219832913

Walsh, K., Fortier, M. A., & DiLillo, D. (2010). Adult coping with childhood sexual abuse: A theoretical and empirical review. *Aggression and Violent Behavior, 15*(1), 1-13. https://doi.org/10.1016/j.avb.2009.06.009

Walsh, K., Galea, S., Cerda, M., Richards, C., Liberzon, I., Tamburrino, M. B., Calabrese, J., & Koenen, K. C. (2014). Unit support protects against sexual harassment and assault among national guard soldiers. *Women's Health Issues, 24*(6), 600-604. https://doi.org/10.1016/j.whi.2014.05.006

Walsh, R. M., & Bruce, S. E. (2011). The relationships between perceived levels of control, psychological distress, and legal system variables in a sample of sexual assault survivors. *Violence Against Women, 17*(5), 603-618. https://doi.org/10.1177/1077801211407427

Weathers, F.W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013). *The PTSD Checklist for DSM-5 (PCL-5).* Veterans Administration. http://www.ptsd.va.gov

Webb, N. M., Shavelson, R. J., & Haertel, E. H. (2006). 4 reliability coefficients and generalizability theory. *Handbook of Statistics, 26*, 81-124. https://doi.org/10.1016/S0169-7161(06)26004-8

Williams, I., & Bernstein, K. (2011). Military sexual trauma among US female veterans. *Archives of Psychiatric Nursing*, *25*, 138-147. https://doi.org/10.1016/j.apnu.2010.07.003

Wilson, L. C. (2018). The prevalence of military sexual trauma: A meta-analysis. *Trauma, Violence, & Abuse, 19*(5), 584-597. https://doi.org/10.1177/1524838016683459

Wilson, L. C., Newins, A. R., & White, S. W. (2017). The impact of rape acknowledgment on survivor outcomes: The moderating effects of rape myth acceptance. *Journal of Clinical Psychology*, *74*(6), 926-939. https://doi.org/10.1002/jclp.22556

Wolff, K. B., & Mills, P. D. (2016). Reporting military sexual trauma: A mixed methods student of women veterans' experiences who served from World War II to the war in Afghanistan. *Military Medicine, 181*(8), 840–848. https://doi.org/10.7205/MILMED-D-15-00404

Zahn, R., Lythe, K. E., Gethin, J. A., Green, S., Deakin, J. F. W., Young, A. H., & Moll, J. (2015). The role of self-blame and worthlessness in the psychopathology of major depressive disorder. *Journal of Affective Disorders*, *186*, 337-341. https://doi.org/10.1016/j.jad.2015.08.001

Zauszniewski, J. A., & Rong, J. R. (1999). Depressive cognitions and psychosocial functioning: A test of Beck's cognitive theory. *Archives of Psychiatric Nursing, 13*(6), 286-293. https://doi.org/10.1016/s0883-9417(99)80060-0

Zinzow, H. M., Grubaugh, A. L., Monnier, J., Suffoletta-Maierle, S., & Frueh, B. C. (2007). Trauma among female veterans: A critical review. *Trauma, Violence, & Abuse, 8*(4), 384-400. https://doi.org/10.1177/1524838007307295

APPENDICES

Appendix A: Notification Statement for ODU Student Veterans

NOTIFICATION STATEMENT DOCUMENT

OLD DOMINION UNIVERSITY

PROJECT TITLE: Military Sexual Trauma in Reintegrating Veterans

INTRODUCTION

The purposes of this form are to give you information that may affect your decision whether to say YES or NO to participation in this research. This is an online survey study.

RESEARCHERS

Michelle L. Kelley, Ph.D., Principal Investigator, Old Dominion University, Psychology Department

Rachel Davies, B.S., Virginia Consortium Program in Clinical Psychology

DESCRIPTION OF RESEARCH STUDY

This study is interested in learning more about veterans' experiences in the military that include military sexual trauma and combat exposure. Additionally, mental health issues, personality factors, and reintegration difficulties are assessed. If you say YES, the survey will take approximately 20 minutes to complete. Approximately 1,000 veterans will participate in this study.

EXCLUSIONARY CRITERIA

To be eligible for this study you must be at least 18 years of age or older and have served in the U.S. military or be currently serving in the U.S. military.

