THE EFFECTS OF DEPLOYMENT STRESS AND COGNITIVE SCHEMA DISRUPTION ON RELATIONSHIP SATISFACTION AMONG NON-MARITAL AND MARITAL PARTNERS OF SERVICE MEMBERS

By

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To the Faculty of Washington State University:

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Abstract

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Current literature points to the stressful nature of partner military deployment on partners of service members. This experience of deployment is analyzed through the Double ABCX model of adaptation that focuses on the pile-up of stressors that partners experience as well as the influence resources and perception have on adaptation. Research indicates that stress related to deployment can negatively impact marital relationships, with factors such as age and rank in the military being associated with both risk and resilient outcomes. A popular area of research has focused on the instance of secondary trauma in partners of service members with findings suggesting a negative association between military partner PTSD, relationship satisfaction, and the presence of secondary trauma in at-home partners. However, literature assessing secondary trauma in partners of service members has yet to evaluate levels of cognitive schema disruption, particularly related to partner’s beliefs about self and others pertaining to areas that Constructivist Self Development Theory has identified as being sensitive to the effects of secondary trauma. In addition to this limitation, there is a paucity of research that evaluates the
experience of non-marital partners of service members. The current study sought to address these limitations of past literature and found a significant difference in relationship satisfaction scores between marital and non-marital partners of service members. The factor structure of the Trauma and Attachment Belief Scale was explored and a four factor model was uncovered that included factors related to others, other-safety, self-safety, and self. Additionally, a model including marital status, length of the relationship, service member rank, number of deployments, measures of perceived and actual experienced risk to the service member during deployment, and cognitive schema disruption was found to significantly predict relationship satisfaction among partners of service members. The results of this study specifically highlight the importance of considering marital status when evaluating the experience of partners of service members. Additionally, findings support the application of the Double ABCX model and use of the Trauma and Attachment Belief Scale with partners of service members. These findings are discussed in detail and clinical implications are explored.
# TABLE OF CONTENTS

ACKNOWLEDGEMENTS ........................................................................................................ iii

ABSTRACT .......................................................................................................................... v-vi

LIST OF TABLES ................................................................................................................... x

LIST OF FIGURES ................................................................................................................ xi

CHAPTER

1. INTRODUCTION ......................................................................................................... 1

2. LITERATURE REVIEW ............................................................................................. 8
   The Double ABCX Model .......................................................................................... 8
   Pile-Up of Stressors (A): Stages of Deployment ............................................... 10
      Pre-deployment ................................................................................................. 10
      Deployment ....................................................................................................... 12
      Specific Stressors .............................................................................................. 13
      Post-deployment .............................................................................................. 16
      Secondary Trauma ........................................................................................... 16
   Resources (B) .......................................................................................................... 20
      Communication .................................................................................................. 20
      Risk and Resilience ......................................................................................... 22
      Cohabitation and Dating Relationships ...................................................... 24
   Coping .................................................................................................................... 27
   Perception (C) ....................................................................................................... 28
      Perception Literature ...................................................................................... 29
Constructivism and Secondary Trauma .................................. 32
Secondary Trauma: Evolution of Terminology .................. 32
Compassion Fatigue ......................................................... 33
Secondary/Vicarious Traumatization ............................. 34
Adaptation (X) ................................................................. 37
Relationship Satisfaction ............................................. 37
General Well-Being .......................................................... 42
Limitations of Current Literature .................................... 44
Summary and Future Research ....................................... 46
Future Directions .............................................................. 47
Overview of the Present Study ......................................... 48

3. METHODOLOGY .......................................................... 50
Participants ........................................................................ 50
Instruments ....................................................................... 53
Demographics .................................................................. 53
Cognitive Schema Disruption/Secondary Trauma ............ 54
Relationship Satisfaction .................................................. 58
Risk to Safety during Deployment ................................. 59
Procedure ........................................................................ 60
Statistical Analysis ............................................................. 61

4. RESULTS ........................................................................ 64
Preliminary Analysis ....................................................... 64
Research Question 1 ....................................................... 68
LIST OF TABLES

1. Participant Demographics.................................................................51
2. Military Partner Demographics..........................................................53
3. Descriptive Statistics by Relationship Satisfaction.................................65
4. Correlations Across Variables ............................................................67
5. Parallel Analysis .................................................................................73
6. Rotated Pattern Matrix.........................................................................74
7. TABS Subscales Represented in Current Four Factor Model .......................75
8. Inter-Factor Correlation Matrix ..............................................................76
9. Hierarchical Multiple Regression Predicting Relationship Satisfaction.........77
LIST OF FIGURES

1. Scree Plot ........................................................................................................................................... 73
Dedication

This dissertation is dedicated to my best animal friend, Lily Bean Bear, who has supported me through my time as a Ph.D. student and taught me valuable lessons about patience, forgiveness, and unconditional love that I will hold with me for the rest of my life.
CHAPTER ONE

INTRODUCTION

Since the beginning of Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF), and subsequently Operation New Dawn (OND) the number of individuals that are being impacted by the stress associated with deployment, and the trauma that so often results from these experiences has significantly increased. A Department of Defense (DOD, 2012) demographics report indicates that there are over 3.1 million military family members including spouses, children and adult dependents. Within this statistic, there are over 1.1 million spouses of service members (DOD, 2012). While this number seems large, there are many more non-marital partners of service members who are not accounted for by traditional DOD statistics. Partners of service members face not only everyday stress associated with military life, but also psychological consequences that can result from the stressful, and at times, traumatic experiences related to the deployment of their military partners (Mansfield et al., 2010).

It is commonly understood that the experience of military deployment can be traumatic for service members, but the vicarious impact of these experiences on partners of service members is less openly acknowledged or understood. Stressors associated with partner military deployment vary greatly depending on the stage of deployment the partner is in. Laser and Stephens (2011) outline the most common stage model of deployment which consists of the following three stages: pre-deployment, deployment, and post-deployment. In the pre-deployment stage couples commonly experience emotional distancing brought on by the service member transitioning their focus to their unit and mission (Hall, 2008; Pincus et al., 2011; Rotter & Boveja, 1999). Couples are also tasked with getting the service member’s affairs in order, which can make the impending deployment separation even more salient. When the service
member leaves, entering the deployment stage, partners may initially react with feelings of “abandonment, loss, emptiness, pain, and disorganization” (Rotter & Boveja, 1999, p. 380). Throughout this deployment stage, partners experience various stressors associated with worry over death or injury to the service member as well as fear, anger, and concerns about service member continued involvement in the military (Allen, Rhoades, Stanley, & Markman, 2011; Wheeler & Stone, 2010). Factors associated with higher stress in partners include the service member reporting more combat exposure and the service member being of lower rank (Allen et al., 2011; Padden, Connors, & Agazio, 2011). Upon the service member’s return and entrance into the post-deployment stage, partners may experience role confusion as they are charged with the task of reconnecting and reorganizing their lives to include the service member (Rotter & Boveja, 1999). Beyond the stress associated with adaptation in the post-deployment stage, coping with service member symptoms of traumatic stress can also impact at-home partners.

There is a breadth of research that has assessed the effects of service member PTSD symptoms on at-home partners, with the bulk of the findings indicating that service member trauma symptoms predict partner trauma symptoms (Dirkzager, Bramsen, Adèr, and van der Ploeg, 2005; Nelson Goff, Crow, Reisbig, and Hamilton, 2009). While much of the research indicates the negative impact that partner PTSD symptoms can have on partner well-being, Dekel (2007) identified that there is the potential for positive outcomes through posttraumatic growth. Posttraumatic growth refers to the concept that exposure to traumatic events can cause positive personal growth, which suggests that while service member’s PTSD symptoms may put partners at risk, there are also factors that can enable partners to grow from these stressful experiences.
Literature on partners of service members generally describes the phenomena of partners being impacted by service member trauma symptoms as secondary trauma, a concept that was originally explored through research on compassion fatigue and vicarious trauma in therapists (McCann and Pearlman, 1990). According to Pearlman and Saakvitne (1995) empathic engagement with another’s traumatic material can impact one’s beliefs about self and others. This conceptualization of secondary trauma is based on constructivist self development theory (CSDT) which posits that how one adapts to a traumatic event is based on the interaction of several factors including one’s personal history, personality, and the traumatic event and its context. All of these factors are also influenced by the social and cultural context that the event occurred within (Pearlman & Saakvitne, 1995). While this theoretical conceptualization of secondary trauma has been applied to other populations, there is a paucity of literature that has evaluated the possible secondary traumatic effect of partner military deployment on partner’s cognitive schemas related to their beliefs about self and others.

The concept of cognitive schemas was drawn from Piaget’s (1971) work on cognitive development, which described cognitive schemas as a mental framework that develops through life experience and observation that serves as a filter and defines how one perceives their world. As new experiences are had, this information is then either assimilated into preexisting cognitive schemas or reshapes existing schemas to accommodate the new information. Thus, in terms of the experience of partner military deployment, research has yet to explore how the new experience of one’s romantic partner being deployed to serve in potentially dangerous areas may impact the way these partner’s make sense of their own world. Furthermore, given that traumatic experiences are theorized to have great impacts on one’s cognitive schemas (Pearlman & Saakvitne, 1995) and that cognitive schemas can become over generalized and cause individuals
to only selectively perceive information that is congruent with their understanding of the world, it is unknown how this processes may impact partner’s beliefs about self and others after experiencing partner deployment. Additionally, the implications of this on areas of adaptation, most specifically relationship satisfaction, are unclear.

Considering at-home partners’ status as both individuals and partners in a dyadic relationship, research on adaptation in this population is concerned not only with individual welfare, but also with the health of the relationship. Literature on partners of service members has thus primarily utilized measures targeted at assessing relationship satisfaction. As with other literature, relationship satisfaction research on this population has primarily assessed the impact of service member PTSD symptoms and found that PTSD symptoms were significantly negatively correlated with all areas of martial functioning (Allen, Rhoades, Stanley, & Markman, 2010) and that service members with PTSD reported poorer relationship adjustment than those without (Erbes, Meis, Polusny, & Compton, 2011). Similarly, Nelson Goff, Crow, Reisbig, and Hamilton (2007) found that trauma symptoms predicted lower relationship satisfaction for both service members and their partners. Although there is a breadth of literature that suggests negative implications for relationship satisfaction in military couples, one study by Karney and Crown (2011) actually found that deployment reduced the risk of divorce in these couples, suggesting that the experience of deployment may not be inherently problematic for military couples.

Based on McCubbin and Patterson’s (1983a, 1983b) Double ABCX model, adaptation is not only influenced by one’s stressors and perceptions, but also by available resources. Communication is a particularly valued resource that military couples rely on to maintain their bond and relationship through the stressors of deployment. Overall, research on communication
suggests that when used effectively to increase everyday talk and disclosure as well as reduce partner protective buffering of information from the service member, communication is related to marital satisfaction and reduced stress (Joseph & Afifi, 2010; Frisby, Byrnes, Mansson, Booth-Butterfield, & Birmingham, 2011). The use of coping strategies are also powerful resources that partners of service members utilize. Wheeler and Stone (2010) identified coping strategies most often used by military wives as including: the use of expressive activities such as writing or painting, getting support from friends and family, religion/spirituality, reliance on technology for communication, and avoidance.

Current literature has also identified various demographic factors that contribute to risk in military couples. Rank of the service member is a particularly important factor, as rank represents not only income and resource availability, but also the type and potential danger level of the service member’s position. Partners of lower ranking service members not only use more evasive and emotive coping, which is associated with higher levels of perceived stress (Padden et al., 2011), but lower ranking service members also reported highest beliefs that their partner would have issues with deployment (Spera, 2009). Beyond rank, those in newer marriages reported more issues adjusting to deployment, and overall service members reported that non-marital partners would have more issues with deployment than marital partners (Spera, 2009). Non-marital partners of service members have been greatly overlooked in current literature, which is particularly problematic given that non-marital partners may represent a potentially at risk population. As Teachman (2009) points out, many military benefits are only available to married couples, which leaves non-martial partners without valuable support networks and the comfort of additional military provisioned resources. Because the availability of resources can
impact adaptation, more information is needed to better understand the risks associated with partner military deployment in non-marital partners.

The well-being of the military family, particularly at-home partners, is not only of importance to the health of each individual partner, but also has implications for the well-being of service members. Huffman, Culbertson, and Castro (2008) specifically found that U.S. Army soldier’s reported views of operating in “family-friendly work environments” were positively related to higher physical training scores, higher combat readiness efficacy belief scores, and higher rates of service member plans to continue military service in the future (p. 264). Furthermore, research on secondary trauma indicates that exposure to primary trauma symptoms of another can result in individual trauma symptoms (Schauben & Frazier, 1995; Dirkzager, Bramsen, Adèr, & van der Ploeg, 2005; Nelson Goff, Crow, Reisbig, & Hamilton, 2009). Thus it remains of paramount importance to focus research and resources on furthering the care of at-home partners to both benefit partners themselves, and indirectly benefit service members and military family units. In other words, increased well-being of military partners has the potential to have many positive ripple effects on every level of the military community as well as current military operations.

The current study identifies the impact of marital status on cognitive schema disruption and relationship satisfaction in partners of service members. Additionally, this study evaluates the extent to which various demographic variables, deployment stress, and cognitive schema disruption contribute to relationship satisfaction. The purpose of this study is to determine whether significant differences exist in level of cognitive schema disruption and level of relationship satisfaction among partners of service members based on marital status (marital and non-marital). Analysis of variance (ANOVA) was employed in order to determine if significant
differences between the two marital status groups exist. This study also explored the factor structure of the Trauma and Attachment Belief Scale (TABS) when this measure was used on a sample of partners of service members. The factor structure was evaluated using exploratory factor analysis. Lastly, this study employed a hierarchical regression analysis to determine the extent to which the following factors contribute to relationship satisfaction among partners of service members: marital status, length of the relationship, rank, number of deployments, perceived risk to the service member’s safety during deployments, actual experienced risk factors related to risk to service member safety during deployments, and level of cognitive schema disruption. Partners of service members were recruited through a variety of Facebook groups to complete a web-based survey that included various demographic questions about the partner and service member as well as questions pertaining to service member deployment. Additionally, participants completed the Trauma and Attachment Belief Scale (TABS) to obtain the partner’s level of cognitive schema disruption as well as the Relationship Assessment Scale (RAS) to measure the partner’s level of relationship satisfaction.
CHAPTER TWO
LITERATURE REVIEW

Literature review will assess various factors that impact at-home military partners in the context of the Double ABCX model and will specifically include stressors, resources, coping, and factors that contribute to risk, resilience, relationship satisfaction, and well-being that occur prior to, during, and after deployment. Additional focus will be lent to the issue of secondary trauma as a potentially important component of these partners’ experience, which will be analyzed through the lens of constructivist self development theory (CSDT). The evolution of the concept of secondary trauma will be reviewed, particularly looking at secondary trauma’s roots in the concept of compassion fatigue. Analysis of current literature will also reveal and address disparities of research in the following areas: the unique impacts of each stage of deployment on at-home partners, specifically in the incidence of cognitive schemas disruptions in response to secondary trauma; and research on non-marital partners of service members.