RISKS AND BENEFITS

RISKS: Some of the questions ask about sensitive experiences that you may have had. These include questions about trauma experiences during combat, mental health concerns, and substance use. In addition, former military members will be asked their experiences transitioning

from the military to the civilian sector. Some people find that thinking about past experiences can cause negative feelings. It is possible that you may become emotionally upset by some questions. If you feel discomfort, you may take a break and come back to the survey, choose not to answer any questions, or stop the survey. At the end of the survey all participants will be provided a list of resources. This study is anonymous.

BENEFITS: There are no benefits to you directly, however, your participation may help increase our understanding. The information gathered from this study will be reported in summarized form.

COSTS AND PAYMENTS

There are no costs to participating in this study. Participants who are students actively enrolled at Old Dominion University may receive .5 research credit point through the SONA system for a psychology course. We advise before completing the survey, that you check with your course instructors as to whether or not any additional extra credit will be given for completing the survey. For ODU students, research credits may be obtained in other ways. You do not have to participate in this study, or any study, in order to obtain research credit.

NEW INFORMATION

If the researchers find new information during this study that would reasonably change your decision about participating, then they will give it to you.

ANONYMITY

All information obtained about you in this study is strictly anonymous unless disclosure is required by law. The researchers will take reasonable steps to keep your information anonymous. There will be no identifiers associated with your information. The results of this study may be used in reports, presentations, and publications, but the researchers will not identify you.

WITHDRAWAL PRIVILEGE

It is OK for you to say NO. Even if you say YES now, you are free to say NO later, and walk away or withdraw from the study at any time. Your decision will not affect your relationship with Old Dominion University, or otherwise cause a loss of benefits to which you might otherwise be entitled.

COMPENSATION FOR ILLNESS AND INJURY

If you say YES, then your consent in this document does not waive any of your legal rights. However, in the event of harm arising from this study, neither Old Dominion University nor the researchers are able to give you any money, insurance coverage, free medical care, or any other compensation for such injury. In the event that you suffer injury as a result of participation in any research project, you may contact Dr. Michelle L. Kelley at 757-683-4459, Dr. Tancy Vandecar-Burdin the current IRB chair at 757-683-3802 at Old Dominion University, or the Old Dominion University Office of Research at 757-683-3460 who will be glad to review the matter with you.

VOLUNTARY PARTICIPATION

By clicking "I read the notification statement" and "yes, I wish to participate", you are saying several things. You are saying that you have read this form or have had it read to you, that you are satisfied that you understand this form, the research study, and its risks and benefits. The researchers should have answered any questions you may have had about the research. If you have any questions later on, then the researchers should be able to answer them:

Dr. Michelle L. Kelley at mkelley@odu.edu or 757-683-4459

Ms. Rachel Davies at rdavi022@odu.edu or 757-683-6602

If at any time you feel pressured to participate, or if you have any questions about your rights or this form, then you should call Dr. Tancy Vandecar-Burdin, the current IRB chair, at 757-683-3802, or the Old Dominion University Office of Research, at 757 683 3460.

And importantly, by clicking "I read the notification statement" and "yes, I wish to participate", you are telling the researcher YES, that you agree to participate in this study.

Appendix B: Notification Statement for Non-Student Veterans

NOTIFICATION STATEMENT DOCUMENT

OLD DOMINION UNIVERSITY

PROJECT TITLE: Military Sexual Trauma in Reintegrating Veterans

INTRODUCTION

The purposes of this form are to give you information that may affect your decision whether to say YES or NO to participation in this research. This is an online survey study.

RESEARCHERS

Michelle L. Kelley, Ph.D., Principal Investigator, Old Dominion University, Psychology Department

Rachel Davies, B.S., Virginia Consortium Program in Clinical Psychology

DESCRIPTION OF RESEARCH STUDY

This study is interested in learning more about veterans' experiences in the military that include military sexual trauma and combat exposure. Additionally, mental health issues, personality factors, and reintegration difficulties are assessed. If you say YES, the survey will take approximately 20 minutes to complete. Approximately 1,000 veterans will participate in this study.

EXCLUSIONARY CRITERIA

To be eligible for this study you must be at least 18 years of age or older and have served in the U.S. military or be currently serving in the U.S. military.

RISKS AND BENEFITS

RISKS: Some of the questions ask about sensitive experiences that you may have had. These include questions about trauma experiences during combat, mental health concerns, and substance use. In addition, former military members will be asked their experiences transitioning

from the military to the civilian sector. Some people find that thinking about past experiences can cause negative feelings. It is possible that you may become emotionally upset by some questions. If you feel discomfort, you may take a break and come back to the survey, choose not to answer any questions, or stop the survey. At the end of the survey all participants will be provided a list of resources. This study is anonymous.