The Double ABCX Model

Considerations of military life commonly focus on the many stressors that service members and military families face. While various stressors are associated with military life, several protective factors unique to the military are often overlooked. McCubbin and Patterson (1983a, 1983b) developed the Double ABCX model that accounts for the impact of both stressors and resources that can influence adaptation within military families. The Double ABCX model was developed as an extension of Hill’s (1949, 1958) original ABCX model (McCubbin & Patterson, 1983a). Hill’s ABCX model addressed how a stressor (a) interacts with a family’s resources (b) and how that family defines the stressful event (c) to generate a crisis (x). McCubbin and Patterson (1983b) recognized several factors that can influence adaptation after
the original crisis has taken place. It is this “post-crisis” time that McCubbin and Patterson (1983b) expanded on to include the following factors: pile-up of stressors (A), resources (B), perception of pile-up and resources (C), and adaptation (X). Pile-up refers to stressors that accumulate after a crisis is experienced and can include the original stressor and its hardships, preexisting strains, stress related to normal transitions, consequences of coping efforts, and ambiguity both socially and within one’s family (McCubbin & Patterson, 1983b). Stress pile-up is of particular concern in the lives of at-home military partners as numerous stressors these individuals face extend beyond the initial deployment. Resources one has for meeting life’s demands can come from individual, familial, or communal sources and include both new and existing resources (McCubbin & Patterson, 1983b). Perception refers to how one views and defines the meaning of stressful events (McCubbin & Patterson, 1983b). McCubbin and Patterson (1983b) note that positive meanings such as viewing a stressful event as a “challenge” or “opportunity for growth” can play a key role in coping and adaptation (p. 16). Lastly, adaptation is the final component of the model that represents post-crisis balance within the individual, the family, and the community (McCubbin & Patterson, 1983a). Adaptation is articulated on a continuum with bonadaptation representing positive adjustment and maladaptation representing negative adjustment (McCubbin & Patterson, 1983a). Because this model was originally studied based on the experiences of military families (McCubbin & Patterson, 1983b), it serves as an ideal model to assess the experiences of partners of service members. The following analysis of the effects of partner military deployment on at-home partners will be examined in the context of the Double ABCX model.
Pile-Up of Stressors (A): Stages of Deployment

As previously stated, the pile-up of stressors is a major concern for partners of service members considering not only the duration of deployment related stressors, but also their far-reaching impact on various parts of these individual’s lives. These stressors that at-home partners face change and influence different aspects of life throughout the duration of the service members’ deployment. Current literature on the experience of deployment has conceptualized the many dimensions of this experience into various stage models. Laser and Stephens (2011) outline the most common stage model of deployment which consists of the following three stages: pre-deployment, deployment, and post-deployment. Each stage has a distinct set of experiences and issues that commonly arise both within romantic relationships and personally in the life of the at-home partner. Literature relevant to stressors that occur in each of the three stages of deployment are presented.

Pre-deployment.

The first stage of deployment is the pre-deployment stage, which begins when the service member receives orders to deploy (Hall, 2008; Pincus, House, Christenson, & Adler, 2011). Because service members can receive orders that range in time frames from weeks to months prior to actual deployment, the length of the pre-deployment stage can vary greatly. Hall (2008) and Pincus et al. (2011) note that emotional reactions in the pre-deployment stage are characterized by both denial and anticipation of loss. Emotional distancing and withdrawal between the couple commonly occurs, which is brought on both by the anticipation of loss and the service member’s increased excitement and commitment to their unit and mission (Hall, 2008; Pincus et al., 2011; Rotter & Boveja, 1999). Jordan (2011) presents this process of emotional distancing from an attachment framework where throughout the stages of deployment
couples grow together when the service member is present and apart when the service member is deployed.

According to Hall (2008) and Pincus et al. (2011), during the pre-deployment stage, service members will begin to spend more time with their unit as training ramps up in preparation for the deployment. This process of bonding with one’s unit members is important in developing unit cohesion, which is instrumental in aiding in the safety and success of military deployment. However, partners may experience this process as distancing and may react with fear, anger, hurt, and resentment (Hall, 2008; Rotter & Boveja, 1999). Even though this emotional distancing takes place, couples will still commonly strive to increase intimacy and make grand plans for events prior to deployment. Because couples perceive these final pre-deployment events as being very important, even small mishaps can be experienced as catastrophic, as couples view these final experiences as being their last with the service member. It is not uncommon for a partner to find themself wishing that their service member was already gone, demonstrating the partner’s desire to have this pre-deployment phase over as soon as possible.

Couples in the pre-deployment stage also have to take care of several logistical activities that need to be done in preparation for deployment. Activities related to getting service members’ affairs in order include: organizing wills, finalizing financial plans, making home and car repairs, organizing insurance policies, planning for child care, and developing other plans for emergency situations (Hall, 2008; Pincus et al., 2011; Rotter & Boveja, 1999). However, the act of making these final arrangements can make the impending deployment even more salient within the relationship, and as emotional reactions intensify, arguments and issues related to unresolved relational or family concerns tend to surface. Both Hall (2008) and Pincus et al.
(2011) point out the importance of couples working through these issues prior to deployment, as lingering tensions can result in a worried and preoccupied soldier who is unable to focus on the mission at hand during deployment. A similar pattern is true for female partners, as indicated in a study by Rosen and Moghadam (1991), who found that previous well-being was the strongest predictor of well-being in army wives. These findings suggest that how well an individual copes with deployment is tied to his/her functioning prior to deployment. Marital and financial satisfaction also were predictors of well-being, thus indicating that the more satisfied partners are in these arenas, the more likely they will be to show higher levels of well-being. These findings add weight to the importance of planning and resolving issues prior to deployment.

**Deployment.**

The second stage of deployment is the actual deployment stage that begins when the service member leaves home and ends when the service member returns (Hall, 2008; Pincus et al., 2011). Just as with the pre-deployment stage, the length of the deployment stage can vary depending on the branch of military that the service member works with, the mission, characteristics of the military conflicts the service member will be involved in, and the military climate at the time. It also is important to note that lengths of deployment commonly change as adjustments are made by the military (Riggs, Brim, & Nofziger, 2008). Therefore, partners may find the added unpredictability of these timeframes to be an additional stressor.

The initial separation of the deployment stage is characterized by emotional confusion, feelings of “abandonment, loss, emptiness, pain, and disorganization” (Rotter & Boveja, 1999, p. 380). However, after these initial weeks, adjustment takes place, and partners begin to develop comfort with their new roles and routines (Hall, 2008; Pincus et al., 2011; Rotter & Boveja, 1999). For at-home partners, this sustainment phase of deployment brings with it an increasing
sense of confidence and control. However, a primary stressor during deployment is related to communications between the service member and the partner. Pincus et al. (2011) point out that it is not uncommon for huge phone bills to result from attempts at communicating regularly, and for the lack of immediacy in communication to cause added stress, especially when issues need to be discussed and resolved but are delayed due to the unpredictability of the service member’s schedule, and the availability of communication methods. Pincus et al. also add that the unpredictability of the schedule of communication from the service member can leave partners “feeling ‘trapped’ at home for fear that they will miss a call” (p. 4).

As the deployment nears its end, new feelings of “apprehension, excitement, high expectations, worry, and fear” emerge (Rotter & Boveja, 1999, p. 380). These mixed feelings reflect common worries over something happening to the service member in the small amount of time left in the deployment, or concerns regarding if the service member will agree with the changes the partner has made in his/her absence (Hall, 2008; Pincus et al., 2011). Partners also may have concerns over the possibility of having to give up their newly gained independence or having to readjust to the old roles they held prior to deployment. It is apparent that there is a plethora of issues that are associated with the deployment stage. The following section will include information from current literature on specific stressors that are common to this stage of deployment.

**Specific stressors.**

Several studies have assessed factors related to stress and its effects on partners of service members. First, Allen, Rhoades, Stanley, and Markman (2011) assessed stress in recently deployed couples and found that “couples had the highest stress regarding issues related to combat, death, physical or psychological injury, loneliness, and effects on the children” (p. 242).
Not surprisingly, when husbands reported experiencing more combat exposure during their last deployment, couples reported higher levels of stress. While another less anticipated finding was that stress related to fidelity was not a significant concern for either wives or husbands. Cozza, Chun, and Polo (2005) also identify media as being another stressor that can increase anxiety related to the potential for parental death, particularly in military children. Additional information regarding stressors of military wives was provided by Wheeler and Stone (2010) whose study identified fear, anger, and concerns about service member continued involvement in the military as common stressors.

Padden, Connors, and Agazio (2011) assessed stress in military wives finding that lower-ranking officers’ wives had the highest perceived stress scores whereas higher ranking officers’ wives had the lowest. Female partners’ vulnerability to the effects of stressors during deployment was assessed in a study by Knapp and Newman (1993) who found that wives who reported an accumulation of stressful life events were more susceptible to distress during prolonged military separations. Furthermore, lower accumulation of stressors and lower perceived military stress are associated with greater psychological well-being. This finding supports the concept of stressor pile-up in the Double ABCX model and demonstrates how this pile-up can put at-home partners at risk during lengthy partner military deployments.

These past studies each share a similar set of limitations. First, all studies used small homogeneous samples consisting of participants’ average ages ranging from 27.80-30.54 years-old and ethnicity distributions ranging from 67-80% Caucasian. The homogeneous nature of this sample not only limits generalizability of findings, but also does not take into account potential differences in experienced stressors of younger and diverse military populations. Additionally, all of these studies sampled married female partners with average years of marriage ranging
between 5.30 and 7.31 years. While the use of married participants offers relevant information to be applied to military spouses, this limited demographic has overlooked a potentially vulnerable population, dating and/or cohabitating partners of service members. This limitation highlights a consistent paucity throughout research on partners of service members. Further discussion on this potentially important population of non-marital partners will be provided in the Cohabitation and Dating Relationships section later on.

Current literature also contains inconsistencies in service members’ current deployment status. For instance, Wheeler and Stone (2010) and Padden et al. (2011) sampled partners of currently deployed service members, while Allen et al. (2011) sampled couples who were home and deployed within the last year. Adding complexity to the issue of deployment status, Allen et al. noted that 37% of their sample had been notified of an impending deployment that would commence in the next 7 months after the study. Knowledge of an upcoming deployment could have altered the saliency of various stressors for these couples. Lastly, Knapp and Newman (1993) sampled spouses of service members that served in Operation Desert Storm. While past research on partners of service members who have served in previous conflicts provide valuable information on stressors of military partners, questions regarding potential differences in partner experiences during current conflicts still exist.

Recruiting methods highlight a final limitation of these studies. The majority of the previously noted studies in this section recruited from military service groups such as family readiness groups and marriage education workshops. This limited sampling could introduce specific biases regarding severity of current stress levels of partners. The possibility remains that partners involved in these groups could represent a population that is experiencing more distress, or alternatively, such groups could lack severely distressed partners who have become isolated.
and disconnected from these support systems. In either case, future research may benefit from recruiting practices that pull from a variety of sources to ensure equal representation.

**Post-deployment.**

Post-deployment begins when the service member arrives at his/her home post and typically lasts between three to six months (Hall, 2008; Pincus et al., 2011). However, Riggs et al. (2008) point out that the post-deployment stage can be interrupted by the beginning of another pre-deployment stage if the service member receives notice of re-deployment soon after arriving home. The initial reunion phase of the post-deployment stage is characterized by high levels of excitement, reestablishing intimacy, and readjusting (Rotter & Boveja, 1999). Hall (2008) and Pincus et al. (2011) point out that while homecoming can be a very joyous occasion, it also can be frustrating because it is not uncommon for the date of return to change, or for scheduling conflicts to keep partners and families from being able to attend the homecoming of the returning service member. The homecoming phase is then closely followed by the first argument, which brings about feelings of discomfort and role confusion (Rotter & Boveja, 1999). Couples are now charged with the task of reconnecting and reorganizing their lives to include the service member. At this point, at-home partners may feel apprehensive over the loss of their independence and may feel resentment towards service members for abandoning them (Hall, 2008; Pincus et al., 2011).

**Secondary trauma.**

While a variety of stressors are associated with the post-deployment stage, research has primarily focused on issues associated with service members returning home with post-traumatic stress disorder (PTSD). One issue that has been a distinct area of research relates to the at-home partners’ experience of living with a service member who is struggling with symptoms of PTSD.
As such, the remainder of this post-deployment section will focus on research surrounding stress related to PTSD and secondary trauma in at-home partners, while a more comprehensive discussion of secondary trauma and its theoretical grounding will be provided in the section devoted to issues relevant to the perception component of the Double ABCX model.