BENEFITS: There are no benefits to you directly, however, your participation may help increase our understanding. The information gathered from this study will be reported in summarized form.

COSTS AND PAYMENTS

There are no costs to participating in this study. While there are no direct benefits to you as a participant, the current study may help us develop effective strategies for helping military members transition successfully from active duty and develop strategies in treating different mental health outcomes in military service members (e.g., depression).

NEW INFORMATION

If the researchers find new information during this study that would reasonably change your decision about participating, then they will give it to you.

ANONYMITY

All information obtained about you in this study is strictly anonymous unless disclosure is required by law. The researchers will take reasonable steps to keep your information anonymous. There will be no identifiers associated with your information. The results of this study may be used in reports, presentations, and publications, but the researchers will not identify you.

WITHDRAWAL PRIVILEGE

It is OK for you to say NO. Even if you say YES now, you are free to say NO later, and walk away or withdraw from the study at any time. Your decision will not affect your relationship with Old Dominion University, or otherwise cause a loss of benefits to which you might otherwise be entitled.

COMPENSATION FOR ILLNESS AND INJURY

If you say YES, then your consent in this document does not waive any of your legal rights. However, in the event of harm arising from this study, neither Old Dominion University nor the researchers are able to give you any money, insurance coverage, free medical care, or any other compensation for such injury. In the event that you suffer injury as a result of participation in any research project, you may contact Dr. Michelle L. Kelley at 757-683-4459, Dr. Tancy Vandecar-Burdin the current IRB chair at 757-683-3802 at Old Dominion University, or the Old Dominion University Office of Research at 757-683-3460 who will be glad to review the matter with you.

VOLUNTARY PARTICIPATION

By clicking "I read the notification statement" and "yes, I wish to participate", you are saying several things. You are saying that you have read this form or have had it read to you, that you are satisfied that you understand this form, the research study, and its risks and benefits. The researchers should have answered any questions you may have had about the research. If you have any questions later on, then the researchers should be able to answer them:

Dr. Michelle L. Kelley at mkelley@odu.edu or 757-683-4459

Ms. Rachel Davies at rdavi022@odu.edu or 757-683-6602

If at any time you feel pressured to participate, or if you have any questions about your rights or this form, then you should call Dr. Tancy Vandecar-Burdin, the current IRB chair, at 757-683-3802, or the Old Dominion University Office of Research, at 757 683 3460.

And importantly, by clicking "I read the notification statement" and "yes, I wish to participate", you are telling the researcher YES, that you agree to participate in this study.

Appendix C: Screening items

1. Are you 18 or older? (Yes or No)

2. What is your current military status? Please only select one.
   a. Active duty
   b. Veteran
   c. Reserves
   d. National Guard
   e. Retired
   f. Never served in military

   **If the participant says, "Never served in the military" they will be discontinued from the survey and not continue further.*

Unfortunately, some individuals try to pretend to be service members in order to get compensation. This ruins our data and can result in inaccurate conclusions about service members. We want to ensure you are actually a veteran or current service member and use the following questions to do so.

**Participants must get 4 out of the 5 military validity questions correct to continue with the survey.*

3. What does "Colors" mean?
   a. The ribbons on a service member's uniform
   b. The raising of the flag at sunrise
   c. A term used to refer to those who are O5 or above
   d. A term used to refer to the oldest branches

   Correct answer: "The raising of the flag at sunrise"

4. True or False: Enlisted will always salute to senior non-commissioned officers.
   a. True
   b. False

   Correct answer: "False"

5. What is the acronym for the generic term that the military uses for various job fields?
   a. RTC or BCT or MTF or SEPS
   b. NOB or FOB or ECP or MOB
   c. MOS or NEC or RATE or AFSC
   d. ASVAB or AIT

   Correct answer: MOS or NEC or RATE or AFSC

6. What is the acronym for the location where the final physicals are taken prior to shipping off for basic training?

a. MEPS or AFEES
b. TAP or CAC
c. NOB or FOB or ECP or MOB
d. KP or DT or ATO

Correct answer: MEPS or AFEES

7. What is the name of the test you must take to determine your military job?
   a. AIT
   b. ASVAB
   c. MOB
   d. MEPS

   Correct answer: ASVAB

For this study, we are specific characteristics within the service member population. Please answer the follow questions to determine eligibility.