Stress related to observing another individuals’ experience of trauma is a common concern for partners of service members. Research on secondary trauma among female partners of service members is fairly consistent in its findings. Across the board, service members’ PTSD symptoms negatively impact areas of female partner well-being. Specifically, Dirkzager, Bramsen, Adèr, and van der Ploeg (2005) found that husbands’ PTSD symptoms predicted wives’ PTSD symptoms. Similarly, Nelson Goff, Crow, Reisbig, and Hamilton (2009) found that female partners’ trauma symptoms were significantly predicted by service member’ level of trauma symptoms. However, female partners’ trauma symptoms were not significantly predicted by service members reporting more trauma exposure. Another study by Ahmadi, Azampoor-Afshar, Karami, and Mokhtari (2011) used an Iranian sample and showed that PTSD among veterans significantly predicted secondary traumatic stress in spouses, with all partners of veterans with PTSD in their study endorsing symptoms consistent with moderate to severe levels of secondary traumatic stress. Ahmadi et al. (2011) identified the duration of PTSD symptoms as being the only demographic factor that predicted secondary traumatic stress in spouses, indicating that extended exposure to PTSD symptoms puts partners at increased risk of developing symptoms of secondary traumatic stress. While this study did show higher rates of secondary traumatic stress in spouses than previous studies, Ahmadi et al. attribute this higher rate to social, cultural, and religious factors that are unique to the Iranian sample.
While living with a veteran who has PTSD is initially associated with negative effects on the at-home partner, Lyons (2001) points out that over time, as a partner lives with the veteran, resolution and healing can occur in the veteran and the couple. Throughout this process, Lyons notes that partners experience a progression from the early honeymoon stage where feelings of openness and intimacy are present, to the middle stage where partners begin to experience difficulties associated with dealing with veterans’ PTSD symptoms. Lastly, in the later phase, partners who decide to stay with the veteran can experience resolution in the relationship, and while veterans’ healing is an ongoing process, in this phase significant improvements in symptomatology can be seen. Dekel (2007) also looked at possible positive outcomes in female partners that may come from experiencing their veteran husbands' PTSD symptoms. Dekel discusses the potential for posttraumatic growth to occur, which is the concept that exposure to traumatic events can cause positive personal growth. In this study, Dekel found that the more severe husbands’ PTSD symptomatology is, the more distress and subsequent posttraumatic growth wives experienced. Dekel offered several possible explanations for this finding, including the possibility that meeting the challenge of dealing with issues associated with their husbands’ PTSD may lead to wives feeling a sense of competence and mastery, or that wives’ love for and appreciation of their husbands was enhanced by witnessing their struggle with PTSD.

While the primary focus of this review is on issues related to military populations, other studies have assessed secondary trauma among other specific populations that are worth noting. For instance, Vrkelvski and Franklin (2008) looked at vicarious trauma among criminal law solicitors and found that they not only had significantly higher scores in total vicarious trauma, but also had more schema disruption in areas of self-safety, other-safety, and other-intimacy, when compared to non-criminal law solicitors. Regehr (2005) interviewed paramedics and their
spouses and identified a common theme as being related to the effects of stress and trauma as well as how stress and trauma impact the family. Lastly, Keats (2005) assessed vicarious witnessing in a group that visited European concentration camps. Keats reviewed personal accounts of those who visited the concentration camps, which revealed that participants felt the weight of the experience even after they went home. This finding indicates that even exposure to images and stories of trauma can have an impact on individuals who bear witness to traumatic material.

Limitations that are unique to current literature on secondary trauma must be noted. Unlike the bulk of research on at-home partners, literature on secondary trauma has been primarily drawn from international populations (Israeli and Dutch), or populations whose military experiences occurred during the Vietnam War. This current literature review only included one study, Nelson Goff et al. (2009), that was conducted on partners of service members who served in current OIF and OEF conflicts. This lack of current research focused on the issue of secondary trauma in partners of service members who have served in current day military conflicts highlights the need for continued research that can be generalized to today’s at-home military partners of those serving in the United States military.

The primary use of currently intact couples represents another distinct limitation. As will be later discussed, various stressors related to military deployment can have detrimental effects on intimate relationships. In light of this, the use of currently intact couples could introduce potential biases related to the possibility that current couples may be more resilient to the stressors of deployment than couples whose relationships have already ended. Furthermore, current literature on secondary trauma has only gathered data post deployment. This post deployment research primarily looks at possible secondary traumatic effects of living with a
veteran partner who has PTSD. Thus, current literature has yet to analyze the possible secondary traumatic effect that the experience of deployment itself can have on at-home partners.

**Resources (B)**

Upon review of literature focusing on the experience of female partners of service members, it is apparent that research has primary focused on the various negative aspects of these partners’ experiences. However, in maintaining this focus, research has greatly overlooked not only the vast array of resources that are available to military populations, but also the coping tools that at-home partners utilize that contribute to the resilience of this population. This section will focus on communication as an important resource, in addition to the impact that risk and resilience factors, as well as coping strategies, can have on at-home partners.

**Communication.**

Communication during deployment is one of the valued resources military couples have to maintain their bond and relationship through the stressors of deployment. Luckily, in recent years, the availability of communication methods in the field during deployment has greatly increased to include access to internet-based communication such as email, instant messaging, and videoconferencing, in addition to more traditional methods of communication like telephone calls and more timely mail delivery. Lincoln and Sweeten (2011) note this significant improvement in the availability of communication, stating that, at the beginning of OIF it was nearly impossible to communicate due to the lack of developed military bases and systems of communication. However, Merolla (2010) also points out several additional factors that can impact the use of these methods of communication including: military imposed restrictions, poor internet connections, the location of computers and phones being in public areas, and the service member’s schedule restricting them from having time to utilize available communication.
methods. Riggs et al. (2008) also add that often communication resources can be so busy that service members may have to endure long wait times, to then only be able to communicate with loved ones for a short amount of time, as the military commonly places short time restrictions on phones and computers.

Beyond methods of communication, content of communication is also an area of research that aids in understanding the experience of at-home partners. Joseph and Afifi (2010) assessed military wives’ stressful disclosure to their deployed husbands and their results indicated military wives are more likely to “protectively buffer,” or not disclose possibly stressful information, to their husbands if they perceive their husbands’ safety to be at higher risk (p. 425). Military wives also appear to be more apt to disclose when husbands are supportive of these disclosures. Furthermore, Joseph and Afifi found an association between disclosure and marital satisfaction for wives, in addition to a relationship between protective buffering and wives reporting poorer mental and physical health.

Lastly, results from a study by Frisby, Byrnes, Mansson, Booth-Butterfield, and Birmingham (2011) revealed that engaging in everyday talk and decreasing topic avoidance were significant contributors to lower stress in romantic partners overall, with results indicating that everyday talk was significantly more important to military couples. This study has a distinct set of strengths relative to other studies that have assessed communication in military couples. Unlike other studies, Frisby et al. included non-marital partners, but unfortunately, they did not provide information to identify the percent of their sample that was actually married to allow for sufficient interpretation of data specific to non-marital partners. Another strength of this study is that Frisby et al. gathered data from a non-military college population in order to make comparisons between military and non-military populations. This comparison is valuable in that
it allows for analysis of the utility of researching these populations separately, and as Frisby et al. found, military partners do demonstrate differences in the area of communication, providing support for future research on communication issues specific to military couples.

A critique of all current literature in the area of communication in military couples, is that no study differentiated between different types of deployment. It should be noted that ‘deployment’ can refer to any required travel away from one’s home base for various lengths of time. Thus, it will be important for future research to properly operationally define deployment, as well as allow participants to identify the nature of the deployment. This key information would allow researchers to analyze potential differences in communication and other experiences during deployments to war zones, versus deployments to other less life threatening locations.

Taken in total, research on communication suggests that when used effectively, communication is an important and positive resource for military partners. Furthermore, communication represents a new area of research that is particularly relevant to military couples in current modern day conflicts, given the influence that numerous technological advancements have had on currently available resources that help military couples connect during deployments. Future research in this area may benefit from exploring both the positive aspects of communication as a resource, as well as the potential negative implications that can be present when communication is experienced as a stressor.

Risk and resilience.

As many stressors associated with military life and deployment have been identified, it is important to make the distinction between what factors put at-home partners at more risk versus what factors aid in resilience. Saltzman et al. (2011) utilized the Families OverComing Under Stress (FOCUS) program model to identify and conceptualize mechanisms of risk and resilience.
in military families. Saltzman et al. identified the following mechanisms of risk: “incomplete understanding of the impact of deployment,” “impaired family communication,” “impaired parenting,” “impaired family organization,” and the “lack of guiding belief systems” (p. 217). Saltzman et al. also identified several mechanisms that can enhance resilience in military families, these include “enhancing family awareness and understanding” of individual narratives and co-constructing a family narrative, “improving family empathy and communication,” and “fostering confidence and hope” within the family (p. 220-221). Bowen and Martin (2011) relate the resiliency model of role performance to resilience in military families. According to this model, resilience is associated with the concept of successful role performance, or in other words, a person’s ability to “get the job done” or be successful at meeting life’s needs (Bowen & Martin, 2011, p. 168). Also in this model, social connections and self-assets, as well as self-esteem and emotional well-being are moderators of stressors, and thereby contribute positively to role performance. These moderators play a role in military families’ resilience by focusing on the ability of service members and their families to meet the responsibilities of military life.

Various demographic factors have also been identified as potential risk factors. Most notably, risk factors such as being in newer marriages and service members being of lower rank were identified in a study by Spera (2009). Specifically, Spera found that lower ranking service members reported highest beliefs that their spouse or non-marital partner would have issues with deployment. Additionally, overall service members believed that non-marital partners would have more issues with deployment than wives. Lastly, individuals in newer marriages reported more issues adjusting with deployment than those in longer standing marriages. Spera’s study highlights the importance of analyzing issues relevant to military couples in the context of various key demographic factors. A significant limitation of this study that should be corrected in
future research is the possible bias that may be present due to survey data being gathered based on soldiers’ perspectives of their partners’ experience. Such bias could be removed in future research by obtaining self-reports from at-home partners on their own experiences, with the implied understanding that at-home partners may be better able to report firsthand accounts of their own experience, while still being capable of accurately reporting service member demographics in an objective manor.

**Cohabitation and dating relationships.**

There is a distinct paucity of research on non-marital partners of service members in both cohabitating and dating relationships. Spera (2009) authored the single study that made mention of non-martial partners and the unique risk factors that these partners may possibility face. In addition to the previously mentioned study by Frisby et al. (2011) on military partner communication, these two studies represent the current amount of attention that research has allotted to issues facing non-marital partners of service members. Due to this absence of substantial research on this population, the following section will report on cohabitation and dating literature drawn from the general population.

According to the 2006-2010 National Survey of Family Growth, the number of women who are currently cohabitating has steadily grown from 3.0% in 1982 to 11% in 2006-2010 (Copen, Daniels, Vespa, Mosher, & Division of Vital Statistics, 2012). While this increase can be seen in general populations, Teachman (2009) uncovered a trend showing that active duty male service members are less likely to cohabitate and more likely to marry than other men. Teachman suggests that this difference is likely due to the availability of various military benefits being only accessible to married couples and not non-marital cohabitating couples. While active duty male service members are less likely to cohabitate, Teachman still found that
5.31% and 4.01% of 25 year old White and Black men respectively in their sample were in cohabitating unions. The presence of these cohabitating couples along with the previously mentioned differences in military support offered to these non-marital couples, highlight a potentially vulnerable population that has yet to be significantly researched. Future research focused on the experience of these non-marital partners could shed light on the needs and struggles that are unique to this population.

Beyond the rising incidence of cohabitation, Copen et al. (2012) also reported the relative survival rates for first marriages that did and did not cohabitate prior to marriage. Women who had cohabitated prior getting engaged had a 61% probability of marriage survival after 10 years, while women who did not cohabitate with their first husband prior to marriage had a 71% probability of marriage survival. For men, rates for probability of marriage survival after 10 years were 66% for cohabitating and 73% for non-cohabitating. Hogan and Seifert (2010) analyzed divorce rates of active duty service members compared to those of non-military individuals and found that service members between the ages of 23 and 25 not only marry at a higher rate than civilians, but even when controlling for other characteristics such as age, sex, race, and education, also divorce at a higher rate. Hogan and Seifert explain that service members’ tendency to marry earlier is likely influenced by the availability of benefits such as having the option to live off base, an option that is only available to junior enlisted officers who are married and officers. Furthermore, it is noted that higher divorce rates could be a product of service members marrying at earlier ages, possibly sooner than they would have if not for being in the military.

In addition to incidence statistics on marriage, cohabitation, and divorce, several studies on dating relationships can also be applied to military non-marital relationships. Hsueh,
Morrison, and Doss (2009) qualitatively analyzed differences in reported problems in cohabitating relationships compared to married and dating relationships. Results of this study revealed several problems that individuals involved in cohabitating and dating relationships are more likely to report than married individuals, which include: problems with arguments, relationship commitment and security, and problems with a previous relationship. Comparisons between cohabitating and dating individuals uncovered only two differences; cohabitating couples were less likely to report problems related to relationship commitment and security, while individuals in dating relationships were less likely to report problems with arguments. Beyond difficulties of these non-marital relationships, Hsueh et al. also identified the following problems that married individuals were more likely to report, which include: emotional affections and distance, as well as lack of physical affection or sex. Taken together, these findings illustrate the relative issues that each relational configuration is more likely to experience, and highlight the potential relational issues facing non-marital partners.

Recognizing the unique challenges that long-distance dating relationships face, Maguire and Kinney (2010) explored the relationships between levels of relational distress, feelings of relational uncertainty, and relationship satisfaction in individuals currently in long-distance dating relationships. The results of this study showed that individuals who reported moderate to high levels of relational distress were more likely to report uncertainty in the relationship as being a stressor, than those who only reported low levels of distress. Furthermore, those with moderate to high levels of relational distress found reported stressors to be more threatening to their relationship and were overall less satisfied with their current relationship. Results from a study by Solomon and Knobloch (2001) further clarify the association between experiencing relational doubt and intimacy through their identification of a negative relationship between
intimacy and experiencing relationship uncertainty. When these results are combined it is clear that issues related to relationship uncertainty not only impact intimacy, but also relationship satisfaction overall.

When applied to non-marital military relationships, these findings may suggest that partners experiencing high levels of deployment related distress may have lower levels of relationship satisfaction. Future research may benefit from exploring the association between distress related to partner military deployment and relationship uncertainty and satisfaction. Furthermore, this general research on cohabitation and dating relationships suggests various unique stressors that non-marital military couples likely face including concerns over arguments, problems related to commitment and security, in addition to stressors related to lack of military support in the form of financial assistance for housing and military family support programs.

**Coping.**

The use of coping strategies can be a powerful factor in any population. However, in partners of service members, the use of coping strategies is of particular interest due to the increased risk of stressor pile-up. Wheeler and Stone (2010) identified coping strategies most often used by military wives as including: the use of expressive activities such as writing or painting, getting support from friends and family, religion/spirituality, reliance on technology for communication, and avoidance. Furthermore, Cozza et al. (2005) point out that in an attempt to cope with stressors, military wives and families may choose to move back home to be supported by family, however, this often means leaving the supportive military environment and any services that may be available to them, thus potentially decreasing the availability of outside coping tools the family can draw from. Padden et al. (2011) also assessed coping in military wives and found that lower ranking officers’ wives used more evasive and emotive coping,
which are positively correlated with higher levels of perceived stress, and wives of higher ranking officers used more confrontive coping, which is considered more effective in reducing perceived stress. Padden et al. noted this finding of higher ranking officers’ wives using more effective coping styles as likely being due to these wives’ more extensive experience with military deployment, as they may have learned to confront a situation and use more effective problem solving.