8. What gender do you identify with?
   a. Cisgender female/Woman
   b. Cisgender male/Man
   c. Transgender Woman/Trans Feminine
   d. Transgender Man /Trans Masculine
   e. Non-binary/Genderqueer/ Gender Fluid
   f. Prefer to self-describe _____
   g. Prefer not to say

**If participant indicates anything but cisgender female/woman, then they will be discontinued from the study*

9. While you were in the military, did anyone ever use force or the threat of force to have sexual contact with you against your will?
   a. Yes
   b. No

** If participant indicates "no", then they will be discontinued from the study.*

To show if participants did not make eligibility requirements (i.e., Not 18 years old, did not serve or currently serving in the US military, failed verification):

Thank you for your interest in our study. Unfortunately, you did not meet our requirements for the survey, and will not be allowed to continue. If you're a student, you will not be receiving research credit for this survey.

Appendix D: Demographic Questionnaire

1. What is the acronym for the locations where final physicals are taken prior to shipping off for basic training? _____

2. What is the acronym for the generic term the military uses for various job fields? _____

3. What is your gender?
    a. Female
    b. Male
    c. Transgender (Male to female)
    d. Transgender (Female to male)
    e. Other

    _____

4. What branch(es) of the military did you serve in or are you currently serving in? Please check all that apply.
    ( ) Army
    ( ) Navy
    ( ) Air Force
    ( ) Marines
    ( ) Coast Guard
    ( ) National Guard
    ( ) Army Reserves
    ( ) Air Force Reserves
    ( ) Navy Reserves
    ( ) Marine Reserves
    ( ) Other (please specify) _____

5. How long ago, in years, has it been since you have been discharged from the military?
    a. Sliding bar from 0 -100 years
6. Have you ever been deployed for 90 days or more (e.g., OIF, OEF, humanitarian, OND, other)?
    a. Yes
    b. No
7. How long ago, in years, has it been since your last deployment?
    a. Sliding bar from 0 -100 years
8. How old are you? _____

9. What best describes your highest educational level?
    () Some high school
    () High school graduate/GED/home school certificate
    () Some college

() Associate's degree
() Bachelor's degree
() Master's degree
() Doctoral/Professional degree

10. My ethnicity is (choose one):
( ) Black, African American, Afro-Caribbean, Black African, Other in this category.
( ) Caucasian, White, European American, White European, Other in this category.
( ) East Asian, Asian American, Amerasian, Asian-Caribbean, Other in this category.
( ) Latinx/o/a, Hispanic, Spanish, Latin American, of Spanish speaking- South American/Caribbean heritage, Other in this category.
( ) South Asian, South Asian American, of South Asian heritage, Other in this category.
( ) Middle Eastern, Arab, Non-Black North African, Other in this category.
( ) Coloured-South African, Khoi San, Cape Malay, Other in this category.
11. What is your marital status? Check all that apply.
    a. Single, never married
    b. Married
    c. Separated
    d. Divorced
    e. Widowed
12. Have you ever received mental health treatment for depression?
    a. Yes
    b. No
13. Do you (or did you) trust your unit chain of-command enough to talk with them about a personal problem?
    a. Yes
    b. No
14. Do you (or did you) trust your unit chain of-command enough to talk with them about sexual harassment if it were to happen to you?
    a. Yes
    b. No
15. Do you (or did you) you trust your unit chain of-command enough to talk with them about rape or sexual assault if it were to happen to you?
    a. Yes
    b. No

Appendix E: Military Sexual Trauma

1. While you were in the military did you receive any uninvited and unwanted sexual attention such as touching, cornering, pressure for sexual favors, or inappropriate verbal remarks?
   ( ) Yes
   ( ) No

a. What was your relationship to this person(s)? Check all that apply.

   a. Stranger
   b. Friend or acquaintance
   c. Relative
   d. Non-military dating partner/boyfriend/girlfriend
   e. Spouse
   f. Military coworker
   g. Military supervisor
   h. Other (Please specify) _____

b. (If military coworker or military supervisor was picked) Were you in a romantic or intimate relationship with this person?

   a. Yes
   b. No

c. Think of your most distressing instance involving uninvited and unwanted sexual attention (e.g., touching, cornering, pressure for sexual favors, or inappropriate verbal remarks), what was your relationship to this person? (Please check only one).

   a. Stranger
   b. Friend or acquaintance
   c. Relative
   d. Non-military dating partner/boyfriend/girlfriend
   e. Spouse
   f. Military coworker
   g. Military supervisor
   h. Other (Please specify) _____
   i.

d. (If military coworker or military supervisor was picked) Were you in a romantic or intimate relationship with this person?

   a. Yes
   b. No

2. While you were in the military, did anyone ever use force or the threat of force to have sexual contact with you against your will?
   ( ) Yes
   ( ) No

a. What was your relationship to this person(s)? Check all that apply.

a. Stranger
b. Friend or acquaintance
c. Relative
d. Non-military dating partner/boyfriend/girlfriend
e. Spouse
f. Military coworker
g. Military supervisor
h. Other (Please specify) _____

b. (If military coworker or military supervisor was picked) Were you in a romantic or intimate relationship with this person?
a. Yes
b. No

c. Think of your most distressing instance involving force or threat of force to have sexual contact against your will, what was your relationship to this person? (Please check only one).
j. Stranger
k. Friend or acquaintance
l. Relative
m. Non-military dating partner/boyfriend/girlfriend
n. Spouse
o. Military coworker
p. Military supervisor
q. Other (Please specify) _____

d. (If military coworker or military supervisor was picked) Were you in a romantic or intimate relationship with this person?
a. Yes
b. No

3. Did you ever report any of your experiences involving force or the threat of force to have sexual contact with you against your will?

a. Yes, made an unrestricted report(s)
b. Yes, made a restricted report(s)
c. Yes, made both restricted and unrestricted reports
c. No

3a. How satisfied were you with how your report(s) were handled?
a. Extremely satisfied
b. Somewhat satisfied
c. Neither satisfied nor dissatisfied
d. Somewhat dissatisfied
e. Extremely dissatisfied

4. After your departure from the military, did you receive any uninvited and unwanted sexual attention such as touching, cornering, pressure for sexual favors, or inappropriate verbal remarks?

( ) Yes
( ) No

4a. What was your relationship to this person(s)? Check all that apply.

a. Stranger
b. Friend or acquaintance
c. Relative
d. Dating partner/boyfriend/girlfriend
e. Spouse
f. Other (Please specify) _____

5. After your departure from the military, did anyone ever use force or the threat of force to have sexual contact with you against your will?

( ) Yes
( ) No

5a. What was your relationship to this person(s)? Check all that apply.

a. Stranger
b. Friend or acquaintance
c. Relative
d. Dating partner/boyfriend/girlfriend
e. Spouse
f. Other (Please specify) _____

Appendix F: Self-Blame

Rape Attribution Questionnaire (modified)

Sexual Assault: Below are statements describing thoughts people often have about why experiences involving force or threat of force to have sexual contact against your will during your military service occurred. Please indicate how often you have had each of the following thoughts in the past week regarding the unwanted sexual contact you experienced during the military.

Sexual Assault: How often have you thought: I experienced unwanted sexual contact involving force or threat of force because . . .

Strongly disagree = 1
Disagree somewhat = 2
Neither agree nor disagree = 3
Somewhat agree = 4
Strongly Agree = 5

Behavioral Self-Blame
1. I used poor judgment.
2. I should have resisted more.
3. I just put myself in a vulnerable situation.
4. I should have been more cautious.
5. I didn’t do enough to protect myself.

Appendix G: Depressive Symptoms

Center for Epidemiological Studies Depression Scale (CES-D)

Below is a list of ways you may have felt or behaved. Please indicate how often you have felt this way during the **PAST WEEK**.

0 = Rarely or none of the time (less than 1 day)
1 = Some or a little of the time (1-2 days)
2 = Occasionally or a moderate amount of time (3-4 days)
3 = Most or all of the time (5-7 days)

1. I was bothered by things that usually don't bother me
2. I did not feel like eating; my appetite was poor
3. I felt that I could not shake off the blues even with help from my family or friends
4. I felt that I was just as good as other people
5. I had trouble keeping my mind on what I was doing
6. I felt depressed
7. I felt that everything I did was an effort
8. I felt hopeful about the future
9. I thought my life had been a failure
10. I felt fearful
11. My sleep was restless
12. I was happy
13. I talked less than usual
14. I felt lonely
15. People were unfriendly
16. I enjoyed life
17. I had crying spells
18. I felt sad
19. I felt that people dislike me
20. I could not get "going"

Appendix H: Institutional Betrayal (Modified)

Institutional and Betrayal and Support Questionnaire

Sexual Assault: In thinking about the events related to your experiences involving force or threat of force to have sexual contact against your will that occurred DURING your military service described in the previous sections, did the U.S. Military play a role by...