Additional research by Dimiceli, Steinhardt, and Smith (2010) showed that military wives used problem-focused coping more than emotion-focused coping strategies. According to Dimiceli et al. this finding implies that these wives made greater efforts to alter the sources of their stress, as opposed to viewing the stressor as one that must just be tolerated, which speaks to the wives’ perceptions of the controllability of these stressors in addition to the wives’ perceptions of having the skills to intervene. Additionally, emotion-focused “strategies were related to negative health-related outcomes independent of moderating effects of controllability of the stressor;” and controllability of the stressor as well as problem-focused coping were related to decreased depression (p. 366).

Limitations of the previously discussed literature on coping can be found in the Specific Stressors section on pages 14-16, as the majority of these studies provided data on both stress and coping, and were thus similarly drawn from in both sections.

**Perception (C)**

As explained by McCubbin and Patterson (1983a, 1983b), how one perceives stressors and resources can play a critical role in coping and eventual adaptation. McCubbin and Patterson (1983b) point out that families who redefine a crisis situation to reflect a positive meaning make efforts to clarify issues to make them more manageable, decrease the negative emotional burden
resulting from the stressful event, and encourage the family to continue functioning and developing. The following research on perception in partners of service members reflects many of these same themes. Additionally, this section will include a detailed review of secondary trauma in the context of constructivism, specifically regarding the impact of secondary trauma on various cognitive schemas.

**Perception literature.**

Research on partner and service member perception is an important component to consider when assessing the experience of at-home partners. Renshaw, Rodrigues, and Jones (2008) point out that researchers need to be pursuing a more thorough understanding of the mechanisms that lead to distress in partners of service members. Renshaw et al. (2008) found that spouses’ perception of soldiers’ PTSD symptom severity was positively related to spouses’ own symptom level. Furthermore, when controlling for these perceptions, “if spouses perceived low levels of such symptoms in soldiers, SSR [soldiers’ self-report] of their own symptom severity had no relationship with the degree of spouses’ symptoms” (p. 592). In other words, perception had more impact on the wife’s symptoms than did the actual symptom level of the service member. In a subsequent study by Renshaw, Rodebaugh, and Rodrigues (2010), spouse’s perceptions of the service member’s symptoms fully mediated the association of service member self-reported PTSD symptoms with spouse’s psychological and marital distress. Furthermore, Renshaw et al. (2010) found that spouses were most distressed when there was a discrepancy between the spouse’s perceptions of the veteran’s symptoms and the veteran’s reported symptoms (spouse’s perceived symptoms as high but veteran’s reported symptoms as low). Thus, this finding points to the importance of attribution of symptoms in partner perceptions. For instance, Renshaw et al. (2008) suggest that a spouse who views symptoms as being more severe
than the service member reports, may internalize the symptoms of the service member, which results in the spouse experiencing greater levels of distress.

Renshaw and Campbell’s (2011) work also suggested that when partners perceived that service members experienced low levels of potentially traumatic deployment experiences, numbing/withdrawal was significantly positively associated with partners’ relationship and psychological distress. Thus indicating, as results of a study by Renshaw, Blais, and Caska (2011) posit, spouses tend to be “less negatively affected by service members’ symptoms if they can attribute those symptoms to external, uncontrollable events” (p. 76). Specifically, spouses’ distress is related to their perceptions of service members’ symptom severity, what they attribute those symptoms to, and the perceived burden of the service members’ symptoms.

Renshaw, Allen et al. (2011) examined spouses’ distress to determine whether their symptoms are reflective of secondary trauma brought on by the service members’ distress, or if the spouses’ distress was attributable to outside traumatic events. The results of this study indicated that women who attributed their symptoms to their husbands’ military experience were actually experiencing some other form of psychological distress that was not necessarily indicative of traumatic stress. Furthermore, most of the wives in the study were attributing their symptoms to an experience in their own lives and not their husbands’ military experience. This specific study brought to light a prominent weaknesses that is present in current literature that assesses the traumatic effects of deployment and service member PTSD on at-home partners, that being, the lack of any assessment for prior or personal traumatic events that could be contributing to the partner’s symptoms.

Lastly, a qualitative study by Aducci, Baptist, George, Barros, and Nelson Goff (2011) assessed themes in interviews with military wives relating to their experiences with deployment
and the military. Aducci et al. found that a common theme amongst military wives was coming to recognize their strength related to making it through the deployment experience, and also developing a new appreciation for their husbands and their marriage. However, other themes including managing uncertainty alone and managing split loyalties between wives and their husbands, the military, and the mission indicate that while wives acknowledge positive aspects of being a military wife, there is also a distinct and unique set of stressors that they must cope with. These findings point to the important role perception plays in military partners’ lives and how these perceptions can be both positive and negative.

Limitations of perception literature follow a similar pattern as previous research on stressors and coping, which includes issues primarily surrounding the use of small homogeneous samples. Samples utilized in perception literature consisted of participants’ average ages ranging from 27-35 years-old and ethnicity distributions ranging from 70-98% Caucasian. Additionally, all of these studies sampled married female partners with average years of marriage ranging between 10.17 and 14.44 years. While Renshaw and Campbell (2011) and Renshaw et al. (2010) did include some non-marital partners in their studies, the vast majority, 98.5% and 94% respectively, were married. Furthermore, potential unexplored biases maybe present due to both Renshaw et al. (2008) and Renshaw and Campbell’s samples consisting exclusively of members of the National Guard/Reserves.

Yet another limitation that can be generalized throughout all literature on partners of service members is that all research has been cross-sectional in design and thus limits inferences on directionality. While the use of cross-sectional research design has advantages such as convenience and practicality, future research may benefit from applying longitudinal designs that
would allow researchers to examine changes that may occur after couples have experienced military deployment.

**Constructivism and secondary trauma.**

Constructivism is a theory that fits well in the context of the Double ABCX model as it specifically focuses on the importance of individually constructed realities and meanings. Constructivism takes the stand point that individuals construct their own realities (Pearlman & Saakvitne, 1995). Within trauma, this translates to a view that “the meaning of the traumatic event is in the survivor’s experience of it” (Pearlman & Saakvitne, 1995, p. 57). Thus, when assessing the effects of partner military deployment on at-home partners, the effect is going to be closely related to how the at-home partner experiences deployment and the partner’s construction of the meaning of those experiences. As previously noted, current research that has analyzed the experiences of partners of service members uses the term secondary trauma as a general concept to encompass the many symptoms that can result from the experience of stress related partner military deployment. This concept of secondary trauma is drawn directly from a constructivist theory lens. Thus, the following section will review literature relating to secondary trauma through the lens of constructivist self development theory to provide a theoretical grounding to aid in the understanding of the concept of perception and its importance related to adaptation.

**Secondary trauma: evolution of terminology.**

As research on the phenomena of secondary traumatization has evolved, so has the terminology used to describe and label it. McCann and Pearlman (1990) explain that the concept of secondary traumatization is by no means a new one, in fact reference to it can be seen all the way back to psychology’s early days where the term burnout was first used to describe a fatigued therapist. Later on, the term countertransference was popularized to specifically describe the
phenomenon where therapeutic content from the client triggers a reaction from the therapist drawn from the therapist’s own past or conflicts (McCann & Pearlman, 1990). This transfer from client to therapist was then later conceptualized by Figley (2002) as compassion fatigue. Compassion fatigue specifically emphasizes how therapists can be affected by their ongoing work and expenditure of support to their clients, this most often resulting in a burnout type reaction (Adams, Figley, & Boscarino, 2008). Figley’s research on compassion fatigue in therapists caught on and was then applied to other care giving populations. Most recently research in this area has applied these concepts to any person’s reaction to working with or being in a close relationship with a traumatized individual. This application has however used several terms to describe such a reaction. Secondary trauma, vicarious trauma, vicarious witnessing, secondary traumatic stress, and secondary PTSD are generally used synonymously in research, although the term secondary traumatization appears to be the most commonly used today.

Compassion fatigue.

Within the area of compassion fatigue, Figley (2002) identifies secondary traumatic stress as “the natural consequent behaviors and emotions resulting from knowing about a traumatizing event experienced by a significant other- the stress resulting from helping or wanting to help a traumatized or suffering person” (p. 1435). Figley itemizes an etiological model that consists of eleven variables that predict compassion fatigue. Those variables include: empathic ability; empathic concern; exposure to client; empathic response; compassion stress; sense of achievement (the one factor that lowers/prevents compassion stress, the extent to which the therapist feels like they have helped); disengagement from the person/client; prolonged exposure; traumatic recollections; and life disruption.
Adams, Figley, and Boscarino (2008) utilized the Compassion Fatigue Scale-Revised to measure both secondary trauma and burnout in their study and found that participants that reported more negative life events and more participation in the world trade center disaster recovery were more likely to have high secondary trauma scale scores. Additionally, secondary trauma was related to job burnout and poorer psychological well-being, while those who reported a higher “sense of mastery” tended to have lower secondary trauma scores (p. 245). Kanter (2007) also assessed how exposure to client suffering can affect professional workers and uncovered five factors that included: worker competence or having the skills necessary to be successful in one’s job; having unrealistic professional expectations; “cumulative countertransference responses from a caseload of clients with similar difficulties;” “ubiquitous countertransference responses” that are elicited by certain clients often affect workers similarly (suicidal clients elicit feelings of helplessness in workers); and “idiosyncratic countertransference responses” (a client pushing your buttons) (p. 292). While previous studies on compassion fatigue provide a base of research that has been built upon, greater focus will be placed on research more closely related to secondary traumatization, as it is more in line with this paper’s focus on the experience of military deployment in at-home partners.

**Secondary/vicarious traumatization.**

Based on constructivist self development theory (CSDT), Pearlman and Saakvitne (1995) itemized several aspects of self that can be impacted by psychological trauma including: (a) a person’s frame of reference which includes worldview, identity, and spirituality; (b) self-capacities which refer to the person’s ability to maintain a consistent sense of self in various circumstances and across time; (c) ego resources that include skills that help one meet their psychological needs, to foresee consequences, to establish mature relationships, “establish
boundaries, and make self-protective judgments”; (d) psychological needs and cognitive schemas in relation to self and others including safety, trust, esteem, intimacy, control; and lastly (e) memory systems that include areas such as “verbal, somatic, interpersonal, affect, [and] imagery” (p. 62). Pearlman and Saakvitne clarify that in vicarious traumatization, an individual’s inner experience, as itemized above, is “negatively transformed through empathic engagement” in another’s traumatic material (p. 279). These effects will vary from each individual depending on personality, defensive style, and resources. While Pearlman and Saakvitne focus primarily on vicarious trauma in therapists, the previously outlined concepts can be applied to other populations that are exposed to a significant other’s traumatic material.

Based on the previously mentioned psychological needs and cognitive schemas, Pearlman (2003) developed the Trauma and Attachment Belief Scale (TABS) formally known as the Traumatic Stress Institute (TSI) Belief Scale, to assess the psychological impacts of traumatic events on cognitive schemas regarding beliefs about self and others in relation to the five aforementioned psychological needs (safety, trust, esteem, intimacy, and control) based on CSDT. This measure has been utilized in research on populations that have been exposed to various forms of trauma including battered women, victims of sexual assault, and counselors (Varra, Pearlman, Brock, & Hodgson, 2008). This measure will be discussed in further detail in the Instruments section on pages 53-58.

Dunkley and Whelan (2006) however do offer a set of critiques of the CSDT supported by Pearlman and Saakvitne (1995) and McCann and Pearlman (1990). These critiques include concerns that CSDT overlooks the possible positive changes some therapists can experience after working with trauma clients or the potential for posttraumatic growth. Also CSDT does not “distinguish between increased awareness and disturbances in cognitive schemas”, it only looks
These critiques further point to a need for additional research focused on factors that contribute to adaptation in populations that are exposed to trauma.

Several studies have looked at factors that can impact or influence the instance of secondary trauma. Pearlman and Mac Ian (1995) assessed disruption of cognitive schemas related to beliefs about self and others regarding the five previously stated psychological needs in trauma therapists. Results indicated that therapists with personal trauma history showed greater schema disruptions, and that newer trauma therapists were experiencing the most difficulties. Thus, the finding that more experienced therapists, even with trauma histories, have less disrupted schemas, points to the possible benefit that personal and professional development in addition to higher competence can have on a therapists’ resilience to vicarious trauma. These findings may also translate to support results from the previously discussed study by Padden et al. (2011), which suggests higher ranking officers’ wives may be better able to cope with deployment related stress as a result of their more extensive experience with military deployment.

A research synthesis by Baird and Kracen (2006) supported the findings of Pearlman and Mac Ian (1995) that having a personal history of trauma is linked to vicarious traumatization, and also found that the probability of developing secondary traumatic stress increases with the amount of exposure the client has to traumatic material. However, findings from a study by Schauben and Frazier (1995) did not support this finding and rather suggested that counselors who have a history of being victims of sexual trauma were not more distressed than counselors without a history of sexual trauma by seeing clients who were trauma survivors. Although the study did indicated that counselors who had a higher percentage of sexual violence survivors in their client load reported more schema disruptions, particularly in schemas related to beliefs...
about the goodness of other people. Lastly, Schauben and Frazier also assessed coping skills most often used by counselors and identified that active coping, getting emotional support from friends and family, seeking instrumental support like getting advice, and the use of humor to be the most often utilized.

Adaptation (X)

Within different populations defining and measuring adaptation can vary. Considering at-home partners’ status as both individuals and partners in a dyadic relationship, research on adaptation in this population is concerned not only with individual welfare, but also with the health of the relationship. Literature on partners of service members has thus primarily utilized measures targeted at assessing both relationship satisfaction and general well-being. The following section will review current research in both of these areas.

Relationship satisfaction.