1. Actively supporting you with either formal or informal resources (e.g., counseling, academic services, meetings or phone calls)?	Yes	No	N/A
2. Apologizing for what happened to you?	Yes	No	N/A
3. Believing your report?	Yes	No	N/A
4. Allowing you to have a say in how your report was handled?	Yes	No	N/A
5. Ensuring you were treated as an important member of the institution?	Yes	No	N/A
6. Meeting your needs for support and accommodations	Yes	No	N/A
7. Create an environment where this type of experience was safe to discuss?	Yes	No	N/A
8. Create an environment where this type of experience was recognized as a problem?	Yes	No	N/A
9. Not doing enough to prevent this type of experience/s?	Yes	No	N/A
10. Creating an environment in which this type of experience/s seemed common or normal?	Yes	No	N/A
11. Creating an environment in which this experience seemed more likely to occur?	Yes	No	N/A
12. Making it difficult to report the experience/s?	Yes	No	N/A
13. Responding inadequately to the experience/s, if reported?	Yes	No	N/A
14. Mishandling your case, if disciplinary action was requested?	Yes	No	N/A
15. Covering up the experience/s?	Yes	No	N/A
16. Denying your experience/s in some way?	Yes	No	N/A
17. Punishing you in some way for reporting the experience/s (e.g., loss of privileges or status)?	Yes	No	N/A
18. Suggesting your experience/s might affect the reputation of the institution?	Yes	No	N/A
19. Creating an environment where you no longer felt like a valued member of the institution?	Yes	No	N/A
20. Creating an environment where staying in the military was difficult for you?	Yes	No	N/A
21. Responding differently to your experience/s based on your sexual orientation?	Yes	No	N/A
22. Creating an environment in which you felt discriminated against based on your sexual orientation?	Yes	No	N/A
23. Expressing a biased or negative attitude toward you and/or your experience/s based on your sexual orientation?	Yes	No	N/A
24. Responding differently to your experience/s based on your race?	Yes	No	N/A
25. Creating an environment in which you felt discriminated against based on your race?	Yes	No	N/A
26. Expressing a biased or negative attitude toward you and/or your experience/s based on your race?	Yes	No	N/A

Appendix I: Childhood Sexual Abuse

Childhood Experience of Care and Abuse Questionnaire (CECA-Q)

1. When you were a child or teenager did you ever have any unwanted sexual experiences?
    a) Yes
    b) No
    c) Unsure
2. Did anyone force you or persuade you to have sexual intercourse against your wishes before age 17?
    a) Yes
    b) No
    c) Unsure

3. Can you think of any upsetting sexual experiences before age 17 with a related adult or someone in authority (e.g., teacher?)
    a) Yes
    b) No
    c) Unsure

Appendix J: PTSD Symptoms

PTSD Checklist for DSM-5 (PCL-5)

Instructions Part 1:

This questionnaire asks about problems you may have had after a very stressful experience involving actual or threatened death, serious injury, or sexual violence. It could be something that happened to you directly, something you witnessed, or something you learned happened to a close family member or close friend. Some examples are a serious accident; fire; disaster such as a hurricane, tornado, or earthquake; physical or sexual attack or abuse; war; homicide; or suicide.

First, please answer a few questions about your worst event, which for this questionnaire means the event that currently bothers you the most. This could be one of the examples above or some other very stressful experience. Also, it could be a single event (for example, a car crash) or multiple similar events (for example, multiple stressful events in a war-zone or repeated sexual abuse).

1. Briefly identify the worst event (if you feel comfortable doing so): _____
2. How long ago did it happen?_____
3. How did you experience it?
    a. It happened to me directly
    b. I witnessed it
    c. I learned about it happening to a close family member or close friend
    d. I was repeatedly exposed to details about it as part of my job (for example, paramedic, police, first responder)
4. Is your worst event related to your experience that included the use force or the threat of force to have sexual contact with you against your will while in the military?
    a. Yes
    b. No

Instructions Part 2:

Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then select the option that best indicates how much you have been bothered by that problem **in the past week**.