Even in non-military populations, stress can have detrimental effects on romantic or marital relationships. However, given the added stress associated with military life and deployment, it is only natural that research would focus on how deployment affects these relationships as well. Karney and Crown (2011) assessed deployment and its possible effects on the instance of divorce and marital dissolution. Results from this study indicated that deployment actually reduced the risk of divorce. Karney and Crown explained that this may be attributed to the benefits that are associated with deployment, including financial benefits and increased independence for partners. This study also revealed that service members being older when entering the military was associated with less risk of marital dissolution. Furthermore, they found that longer periods of time spent deployed while married related to lower risk of marital dissolution.
As was previously described, the presence of PTSD symptoms in service members can impact at-home partners, and specifically aspects of relationship satisfaction and functioning. Monson and Taft (2005) point out the destructive and likely reciprocal association between PTSD and intimate relationship functioning which is demonstrated by several studies. Research conducted by Allen, Rhoades, Stanley, and Markman (2010) indicated that while recent deployment was not related to level of relationship functioning, “PTSD symptoms were significantly negatively correlated with all indices of marital functioning for husbands and wives” alike (p. 284). Similarly, Erbes, Meis, Polusny, and Compton (2011) found that service members with PTSD have poorer relationship adjustment than service members without PTSD. Erbes et al. specifically identified dysphoria symptoms as the most important factor in explaining intimate relationship adjustment. Additionally, results from a study by Solomon, Dekel, and Zerach (2008) suggested that prisoners of war (POWs) with PTSD had more marital issues compared to POWs without PTSD. Solomon et al. specifically identified PTSD avoidance symptoms as having a negative relationship with self-disclosure and marital intimacy. Also in another study, Dekel (2010) discovered that “wives of former POWs with PTSD reported lower levels of couple forgiveness”, in which higher levels of couple forgiveness were associated with greater marital satisfaction (p. 932).

Taft, Watkins, Stafford, Street, and Monson (2011) conducted a meta-analysis which showed that PTSD had positive associations with “intimate relationship discord,” “intimate relationship physical aggression,” and “intimate relationship psychological aggression”, with higher associations amongst military samples for “relationship discord and physical aggression” (p. 28). Lastly, Mikulincer, Florian, and Solomon (1995) found that upon service member return from war, wives of veterans with combat stress reaction reported experiencing more negative and
less positive emotions. Additionally, at the time of the study, which was six years after the service members’ return, wives reported greater overall psychological symptomatology and more somatization.

Nelson Goff and Smith (2005) itemize the Couple Adaptation to Traumatic Stress (CATS) model which demonstrates both primary and secondary effects of trauma on individuals and the couple as a system. The CATS model is a circular model where the “individual level of functioning” in the “primary trauma survivor” influences the “individual level of functioning” in the “secondary trauma survivor” (p. 149). Both are then influenced by predisposing factors such as age and previous trauma, as well as resources such as coping and support, all of which interact to influence couple functioning. The CATS model further notes that, amongst others, issues related to attachment, relationship satisfaction, communication, intimacy, roles, and power also influence the couple dyad system.

Nelson Goff et al. (2006) qualitatively assessed the effects of trauma on intimate relationships and found mixed responses when interview themes were analyzed. Themes identified by Nelson Goff et al. included participants reporting both increased and decreased communication, which Nelson Goff et al. suggested may indicate the possibility of different topic-specific communication levels or evasion of specific topics. Participants also indicated increased cohesion/connection and decreased cohesion/connection, suggesting that some couples actively connect through traumatic experiences, while trauma may cause other couples to become disconnected. Increased understanding and decreased understanding also were identified, similarly suggesting the different ways couples may deal with the experience of trauma. Additional themes noted include increased sexual intimacy problems, increased relationship distress, support from partner, and relationship resources (using the relationship as a
coping resource). As is evident by the conflicting themes, this study did not support the common notion that trauma survivors’ relationships are fundamentally troubled. Nelson Goff et al. explain that this may be due to the participants having the opportunity to speak about both strengths and problem areas in the study, as opposed to only having a problem focus. Thus, while some participants in this study indicated more relational problems, all described both positive and negative features of the relationship.

Trauma symptoms and how they impact the marital relationship also were assessed by Nelson Goff, Crow, Reisbig, and Hamilton (2007), whose results suggested that trauma symptoms including “sexual problems, dissociation, and sleep disturbances” significantly predict lower relationship satisfaction for both service members and their partners (p. 350). In a subsequent study by Hamilton, Nelson Goff, Crow, and Reisbig (2009), similar results were uncovered when assessing female partners’ primary trauma symptoms. It was specifically found that a personal history of trauma and PTSD symptoms in partners was negatively associated with relationship satisfaction for both female partners and service members. Taken together, the results of these two studies indicate that trauma symptoms from either the partner or the service member negatively impact relationship satisfaction. Furthermore, an analysis of common themes reported amongst service members and female partners by Baptist et al. (2011) identified issues related to emotional and marital intimacy as being most prominent. Specifically, Baptist et al. note that both service members and partners discussed having to shut down sexually during deployments and also reported difficulty turning that sexuality back on during post-deployment. Thus, it is apparent that issues related to intimacy are important factors that can affect these military relationships.
Henry et al. (2011) also interviewed couples with one partner having experienced trauma and assessed the resulting themes. Themes were broken down into five categories: “role in the relationship, boundary issues, intimacy problems, triggers, and coping mechanisms” (p. 324). Role in the relationship themes were divided into partners either taking a supportive role (providing support through listening and communication) or an instrumental role (taking actions such as taking on more responsibilities in efforts to reduce other pressures and stressors on the traumatized partner), of which these roles may have been developed based on the partners’ traumatic experience. Boundary issues also varied to include “pursuer-distancer patterns”, the use of “power and control, testing the relationship, and avoidance” (p. 325). Participants noted intimacy issues in both sexual and emotional domains and also emphasized being aware of triggers that may be reminders of the trauma. Lastly, coping mechanisms reported as being used to deal with the trauma were either spiritual in nature or through verbal communication.

Literature on relationship satisfaction has similar limitations to generalizability due to small homogeneous samples as previously noted sections. Several studies including Mikulincer et al. (1995), Solomon et al. (2008), and Dekel (2010) used Israeli samples in which generalizability to partners of United States military service members is questionable. Furthermore, each of these three studies analyzed data from currently intact couples where they had been married for an average of 27.82-29.08 years. As was previously stated, these couples may inherently demonstrate greater resilience by virtue of being in a longstanding intact relationship. Future research may gain valuable information by studying dissolved relationships that were previously intact during times of deployment. This would allow researchers to explore different potential reasons for relationship dissolution, while considering if deployment related stress may have contributed. Lastly, the majority of this current literature lacks data on couples.
who have endured multiple deployments, as undergoing numerous deployment experiences and home base transitions may put added stress on romantic relationships.

**General well-being.**

While one’s satisfaction with their relationship can certainly be impacted by trauma associated with partner military deployment, individual well-being in and of itself is also a construct that can be impacted by partner deployment related experiences. General literature on relationship adjustment even indicates that premarital life satisfaction predicts later relationship adjustment (Stanley, Ragan, Rhoades, & Markman, 2012). Furthermore, as was formerly stated, previous well-being was found to be the strongest predictor of well-being in military wives (Rosen & Moghadam, 1991). These findings highlight the critical role individual well-being plays in relationship satisfaction as well as the dynamic influence partner military deployment can have on each to impact at-home partner adaptation. The following section will specifically review literature on at-home partner well-being.

Hayes et al. (2010) utilized qualitative interviews to identify domains that are relevant when measuring well-being in spouses of veterans with PTSD. These include: (a) spouse characteristics such as demographics, employment status, and length/amount of time assisting the veteran, (b) alcohol and substance abuse of the veteran to cope with returning home, (c) burden placed on spouse’s time and finances to care for veteran, (d) health status/mental health which represents the impact the veteran’s trauma has on the physical and emotional health of the spouse, (e) martial satisfaction, (f) self-efficacy/role discrepancy representing perceived changes in the veteran and the spouse’s concern for their ability to continuously sustain currently levels of support for the veteran, and (g) social support describing spouses’ reports of lessened social support and increased time caring for veteran resulting in reduced time for self and friends. This
study also identified various instruments that were most appropriate for each domain through the use of expert panel reviews and feedback from focus groups of veteran spouses. The results of these reviews provided rationale for each suggested instrument, thus providing valuable information that may inform instrument selection for future research seeking to examine the well-being of spouses of veterans with PTSD. Outram, Hansen, Macdonell, Cockburn, and Adams (2009) also assessed well-being in partners of Vietnam veterans and discovered that partners’ health and well-being were negatively affected by living with veterans who have long term and debilitating mental health problems, reflecting support for Hayes et al. health status/mental health domain.

As is a theme throughout the research, partners’ mental health is a critical component when measuring well-being. Mansfield et al. (2010) examined medical record data for wives of service members which indicated that 36.6% of wives of deployed service members “had at least one mental health diagnosis” compared to 30.5% of wives whose service members were not deployed (p. 104). It was also found that the age of the wife and the total number of service member deployments were confounding variables when assessing the relationship between service member deployment and partner mental health diagnosis. Specifically, wives of deployed service members tended to be younger than non-deployed service members. Extended deployments also were related to a higher instance mental health diagnosis among wives of service members. The relationship between age and well-being in military wives was also highlighted by Rosen and Moghadam (1991) who found that age predicted well-being in military spouses. These findings highlight the negative impact partner military deployment can have on wives’ mental health, and consequently their complete well-being.
Within this well-being literature two unique limitations are present. First, Mansfield et al. (2010) and Rosen and Moghadam (1991) both utilized preexisting data from large scale data collection systems such as TRICARE. While these systems allowed researchers to analyze data on larger samples, they were restricted in their analysis by the previously delineated questions. Thus, as in Mansfield et al., they did not have information on dates of deployment in order to assess for potential “temporal relationship[s] between deployment and mental health diagnosis” (p. 105). In other words, there was no way to tell if wives were diagnosed before or after spousal deployment, leaving questions about other factors that may have contributed to these wives motivation to seek care. Conversely, the second limitation of this literature is that the two other studies, Hayes et al. (2010) and Outram et al. (2009), were qualitative and thus had very small samples. Further research utilizing larger samples is needed to verify the themes reported in both of these studies.

Limitations of Current Literature

Taken together, several limitations of this current literature should be noted. First, the use of small and fairly homogeneous samples restricts generalizability of findings. Also, while more research is being done to look at the effects of multiple deployments, a majority of the studies have not looked at this possibly important variable. Current literature specific to partners of service members also lacks connections with general research on the effects of secondary trauma, particularly in the area of cognitive schema disruption. While this topic has been explored in other populations that are vulnerable to experiencing the effects of secondary trauma, there is a paucity of research that evaluates these effects in at-home military partners. This information is particularly important given the implications for treatment that could be drawn
from understanding how partner military deployment changes at-home partners’ beliefs about and the way they experience their world.

Yet another limitation lies in the fact that previous studies have generally focused research on longer standing married military couples, no doubt due to the convenience of this population. However, as evidenced by Spera (2009), individuals in newer marriages reported more issues adjusting to deployment. Additionally, by only focusing on married couples, this body of research is overlooking a significant and potentially vulnerable population, that being partners in non-marital relationships with service members. Not only are members of this population likely to be younger, but the less mature nature of the relationship between the service member and the partner may be more easily stressed by issues related to deployment. Spera found that overall, service members believed that non-marital partners would have more issues with deployment than wives. Non-marital partners do not have the same support from the military as spouses do, as pointed out by Teachman (2009). This suggests that with reduced support, these non-marital at-home partners may experience greater negative effects of partner deployment.

The age composition of the samples used relates to another limitation, specifically that most studies have primarily looked at individuals from their late 20s and older. This limited demographic has not offered any information about the younger 18-25 population that may be more susceptible to being negatively impacted by stressors associated with deployment and military life. This point was evidenced in a study by Padden et al. (2011), where wives of lower ranking service members had the highest perceived stress scores and these wives also used less effective coping strategies. Additionally, Mansfield et al. (2010) also support this limitation with their results identifying age and number of deployments as confounding variables when
assessing the relationship between spousal deployment and mental health diagnosis. Specifically, deployed service members’ wives were found to be younger than non-deployed service members’ wives. This indicates that the younger population is experiencing stressors associated with deployment to a larger degree than older populations that may have been promoted to more stable or less deployed positions within the military. Lastly, as addressed by Renshaw, Allen et al. (2011), most previous studies have not assessed for previous or personal trauma in at-home partners. Without this assessment, it is not possible to determine if at-home partners are experiencing distress solely related to the experience of deployment, or if personal trauma could be a confounding variable.

**Summary and Future Research**

The majority of literature on the experience of partners of service members indicates that partners are impacted by stressors associated with military deployment. However, the nature of this impact is somewhat unclear. While several studies assessed the incidence of secondary trauma in at-home partners, this was done so in relation to the impact of the husband’s PTSD symptoms and not necessarily a direct reflection of the impacts of deployment stress on at-home partners. Research also indicates that stress related to deployment can negatively impact marital relationships, with factors such as age and rank in the military being associated with both risk and resilient outcomes. However even with lower rank and age being identified as important risk factors, there is a lack of research that substantially sampled these at risk populations. Furthermore, non-marital partnerships have been identified as at risk of having difficulty coping with deployment, but there is very limited research that focuses on the experience of non-marital partners of service members.
**Future directions.**

Similar to previous research by Nelson Groff et al. (2009), future research would benefit from assessing the effects of partner military deployment on at-home partners based on the concept of secondary trauma. While this focus on secondary trauma is becoming commonplace in research on this population, the assessment of specific cognitive schemas that are theorized to be impacted by trauma has yet to be undertaken as a research focus regarding the effects of partner military deployment on at-home partners. Given that cognitive schemas relating to safety, trust, esteem, intimacy, and control have been assessed in other populations that have experienced trauma, it seems fitting to take a similar approach with research on partners of service members, who are also often exposed to secondary trauma. Additionally, based on the nature of deployment and the stressors associated with it, a research approach that assesses the impacts of partner military deployment on specific cognitive schemas may offer both more accurate information on the effects of deployment, regardless of service member PTSD symptoms, as well as offer information that would be much more useful in treatment settings that work to help this population cope with these deployment related stressors.

Research on non-marital partners of service members is also a distinct area of literature that has received little attention. While marital and non-marital partners of service members may experience many of the same deployment related stressors, little is known about the unique experiences and additional stressors that these non-marital partners face, since they do not receive the same military support as military spouses. Future research that assesses the effects of service member rank, and marital status of at-home partners is needed to further clarify the experience and subsequent needs of this population. Lastly, an assessment of the potential relationships between cognitive schema disruption, marital status, and factors associated with
deployment stress as they relate to relationship satisfaction is needed, to further clarify the implications that each factor may have on adaptation among partners of service members.