0 = Not at all
1 = A little bit
2 = Moderately
3 = Quite a bit
4 = Extremely

For individuals who say “Yes” to question 4.
In the past week, how much were you bothered by:

1. Repeated, disturbing, and unwanted memories of the stressful experience?
2. Repeated, disturbing dreams of the stressful experience?
3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?
4. Feeling very upset when something reminded you of the stressful experience?
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?
6. Avoiding memories, thoughts, or feelings related to the stressful experience?
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?
8. Trouble remembering important parts of the stressful experience?
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)?
10. Blaming yourself or someone else for the stressful experience or what happened after it?
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?
12. Loss of interest in activities that you used to enjoy?
13. Feeling distant or cut off from other people?
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?
15. Irritable behavior, angry outbursts, or acting aggressively?
16. Taking too many risks or doing things that could cause you harm?
17. Being "super alert" or watchful or on guard?
18. Feeling jumpy or easily startled?
19. Having difficulty concentrating?
20. Trouble falling or staying asleep?

For individuals who say "no" to question 4.

Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then select the option that best indicates how much you have been bothered by that problem **in the past week**. Please try to consider how the statements relate specifically to your worst event and to the event in which someone used force or threat of force to have sexual contact with you against your will while in the military.

0 = Not at all
1 = A little bit
2 = Moderately
3 = Quite a bit
4 = Extremely

Question	Worst event that you've experienced	Event in which someone used force or the threat of force to have sexual contact with you against your will while in the

		military
1. Repeated, disturbing, and unwanted memories of the stressful experience?	Drop down menu of the different response options	Drop down menu of the different response options
2. Repeated, disturbing dreams of the stressful experience?	Drop down menu of the different response options	Drop down menu of the different response options
3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?	Drop down menu of the different response options	Drop down menu of the different response options
4. Feeling very upset when something reminded you of the stressful experience?	Drop down menu of the different response options	Drop down menu of the different response options
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	Drop down menu of the different response options	Drop down menu of the different response options
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	Drop down menu of the different response options	Drop down menu of the different response options
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	Drop down menu of the different response options	Drop down menu of the different response options
8. Trouble remembering important parts of the stressful experience?	Drop down menu of the different response options	Drop down menu of the different response options
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)?	Drop down menu of the different response options	Drop down menu of the different response options
10. Blaming yourself or someone else for the stressful experience or what happened after it?	Drop down menu of the different response options	Drop down menu of the different response options
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	Drop down menu of the different response options	Drop down menu of the different response options

12. Loss of interest in activities that you used to enjoy?	Drop down menu of the different response options	Drop down menu of the different response options
13. Feeling distant or cut off from other people?	Drop down menu of the different response options	Drop down menu of the different response options
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	Drop down menu of the different response options	Drop down menu of the different response options
15. Irritable behavior, angry outbursts, or acting aggressively?	Drop down menu of the different response options	Drop down menu of the different response options
16. Taking too many risks or doing things that could cause you harm?	Drop down menu of the different response options	Drop down menu of the different response options
17. Being “super alert” or watchful or on guard?	Drop down menu of the different response options	Drop down menu of the different response options
18. Feeling jumpy or easily startled?	Drop down menu of the different response options	Drop down menu of the different response options
19. Having difficulty concentrating?	Drop down menu of the different response options	Drop down menu of the different response options
20. Trouble falling or staying asleep?	Drop down menu of the different response options	Drop down menu of the different response options

Appendix K: Minimization

Illinois Rape Myth Acceptance Scale

Please read each of the following statements and indicate the number that indicates how true each is of you **regarding your unwanted sexual contact involving force or threat of force**.

1 = Strongly disagree
2 = Disagree
3 = Somewhat disagree
4 = Neither agree or disagree
5 = Somewhat agree
6 = Agree
7 =Strongly agree

1. If I didn't physically fight back, I can't really say that it was unwanted sexual contact.
2. If I didn't physically resist unwanted sexual contact, even when protesting verbally, it really can't be considered unwanted sexual contact.
3. If the perpetrator doesn't have a weapon, I can't really call it an unwanted sexual contact.
4. If I have/had no bruises or scrapes from my unwanted sexual contact, it probably shouldn't be taken too seriously.
5. An unwanted sexual contact experience probably didn't happen if I had no bruises or marks.

Modified from "rape" to "unwanted sexual contact" to stay consistent with what they reported affirmatively to. Changed "sex" to unwanted contact" in question 2. Modified "rapist" in question 3 to "perpetrator."

Appendix L: Unit Support

Deployment Risk and Resilience Inventory-2

The statements below are about your relationships with other military personnel during your time of service. As used in these statements, the term "unit" refers to those you lived and worked with on a daily basis during service. Please mark how much you agree or disagree with each statement.

Strongly disagree = 1

Somewhat disagree = 2

Neither agree nor disagree = 3

Somewhat agree = 4

Strongly agree = 5

1. My unit was like family to me.
2. People in my unit were trustworthy
3. My fellow unit members appreciated my efforts.
4. I felt valued by my fellow unit members
5. Members of my unit were interested in my well-being
6. My fellow unit members were interested in what I thought and how I felt about things.
7. My unit leader(s) were interested in what I thought and how I felt about things.
8. I felt like my efforts really counted to the leaders in my unit
9. My service was appreciated by the leaders in my unit
10. I could go to unit leaders for help if I had a problem or concern.
11. The leaders of my unit were interested in my personal welfare.
12. I felt valued by the leaders of my unit.

Modified:

In the instructions, I removed "during your most recent deployment" to "during your time of service." Removed "during deployment" and changed to "during your service"

Appendix M: Attention Check Items

1. Please choose "Some or a little of the time" for this question.

    A. Rarely or none of the time

    B. Some or a little of the time

    C. Occasionally or a moderate amount of the time

    D. Most or all of the time

2. Please choose " A lot of difficulty" for this question.

    A. No difficulty

    B. A little difficulty

    C. Some difficulty

    D. A lot of difficulty

    E. Extreme difficulty

3. Please pick the animal out of the list.

    A. Cabin

    B. Frog

    C. Ballet

    D. Orange

Appendix N: Resources for Assistance

If any questions left you feeling uncomfortable or upset and you would like further assistance, please contact any of the following resources.

- Veterans Crisis Line for suicidal thoughts
  - Phone: 1-800-273-8255, Press 1
  - Text: 83255
- Veteran Combat Call Center to reach a veteran 24/7 to talk about problems adjusting to civilian life, military history, and any other issues you have with another veteran
  - Phone: 1-877-WAR-VETS
- Lifeline for Vets that connects veterans needing assistance with other veterans
  - Phone: 888-777-4443
- SAMHSA's National Hotline for alcohol or drug abuse concerns
  - Phone: 1-800-662-4357
- National Sexual Assault Hotline
  - 1-800-656-4673

If ODU student

- The ODU Counseling Center is an available resource to all students.
  - Phone: 757-683-4401.

VITA

Rachel L. Davies

Old Dominion University
Department of Psychology
Norfolk, VA 23529

Education

Ph.D. **Virginia Consortium Program in Clinical Psychology**, *Norfolk, VA*
(APA Accredited)
Clinical Psychology, 2023 (Expected)
Advisor: Michelle L. Kelley, Ph.D.

M.S. **Old Dominion University**, *Norfolk, VA*
Experimental Psychology, 2021
Advisor: Michelle L. Kelley, Ph.D.

B.S. **Colorado State University**, *Fort Collins, CO*
Psychology, 2017
Advisors: Mark A. Prince & Tori L. Crain

Select Publications

Davies, R. L., Cox, S., Kelley, M. L., Meca, A., Milam, A. L., & Chae, J. W. (2022). Posttraumatic stress disorder, personal identity, and meaning in life in US veterans. *Identity*, 1-11. https://doi.org/10.1080/15283488.2022.2124513

Davies, R.L., Prince, M.A., Bravo, A. J., Kelley, M. L., & Crain, T. L. (2019). Moral injury, substance use, and PTSD symptoms among military personnel: An examination of trait mindfulness as a moderator. In press. *Journal of Traumatic Stress, 32*(3), 414-423. https://doi.org/ 10.1002/jts.22403

Select Presentations

Davies, R. L., Chae, J, & Kelley, M. L. (2021, August 12 -14). *Other-directed moral injury as a mediator between institutional betrayal and anger*. American Psychological Association 2021 Convention, virtual. https://convention.apa.org/

Davies, R. L., Hamrick, H.C., Ehlke, S. J., Higgins, J., & Kelley, M. L. (2020, August 6-9*). Moral injury's mediation effects between unwanted sexual attention and mental health outcomes* [Poster presentation]. American Psychological Association 2020 Convention, Washington D.C. https://convention.apa.org/