Overview of the Present Study

The purpose of this study is to determine whether significant differences exist in level of cognitive schema disruption and level of relationship satisfaction among partners of service members based on marital status (marital and non-marital). This study will also explore the factor structure of the Trauma and Attachment Belief Scale (TABS) when this measure is used on a sample of partners of service members. Lastly, this study will determine to what extent the following factors contribute to relationship satisfaction among partners of service members: marital status (marital and non-marital), length of the relationship, service member rank (enlisted and officer), number of deployments, perceived risk to the service member’s safety during deployments, actual experienced risk factors related to risk to service member safety during deployments, and level of cognitive schema disruption. This study will investigate the following research questions:

Q1: Do significant differences exist between non-marital and marital partners’ levels of relationship satisfaction as measured by the Relationship Assessment Scale (RAS) total score while controlling for length of relationship and rank of service member?

Q2: Do significant differences exist between non-marital and marital partners’ levels of cognitive schema disruption as measured by the Trauma and Attachment Belief Scale (TABS) total score while controlling for length of relationship and rank of service member?

Q3: What is the factor structure of the Trauma and Attachment Belief Scale (TABS) when the instrument is applied to a sample of partners of service members?
Q4: To what extent do the following variables contribute to relationship satisfaction in partners of service members: marital status (marital and non-marital), length of the relationship, service member rank (enlisted and officer), number of deployments, perceived risk to the service member’s safety during deployments, actual experienced risk factors related to risk to service member safety during deployments, and TABS score?
CHAPTER THREE

METHODOLOGY

Participants

Participants were recruited through various Facebook groups for partners of service members. Examples of Facebook groups recruited from included: Fort Lewis Military Wives, Military Wife/Girlfriend Support, Hawaii Military Wives, and Military Partners and Families Coalition. Additionally, participants were recruited from personal contacts of the author via Facebook and email.

An initial sample of 459 participants was collected. A total of 81 participants were removed from the sample due to missing responses to TABS items in excess of 20%, as the TABS cannot be reliably interpreted with more than 20% missing data (Pearlman, 2003). Two additional participants were also excluded from the study due to not meeting the following inclusion criteria: (a) 18 years of age or older, (b) currently in a relationship with an active duty service member, and (c) no current service in the military. The final sample consisted of 376 marital and non-marital partners of service members who were at least 18 years of age and not currently serving in the military themselves.

The final sample for analyses consisted of 374 female partners (99.5%), 1 male partner (.30%), and 1 participant who did not specify an identified gender (.30%). Participants ranged in age from 18 to 51 years of age, with a mean age of 27.05 (SD = 6.10) and a median age of 26. Overall, 67.3% of the sample was under the age of 30. The majority of the sample reported no previous personal military service (94.1%, 354), with 5.3% (n=20) reporting past but no current service. Two participants (0.5%) did not specify if they had previously served in the military.

Demographically, the sample was predominantly White/Caucasian (n=296, 78.7%), heterosexual
(96.8%, n=364), and married or in a domestic partnership (77.7%, n=292). Detailed information on participant demographics in addition to the socioeconomic composition of the sample can be seen in Table 1.

Table 1

<table>
<thead>
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<th>Participant Demographic Variable Descriptive Statistics</th>
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Note. Sexual Orientation “Other” category consisted of one individual who identified as bi-curious.
Length of participant relationship with their service member ranged from 1 month to 24.08 years, with a mean of 6.00 years (SD = 4.65) and a median of 4.67 years. More specifically, over half (51.6%) of participants had been in a relationship with their service member for less than 5 years. Over half (54.8%, n=206) of participants also reported having children (either with their current partner or from another relationship), with 43.9 (n=165) reporting having no children and 1.1% (n=4) specifying that they are currently pregnant with their first child. One participant (0.3%) did not report if they had children. Of those that reported having children, the mean number of children reported was 2.01 (SD = 1.12).

Participants also provided demographic information about their military partner. In regards to gender, 99.7% (n=375) of military partners were reported to be male and 0.3% (n=1) female. Military partners ranged in age from 18 to 49 years of age with a mean age of 28.26 (SD = 6.16) and a median age of 28 years old. Demographically, military partners were predominantly White/Caucasian (n=296, 78.7%), with over half serving in the Army (52.4%, n=197), and in terms of rank, 67.3% (n=253) were Enlisted. Detailed information on military partner demographics can be seen in Table 2. The mean number of deployments for military partners during participants’ relationship with them was 2.19 (SD = 4.36) and 62.2% (n=234) reported their military partner had been deployed to a combat zone.
Table 2

<table>
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<tr>
<th>Military Partner Demographic Variable Descriptive Statistics</th>
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<tbody>
<tr>
<td>Characteristic:</td>
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<td>Black/African American</td>
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<td>White/Caucasian</td>
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<tr>
<td>Preparing to Deploy</td>
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<td>Returned from Deployment</td>
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Note. Returned from deployment category represents those who have returned home from a deployment within the last 6 months.

Instruments

Demographics.

A personal data questionnaire was developed to obtain sociodemographic information on each of the participants. The following partner demographic information was obtained: age, gender, ethnicity, level of education, income, sexual orientation, past or current service in the military, current relationship status, length of relationship with the service member, and number
of children. The following information was obtained regarding the service member partner: age, gender, ethnicity, branch of the military served in, National Guard and Reserve status, rank, number of deployments during the relationship, locations of deployments, stage of deployment, and if the service member has been deployed to a combat zone. A copy of the demographics questionnaire can be seen in Appendix C.

**Cognitive Schema Disruption/Secondary trauma.**

The Trauma and Attachment Belief Scale (TABS; Pearlman, 2003) was used to measure the presence of secondary traumatic effects related to partner military deployment. The TABS was designed to measure the psychological impacts of traumatic events on cognitive schemas regarding one’s beliefs about self and others in relation to psychological needs in the following five areas: safety, trust, esteem, intimacy, and control. The TABS was developed based on the constructivist self development theory (CSDT) that identified various cognitive schemas that are sensitive to the effects of trauma. The TABS is an 84 item self-report questionnaire that asks participants to rate the degree to which each statement provided matches their beliefs on a scale from 1-6 (1=Disagree Strongly; 2=Disagree; 3=Disagree Somewhat; 4=Agree Somewhat; 5=Agree; 6=Agree Strongly). The TABS provides ten subscale scores representing the degree of disruption, or “restriction of one’s beliefs that affects his or her ability to relate to others in healthy manner” (p. 13), in each of the following areas: Self-Safety (SS), Other-Safety (OS), Self-Trust (ST), Other-Trust (OT), Self-Esteem (SE), Other-Esteem (OE), Self-Intimacy (SI), Other-Intimacy (OI), Self-Control (SC), and Other-Control (OC). The TABS also provides a total score that represents an individual’s overall level of disruption. Example TABS items include questions such as: “I can’t be myself around people,” “I can’t stop worrying about others’ safety,” and “I have good judgment” (p. 16).
Pearlman (2003) outlined the following guidelines to understanding disruptions in each domain based on a compilation of literature on psychological trauma. Disruption in the safety domain can result from the experience of harm or threats to one’s self, property, or loved ones. Specific to self-safety, individuals are concerned with their own safety, which may be a response to traumatic experiences where the individual was unable to protect themselves. Issues in other-safety can stem from past losses or situations where significant others were in danger which lead to current concerns over safety of loved ones. Disruptions in the trust domain can result from experiences of abandonment, betrayal, and traumatic interpersonal events. Self-trust disruptions reflect issues with trusting one’s own judgment and views. Other-trust issues reflect one feeling that they cannot rely on or trust others. The esteem domain is impacted by experiences of humiliation, degradation, and rejection that hinder the development of positive self-esteem or damage ones pre-existing self-esteem. Disruptions in the self-esteem domain are related to one feeling that they are to blame for negative experiences and/or that they do not deserve respect from others. On the other hand, traumatic events could result in other-esteem disruptions where individuals view others negatively. Pearlman equates these negative feelings toward others to a defense mechanism that protects an individual from future mistreatment and disappointment. Disruptions in the intimacy domain can result from past losses of significant attachment figures, loss of a job, and experiences of alienation. Specific to self-intimacy, disruptions can result when an individual has lived to meet the needs of others, resulting in the avoidance of alone time or introspection. Other-intimacy disruptions where one is either interpersonally or emotionally disconnected or isolated from others, can result from past traumatic or violating relationships. Lastly, disruptions in the control domain can result from experiences where one was unable to act in order to help themselves or others. Disruptions in the self-control domain are associated
with feelings of lacking control over one's self, either emotionally or behaviorally. The other-control area references issues related to feelings of discomfort when others, as opposed to oneself, are in control.

Raw scores for the ten subscales and the TABS total score are converted to T-scores which allow for individual score comparisons to normative group average scores (Pearlman, 2003). The TABS was normed off a group of 1,743 non-clinical participants ranging from ages 17-78. TABS subscale and total scores are interpreted based on the following T-score ranges: ≤ 29 = Extremely Low Disruption, 30-39 = Very Low, 40-44 = Low Average, 45-55 = Average, 56-59 = High Average, 60-69 = Very High, and ≥ 70 = Extremely High Disruption (p. 14).

The TABS has been utilized to measure the effects of traumatic life experiences in a vast array of populations including survivors of abuse, therapists, battered women, paramedics, social workers, and criminal law solicitors. While the TABS was originally designed to assess for the effects of primary trauma, several studies have utilized the TABS to assess for the effects of secondary trauma (therapists, social workers, criminal law solicitors, etc.). For instance, Pearlman and MacIan (1995) utilized the TABS to assess secondary trauma in trauma therapists and found higher TABS scores in therapists with either a personal history of trauma or more exposure to clients’ trauma disclosures. The TABS was also utilized by Vrklevski and Frianklin (2008) to assess for secondary trauma in criminal law solicitors and found criminal law solicitors displayed more cognitive disruption in areas of self-safety, other-safety, and other-intimacy, when compared to non-criminal law solicitors.

Pearlman (2003) reports internal consistency estimates of .96 for the total TABS score and in the current study the TABS also had strong internal consistency with an alpha of .96. Pearlman also provided the following internal consistency estimates for each of the subscales:
.83 for SS, .72 for OS, .74 for ST, .84 for OT, .83 for SE, .82 for OE, .67 for SI, .87 for OI, .73 for SC, and .76 for OC. Test-retest reliability correlations for the total TABS score were .75 as well as the following test-retest reliability correlations for each of the subscales: .72 for SS, .73 for OS, .70 for ST, .79 for OT, .69 for SE, .72 for OE, .74 for SI, .60 for OI, .76 for SC, and .66 for OC. Construct validity of the TABS is supported through measurement of concurrent validity between the TABS and the Trauma Symptom Inventory (TSI) where all TABS subscales were significantly correlated with TSI trauma symptom scales. Strong correlations were specifically found between the TABS self-oriented subscales and the TSI impaired self-reference scale with correlations ranging from .72-.57.

The TABS factor structure has been evaluated by both Pearlman (2003) and Varra, Pearlman, Brock, and Hodgson (2008) with both 10 factor and 3 factor solutions identified. Pearlman employed a principal components factor analysis with varimax rotation and identified 10 factors when using the TABS on a non-clinical college sample. Factor 1 consists primarily of items from other-trust and other-esteem subscales. Factor 2 is made up of items from self-trust and self-esteem subscales with several items from self-safety and self-control being moderately related as well. Factor 3 consisted of items from the other-intimacy subscale. Factor 4 consisted mostly of self-safety items and one item from the self-control subscale. Factor 5 and Factor 6 are made up of items from the other-safety subscale, with items related to “worries about inflicting damage on loved ones” loading on Factor 5 and items related to general worry that others are not safe loading on Factor 6 (p. 36). Factor 7 consisted of items from various subscales and several that were cross-loadings on other factors including one item from self-safety, one item from other-safety, three items from other-trust, two items from other-esteem, and one item from other-control. Factor 8 is made up of items from self-control and other control and factor 9 primarily
contains self-intimacy items. Lastly, Factor 10 is generally made up of items related to ones impulses relative to harming self and others. Pearlman explains that “this factor structure is consistent in many respects with the subscales that are scored on the test” (p. 36). Alternately, using a sample consisting of students, therapists, individuals in outpatient psychotherapy, individuals in inpatient psychiatric settings, and individuals in partial hospitalized programs, Varra et al. employed principal axis factor analysis with varimax rotation and identified three factors containing items pertaining to self, others, and safety. The “self” oriented factor consists of three items from the self-safety subscale, two self-trust, five self-esteem, four self-control, one other-control, and one item from the other-intimacy scale. The “other” oriented factor includes one item from the other-safety subscale, six other-trust, six other-estee, and one other-control item. Lastly, the “safety” factor consists of three self-safety, three other-safety, and two self-intimacy items. It should be noted, however, that Varra et al. conducted this factor analysis on an older version of the TABS (the TSI Belief Scale, Revision L) that only had 80 items, instead of the current 84 item version.

**Relationship satisfaction.**

The Relationship Assessment Scale (RAS; Hendrick, 1988) was used to assess for relationship satisfaction in partners of service members. A benefit of the RAS over other measures of relationship satisfaction is its ability to be used in non-marital populations given the usage of inclusionary wording such as partner and relationship. The RAS is a 7 item self-report questionnaire that asks participants to rate their level of satisfaction on a 1-5 point Likert-type scale. The RAS includes questions such as “How well does your partner meet your needs?” and “In general, how satisfied are you with your relationship?” (p. 94). Item scores are summed (with item 4 and 7 being revered scored) to produce a total score representing the degree to which an
individual is satisfied with their current relationship, with higher scores indicating higher relationship satisfaction. Hendrick (1988) reports strong concurrent validity with RAS total scores correlating strongly at .80 with total scores of the Dyadic Adjustment Scale (DAS). The RAS has also shown strong reliability with test-retest reliability of .85 and strong internal consistency with alphas ranging from .93-.73 (Hendrick, Dicke, & Hendrick, 1998). In the current study the RAS continued to show good internal consistency with an alpha of .87.

**Risk to safety during deployment.**

In order to assess for the level of perceived risk to the service member’s safety during deployments, four questions were developed that ask participants to rate the following: (a) how safe their military partner is during his/her deployments, (b) the level of risk of their military partner being injured during deployments, (c) the level of risk of their military partner being killed during deployments, and (d) the level of risk of their military partner developing psychological problems during his/her deployments. Each of these questions was based on a 1-4 rating scale, with 1 representing a low rating and with the following item being reverse scored: “How safe do you feel your military partner is during his/her deployments?” Responses to these four items were recoded to a scale of 0-3 and summed to obtain a total score from 0-12, with higher scores representing higher levels of perceived risk to service member safety during deployments. In the current study the perceived risk scale showed good internal constancy with an alpha of .82. Questions on this scale were developed based on research by Allen et al. (2011) that suggests military spouses experience high stress around fear related to death of the service member, physical injury of the service member, and the service member developing psychological problems. Thus, it is appropriate to assess for the level of perceived risk to the service member in these domains during deployment as a component of deployment stress.
Furthermore, this measure of perception will likely offer additional information regarding the effects of deployment stress on cognitive schema disruption and relationship satisfaction beyond what can be gained from information regarding the characteristics of the service member’s deployment (e.g. number of deployments to combat zones). This is based on research suggesting that partner perception of their military partner’s symptoms may have more of an effect on the partner’s symptoms than the service member’s actual symptom level (Renshaw et al., 2008). A copy of this measure can be seen in Appendix E.

In order to assess for the level of actual experienced risk factors reported related to the service member’s safety during deployments, three questions were developed that ask participants to answer yes or no to the following: (a) Has your military partner ever been diagnosed with PTSD? (b) Has your military partner ever been diagnosed with any other mental health issues that developed during or after military deployment? and (c) Has your military partner ever sustained a life-changing physical injury during a military deployment? Each of these questions is scored on a 0-1 scale, with yes responses being scored as 1. Responses to these three items are summed to obtain a total score from 0-3, with higher scores representing higher levels of actual experienced risk to service member safety during deployments. In the current study the actual experienced risk scale had poor internal consistency with an alpha of .52, which is likely due to the low number of items on this scale. Additionally, low endorsement rates due to the “critical” nature of these items could also account for poor internal consistency. A copy of this measure can be seen in Appendix D.

Procedure

The study was reviewed and determined to satisfy the criteria for Exempt Research based on 45 CFR 46.101(b)(2) by the Washington State University Office of Research Assurances
prior to data collection. The author contacted various Facebook groups for military partners as well as personal contacts via email and shared/posted information about the study including a link to the web-based survey through SurveyMonkey. A copy of the general message used for Facebook recruiting can be seen in Appendix B. Written informed consent was presented to participants prior to completing the survey and participants were provided with contact information for both the principal investigator and co-investigator, as well as various mental health resources. A copy of the consent form can be seen in Appendix A. At the completion of the survey, participants were routed to a separate survey where they had the option to enter into a drawing for 1 of 8 $25 Amazon gift cards. Item responses were anonymous and confidentiality was maintained throughout the process of collecting and analyzing data.

**Statistical analysis.**

Descriptive statistics were used to describe the composition of the sample in terms of various demographic variables (age, gender, race, level of education, income, sexual orientation, marital status, number of children, branch of the military the partner serves in, number of deployments, and rank). Pairwise deletion was used in all analyses as there was less than five percent missing data, based Tabachnick and Fidell’s (2013) recommendation that any approach to addressing missing data can be used when less than five percent of the data is missing. Preliminary analyses were conducted via correlational analysis to identify any demographic variables that may confound the relationship between marital status and the outcome measures of interest in research questions one and two (TABS and RAS total scores). However, because no variables were identified as having moderate to strong correlations with RAS (Length of the relationship $r = -.11, p < .05$; Rank $r = .07, p > .05$) and/or TABS (Length of the relationship $r = -.11, p < .05$; Rank $r = -.09, p > .05$) scores based on Cohen’s (1988) classification guidelines,
analysis of variance was conducted in lieu of analysis of covariance. ANOVAs were employed for questions one and two to assess for differences in TABS total score and RAS total score between marital and non-marital partners.

Exploratory factor analysis was conducted for question three to identify the factor structure of the TABS when this instrument is applied to a sample of partners of service members. Exploratory factor analysis was selected over confirmatory factor analysis because of significant discrepancies in previous research in terms of TABS factor structure. Specifically, Pearlman (2003) identified a ten factor model, while Varra et al. (2008) uncovered a three factor model. Furthermore, the factor analysis by Varra et al. (2008) was conducted using items from an older version of the TABS (the TSI Belief Scale, Revision L) that only had 80 items instead of the current 84 item version. Additionally, as Pearlman explains, a variety of other wording changes were made and some items were replaced with similar items that were believed to be more easily understood in the context of the preexisting rating scale. Lastly, exploratory factor analyses was also preferred given that the TABS has never been validated on a sample of partners of service members, which unlike other populations, specifically relates to the measurement of secondary trauma as opposed to primarily evaluating the effects of primarily trauma. Principal axis factor analysis was used to extract factors because, as indicated by Tabachnick and Fidell (2013), a common factors model should be used when the measure is based on a theory (TABS is based on CSDT) and when seeking to reduce the impact of error on the final factor model. An oblique rotation method, promax, was used as factors are correlated. While past researchers (Varra et al., 2008; Pearlman, 2003) have used orthogonal (varimax) rotation techniques, literature regarding best practices for factor analysis has strongly suggested that oblique rotation methods be used when factors are found to be correlated. Further providing
support for the use of promax rotation in the current study, Tabachnick and Fidell note that this procedure applies an oblique rotation to a previously “orthogonally rotation solution (usually varimax)...to allow for correlations among factors” (p. 645).

Hierarchical regression was employed for research question four to determine the extent to which various factors contribute to relationship satisfaction, as measured by the RAS, in partners of service members. This hierarchical regression analyzed the following factors:

Step 1: Demographic variables: Relationship status (marital and non-marital), length of the relationship, and service member rank (enlisted and officer).

Step 2: Deployment stress: Perceived risk to military partner’s safety during deployments, Actual experienced risk factors, and number of deployments.

Step 3: Level of cognitive schema disruption: TABS Total T-score.

This regression model was evaluated based on the relative variance accounted for by each step as well as the model as a whole. Additionally, the significance and unique contribution of each variable was assessed in the final model. All statistical analyses were completed using the IBM Statistical Package for the Social Sciences version 22.
CHAPTER FOUR

RESULTS

Preliminary Analysis

Prior to data analyses cases were screened for errors and missing data. Any case with more than 20% missing data on the TABS was removed from the sample and not included in final analyses. Descriptive statistical analyses were conducted for demographic and outcome variables. Descriptive statistics for RAS total scores, TABS total scores, and actual and perceived risk total scores for the sample as a whole as well as per each relationship status category can be seen in Table 3. Two one-way between-groups analysis of variance analyses were conducted to screen for significant differences in terms of RAS and TABS scores between partners reporting service member National Guard or Reserve status and those reporting no service with the National Guard or Reserves, as well as differences between participants who reported prior personal military service and those who did not. ANOVAs in both cases revealed no significant differences between these groups: National Guard or Reserve status in terms of RAS total score $F (2, 371) = .12, p = .89$ and TABS total score $F (2, 371) = .45, p = .64$; Personal military service in terms of RAS total score $F (2, 372) = .26, p = .61$ and TABS total score $F (2, 372) = 3.5, p = .06$. Thus, participants reporting partner military service in the National Guard or Reserves or prior personal military service were included in all final analyses.
Table 3

Descriptive Statistics by Relationship Status

<table>
<thead>
<tr>
<th>Relationship Status (n)</th>
<th>RAS</th>
<th>TABS</th>
<th>Actual Risk</th>
<th>Perceived Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sample (376)</td>
<td>29.97 (4.90)</td>
<td>51.88 (10.25)</td>
<td>0.25 (0.58)</td>
<td>6.63 (2.52)</td>
</tr>
<tr>
<td>Dating (39)</td>
<td>30.24 (3.61)</td>
<td>54.05 (10.08)</td>
<td>0.18 (0.45)</td>
<td>5.63 (2.25)</td>
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<tr>
<td>Cohabitating (11)</td>
<td>31.27 (3.82)</td>
<td>51.82 (11.53)</td>
<td>0.09 (0.30)</td>
<td>5.73 (1.56)</td>
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<tr>
<td>Engaged (34)</td>
<td>32.19 (2.72)</td>
<td>54.09 (9.55)</td>
<td>0.15 (0.44)</td>
<td>7.00 (2.47)</td>
</tr>
<tr>
<td>Married (292)</td>
<td>29.62 (5.21)</td>
<td>51.34 (10.28)</td>
<td>0.27 (0.62)</td>
<td>6.75 (2.55)</td>
</tr>
</tbody>
</table>

Note. Married includes those in a domestic partnership.

Table 4 displays Pearson correlation coefficients that were reviewed for several variables of interest to assess for relationships among demographic variables and TABS and RAS total scores, as well as to identify possible confounding variables that should be considered as covariates in research question one and two analyses. The following variables were significantly correlated with RAS scores at the \( p < .05 \) level: participant age \( (r = -.12) \), length of the relationship \( (r = -.11) \), having children \( (r = -.22) \), and relationship status based on group data with a marital (1) and non-marital status (0) groups \( (r = -.13) \). The following variables were significantly correlated with TABS scores at the \( p < .05 \) level: participant age \( (r = -.17) \), level of education \( (r = -.20) \), household income \( (r = -.21) \), length of the relationship \( (r = -.11) \), and age of military partner \( (r = -.15) \).

Review of correlations revealed that no variables had medium to large correlations with RAS and/or TABS scores. Given that covariates should be substantially correlated with dependent variables (Pallant, 2010), it was determined that including covariates into research question one and two analyses was less justified. Assumptions of normality were assessed for both RAS and TABS scores, of which TABS scores met this assumption, while RAS scores violated this assumption and were negatively skewed (Skewness -1.53, Kurtosis 2.61). RAS
scores were then transformed using Reflect and Logarithm, which corrected issues with normality, but did not significantly change associated statistical findings. Due to little change in findings and the belief that the current sample size is large enough where this violation should have minimal impact (Pallant, 2010), analyses were conducted with non-transformed data to maintain ease of interpretation.
Table 4
Correlations Across Variables

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<td>0.20 ***</td>
<td>0.18 ***</td>
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<td>6. Race</td>
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<td>0.03</td>
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<td>7. Education Level</td>
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<td>0.09</td>
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<td>0.14**</td>
<td>0.19 ***</td>
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<td>-0.11*</td>
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<td>0.21***</td>
<td>0.61***</td>
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<td>0.14**</td>
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<td>11. Children</td>
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<td>0.14**</td>
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<td>0.47***</td>
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<td>-0.04</td>
<td>0.22 ***</td>
<td>0.45***</td>
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<td>0.19***</td>
<td>0.86***</td>
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<td>13. MP Race</td>
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<td>15. Number of Deployments</td>
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<td>0.10</td>
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<td>0.04</td>
<td>0.26***</td>
<td>0.11*</td>
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</tbody>
</table>

Note: ***p < .001. **p < .01. *p < .05. (2-tailed).

MP = Military Partner. Coding: Race: White(0)/People of Color(1); Children: No(0)/Yes or Pregnant(1); MP Race: White(0)/People of Color(1); Relationship Status: Non-Marital(0)/Marital(1); Ever Deployed to a Combat Zone: No(0)/Yes(1).

*Married/Domestic Partnership: n = 292; Non-Marital: n = 84
**Research Question 1**

Differences between non-marital and marital partners’ levels of relationship satisfaction as measured by the RAS total score were assessed through an ANOVA and an independent samples T-test. For the ANOVA, participants were divided into groups based on their reported membership in one of the following relationship status categories: dating (n=39), engaged (n=34), cohabitating (n=11), and married/domestic partnership (n=292). There was a statistically significant difference at the $p < .05$ level in RAS scores for the four relationship status groups: $F(3, 372) = 3.2, p = .03$. Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small. The effect size, calculated using eta squared, was .02. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for engaged participants ($M = 32.19, SD = 2.72$) was significantly different from married/domestic partnership participants ($M = 29.62, SD = 5.21$). All other group comparisons were not statistically significant.

This finding was maintained in the independent samples T-test when marital partners were compared to all non-marital partner categories combined (dating, cohabitating, and engaged). There was a statistically significant difference between RAS scores for marital ($M = 29.62, SD = 5.2$) and non-marital partners ($M = 31.16, SD = 3.39$), $t(374) = 3.21, p = .002$, two tailed. While non-marital partners had significantly higher RAS scores than marital partners, the magnitude of the differences in the means (mean difference = 1.53, 95% CI: .35 to 2.72) was small (eta squared = .03).

**Research Question 2**

Differences between non-marital and marital partners’ levels of cognitive schema disruption as measured by the TABS total score were assessed through an ANOVA and an
independent samples T-test. For the ANOVA, participants were divided into groups based on their reported membership in one of the following relationship status categories: dating, engaged, cohabitating, and married/domestic partnership. There was no statistically significant difference in TABS scores for the four relationship status groups: $F(3, 372) = 1.4, p = .25$. This finding was maintained in the independent samples T-test when marital partners were compared to all non-marital partner categories combined (dating, cohabitating, and engaged). There was no statistically significant difference between TABS scores for marital ($M = 51.34, SD = 10.28$) and non-marital partners ($M = 53.77, SD = 9.97$), $t(374) = 1.93, p = .06$, two tailed.

**Post-hoc analysis.**

ANOVAs were conducted post-hoc to assess for differences between non-marital and marital partner TABS subscale scores as well as perceived and actual experienced risk total scores. There were statistically significant differences at the $p < .05$ level among scores for the four relationship status groups in Other-Safety TABS subscale scores: $F(3, 372) = 3.3, p = .02$; Other-Control TABS subscale scores: $F(3, 372) = 3.4, p = .02$; Self-Safety TABS subscale scores: $F(3, 372) = 2.7, p = .047$; and Self-Intimacy TABS subscale scores: $F(3, 372) = 2.8, p = .04$. Post-hoc comparisons using the Tukey HSD test indicated that the Other-Safety and Other-Control mean scores for engaged participants (Other-Safety: $M = 55.29, SD = 13.67$; Other-Control: $M = 52.26, SD = 10.11$) were significantly different from married/domestic partnership participants (Other-Safety: $M = 49.01, SD = 12.90$; Other-Control: $M = 47.29, SD = 9.77$). All other group comparisons were not statistically significant.

In terms of perceived and actual risk total scores, the ANOVA revealed significant differences at the $p < .05$ level in perceived risk total scores for the four relationship status groups: $F(3, 372) = 3.1, p = .03$. Post-hoc comparisons using the Tukey HSD test indicated that
the mean score for dating participants ($M = 5.63$, $SD = 2.25$) was significantly different from married/domestic partnership participants ($M = 6.75$, $SD = 2.55$). All other group comparisons were not statistically significant. No statistically significant differences were found in actual experienced risk total scores for the four relationship status groups: $F (3, 372) = .94, p = .42$.

**Research Question 3**

In order to explore the factor structure of the Trauma and Attachment Belief Scale (TABS) when the instrument is applied to a sample of partners of service members an exploratory factor analysis was conducted. Preliminary screening procedures were employed to ensure no violation of the assumptions of normality and linearity. Analysis of outliers was conducted using box plots to screen for extreme outliers. Extreme outliers were then transformed to a new value to minimize their impact on the analysis (with the exception of item 81 “I am afraid I will harm myself”, where only responses of 5 and 6 were transformed due to the majority of the sample responding with 1=Strongly Disagree). Transformations were done based on the following equation suggested by Field (2009): Transformed value = mean + SD2. After extreme outliers were transformed, there was no difference in the resulting factor structure, thus the final factor analysis was completed using original data. Assumptions were further assessed via Bartlett’s Test of Sphericity ($p < .001$), which indicated that there was no evidence of an identity matrix, as well as the KMO test (.93) which confirmed that there is an adequate sample size as the KMO values was >.70. Both Bartlett’s Test of Sphericity and the KMO test indicated that the data was factorable.

The number of factors to extract was determined via consideration of parallel analysis, examination of the scree plot, total variance accounted for, and initial eigenvalues. Results of the parallel analysis can be seen in Table 5 and the scree plot can be seen in Figure 1. Overall, the
findings of each of these extraction methods were quite discrepant. Parallel analysis suggested the extraction of 7 factors, the scree plot suggested 3-4 factors, and use of the Kaiser criterion indicated the need to extract 18 factors. Given these discrepant findings, specific factor models were assessed to identify an overall factor model that had both the benefit of parsimony as well as ease of interpretability. As a result, given the scree plot’s suggestion of a three or four factor model, both the three and four factor models were assessed. The three factor model was parsimonious and was similar to past research by Varra et al. (2008) that also uncovered a three factor model including factors related to others, self, and safety. However, after review of the four factor model, the same benefits of parsimony were present as well as the distinction between self-safety and other-safety. Given that this factor analysis was conducted to validate the use of the TABS on a sample of partners of service members, the four factor model was selected as it tapped into the specific focus on other-safety that may be unique to partners of service members.

Principal Axis Factor analysis with Promax rotation revealed the presence of four factors based on pattern coefficients being equal to or greater than .40. All pattern coefficients can be seen in Table 6. Factor one accounted for 27.12% of the variance and consisted of 23 items present in other-intimacy, other-trust, other-esteem, other-control, and self-control subscales. Thus factor one has been labeled as “Other,” given that this factor appears to represent one’s beliefs about and relationship with others. There was only one item from a “self” oriented subscale that loaded on factor one, and in congruence with the theme of “other,” that item’s content specifically related to one’s comfort around others (“I can’t be myself around people”).

Factor two accounted for 4.10% of the variance and consisted of 17 items from self-safety, other-safety, self-intimacy, self-control, and other-control subscales. Of these 17 items, item number 71 loaded at .41 on this factor as well as at .57 on factor three. In order to determine
which factor this item should be retained on, a reliability analysis was conducted and because Cronbach’s alphas for both factor two and three increased when item 71 was included in factor two, this item was ultimately assigned to be a part of factor two. Due to the overall emphasis on safety of the outside world and the safety of significant others, factor two was labeled “Other-Safety.”

Factor three accounted for 3.17% of the variance and was made up of 7 items from self-safety, other-safety, self-esteem, and other-esteem subscales that had content consistent with perceptions of one’s ability to keep oneself safe from external and self-inflicted harm, and was thus labeled “Self-Safety.” Factor four accounted for 2.93% of the variance and was made of 10 items from self-trust, self-safety, self-esteem, self-control, and self-intimacy subscales. Due to the overall emphasis on one’s beliefs about self, this factor was labeled “Self.” A detailed summary of the number of items from each TABS subscale that loaded on each respective factor can be found in Table 7.

Taken together, these four factors cumulatively account for 37.32% of the total variance. Factors were strong to moderately correlated with each other, further validating the use of an oblique rotation. Inter-factor correlations can also be seen in Table 8. All four factors exhibited excellent to good internal consistency with Cronbach’s alphas of .94 for factor one, .89 for factor two, .81 for factor three, and .70 for factor four. Out of the 84 items of the TABS, 27 items did not meet the minimum .40 threshold for item retention. Of these 27 items, five were from the other-control subscale, five from self-control, four from self-trust, four from self-esteem, three from self-intimacy, two from self-safety, two from other-esteem, and one from other-safety.
Table 5

Parallel Analysis

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*Note. *Factor Eigenvalue > Random Eigenvalue

Figure 1

![Scree Plot](image-url)
Table 6

*Rotated Pattern Matrix*

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<th>Item Number</th>
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</table>
Note. Factor loadings > .40 are in boldface.
Rotation Method: Promax with Kaiser Normalization
RS = Reverse Scored Item

Table 7

| Items from Original TABS Subscales Represented in Current Four Factor Model |
|---|---|---|---|---|
| Number of Items from Subscale | | | |
| Factor 1: Other | Factor 3: Self-Safety |
| Other-Intimacy: 8 | Self-Safety: 2 |
| Other-Trust: 8 | Other-Safety: 2 |
| Other-Esteem: 5 | Self-Esteem: 2 |
| Self-Control: 1 | Other-Esteem: 1 |
| Other-Control: 1 | |
| Factor 2: Other-Safety | Factor 4: Self |
| Self-Safety: 6 | Self-Safety: 3 |
| Other-Safety: 4 | Self-Trust: 3 |
| Self-Intimacy: 4 | Self-Esteem: 2 |
| Self-Control: 2 | Self-Intimacy: 1 |
| Other-Control: 1 | Self-Control: 1 |
Table 8

*Inter-Factor Correlation Matrix*

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**Research Question 4**

The extent to which marital status (marital and non-marital), length of the relationship, service member rank (enlisted and officer), number of deployments, perceived and actual experienced risk to the service member’s safety during deployments, and TABS total scores contribute to relationship satisfaction in partners of service members was assessed via a hierarchical regression. Assumptions were assessed prior to analysis and all assumptions were met with the exception of normality and homoscedasticity of RAS scores. RAS scores transformed with Reflect and Logarithm were utilized in the analysis which corrected issues with normality and homoscedasticity. However, when compared to regression results using non-transformed RAS scores results did not differ. Because the use of transformation did not significantly alter the results of the hierarchical regression, final analyses used original data to maintain ease of interpretation.

Relationship status (grouped marital and non-marital), service member rank (grouped enlisted and officer), and length of the relationship were entered at Step 1, explaining 3.2% of the variance in relationship satisfaction, $F$ change (3, 368) = 4.04, $p = .008$. After entry of number of deployments and actual and perceived risk total scores in Step 2, the total variance explained by the model as a whole was 8.4%, $p < .001$. Number of deployments and perceived
risk and actual experienced risk measures explained an additional 5.3% of the variance in relationship satisfaction after controlling for relationship status, service member rank, and length of the relationship, $R^2$ change = .053, $F$ change (3, 365) = 6.99, $p < .001$. After entry of TABS total T-scores in Step 3, the total variance explained by the model as a whole was 15.0%, $F$ (7, 364) = 9.16, $p < .001$. TABS total T-scores explained an additional 6.5% of the variance in relationship satisfaction, $R^2$ change = .065, $F$ change (1, 364) = 27.98, $p < .001$. In the final model, only relationship status ($beta = -.12, p = .029$), actual experienced risk total score ($beta = -.18, p = .001$), and TABS total T-score ($beta = -.26, p < .001$) were statistically significant. All $beta$ values, $R^2$, and $\Delta R^2$ values can be seen in Table 9.

Table 9
Hierarchical Multiple Regression for Variables Predicting Relationship Satisfaction

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<td>TABS Total T-Score</td>
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Note. *** $p < .001$. ** $p < .01$. * $p < .05$. 
CHAPTER FIVE

DISCUSSION

This study examined the effect of deployment related stressors and cognitive schema disruption on relationship satisfaction among partners of service members with respect to partners of both marital and non-marital status. Overall, the present study added to current literature related to the experience of non-marital partners of service members, a population that has received little attention in the past. Furthermore, current findings indicate that relationship status is an important variable to assess when considering relationship satisfaction in partners of service members. Exploration of the factor structure of the Trauma and Attachment Belief Scale (Pearlman, 2003) uncovered a four factor model, which highlights the unique concerns of partners of service members related to other-safety. Lastly, results support the interactive effects of stress and perception on adaptation in partners of service members, further validating the use of the Double ABCX model.

Summary and Interpretation

Research question one sought to determine if significant differences exist between marital and non-marital partners of service members in terms of relationship satisfaction. Significant differences were found among the four relationship status groups (dating, cohabitating, engaged, and married/domestic partnership), and specifically revealed engaged partners’ relationship satisfaction was significantly higher than those in a married/domestic partnership. While there is a lack of preexisting literature that assessed the experience of non-marital partners, these findings can be compared to the one study by Spera (2009) that considered differences between marital and non-marital partners.
Considering literature by Padden et al. (2011) that recognized the negative association between perceived stress and mental well-being as well as research by Allen et al. (2011) that identified a negative correlation between stress regarding deployment and marital satisfaction, past research generally suggested that partners who have more difficulty with deployment also have lower relationship satisfaction. Taking these findings into consideration, the results of the current study differed from previous research by Spera (2009) that identified service member beliefs that non-marital partners would have more difficulty with deployment than those in marital relationships. This discrepancy with current findings may reflect differences based on perception, as in Spera’s study, service members were asked to report on their perceptions of how much difficulty their partners would have with deployment, whereas in the current study, partners were asked to speak on their own behalf. Furthermore, one must also consider the possible presence of protective factors that may contribute to higher relationship satisfaction in engaged partners, which could include more salient feelings of investment in the relationship or excitement about one’s future role as a spouse. Overall, findings of the current study are somewhat contrary to assumptions made by past literature and thus highlight a need for further exploration of various relational factors that may impact relationship satisfaction.

Research question two also assessed for differences between marital and non-marital partners in relation to level of cognitive schema disruption, as measured by the Trauma and Attachment Belief Scale (TABS), and no significant differences were uncovered. As was previously stated, while there is a general lack of research on non-marital partners, this finding also appears to contradict past research that suggests non-marital partners would have more difficulty with deployment than partners in marital relationships. Furthermore, this result also seems counter to suggestions by Teachman (2009) about non-marital partners lacking military
provisioned resources. However, it may be possible that while non-marital partners have few military provisioned resources, they may find support through outside networks, such as those available through social media. Thus, it is possible that participation in these outside supportive networks may buffer the negative psychological effects of deployment related stress.

Post-hoc analyses further examined possible differences between marital and non-marital partners’ scores on individual TABS subscales and significant differences were found among the four relationship status groups in Other-Safety, Other-Control, Self-Safety, and Self-Intimacy TABS subscale scores. It was specifically found that engaged partners had higher levels of cognitive schema disruption in Other-Safety and Other-Control domains than those in a married/domestic partnership. These findings clarify that while non-marital partners may not have significantly different levels of cognitive schema disruption when subscales are combined into one total score, engaged partners do experience more disruption in areas related to other-safety and other-control. This suggests that engaged partners have higher levels of worry related to the safety of their loved ones as well as more discomfort around not being in control of their own life. Each of these areas is closely related to experiences of deployment stress such as worry over death or injury to the service member during deployment (Allen et al., 2011) and stress related to the unpredictability of the military and associated lack of control partners have over the decisions of the military.

Further assessment of differences among marital status groups in terms of levels of perceived and actual experienced risk uncovered differences in perceived risk scores, but not in actual experienced risk scores. Analyses specifically revealed that partners in dating relationships reported lower perceived risk scores than those in a married/domestic partnership. This difference may stem from dating partners possibly having less awareness of the risks of
deployment when compared to marital partners, who are more likely to have been in longer standing relationships and thus likely had more experience with partner military deployment. Alternatively, dating partners may have a similar awareness of the risks associated with deployment, but their perceptions of the severity of those risks may differ from those of marital partners.

Research question three sought to explore the factor structure of the TABS when the instrument is applied to a sample of partners of service members. Exploratory factor analysis uncovered a four factor model with factors representing the following domains: Other, Other-Safety, Self-Safety, and Self. Of the 23 items that make up the Other factor, the majority came from other-oriented subscales including other-intimacy, other-trust-other-esteem, and other-control, with the exception of one self-oriented item from the self-control subscale. However, review of this particular item’s content (“I can’t be myself around people”) revealed a distinct focus on one’s sense of comfort when around others. Overall, high scores on this factor reflect negative views of others and their trustworthiness, as well as feeling cut-off from relationships with other people.

Factor two, Other-Safety, consisted of 17 items related to concerns for the safety of others and concern related to external risks to safety. Many of these items referenced feelings related to being alone, suggesting that this factor tapped into partners’ concerns related to their general sense of safety in the world. Focus on concerns related to being alone may also reflect a unique aspect of the experience of partners of service members, managing life alone during military deployment. This may also explain why these items loaded in a factor with many other-safety items, as opposed to loading on a self-oriented factor, as all of the items referencing experiences being alone were originally associated with the self-intimacy subscale. High scores
on this factor reflect concerns regarding the safety of one’s significant others and the safety of one’s world.

Factor three, self-safety, contained 7 items which referenced self-imposed safety risks, many of which were items Pearlman (2003) identified as “critical” items. One item from the other-esteem subscale was included on this factor (“I don’t respect the people I know best”), and while item content does not explicitly relate to self-safety, this item was maintained on this factor due to beliefs that choosing to be closest with people one does not respect is related to issues with interpersonal boundary setting, and thus is associated with the general concept of keeping oneself safe from self-imposed danger. High scores on this factor reflect concerns related to self-inflicted harm and beliefs that one is flawed.

Factor four, self, consisted of 10 items which were all drawn from self-oriented TABS subscales. Elevations on this factor reflect concerns related to beliefs about both the goodness of oneself as well as confidence in one’s own judgment and ability to care for oneself. It also should be noted that all but one of the items that loaded on this factor were reverse scored. Thus, it is possible that response bias to positively worded questions may have impacted the resulting factor structure.

In relation to past literature that assessed the factor structure of the TABS, the current factor structure, while similar to the three factor model uncovered by Varra et al. (2008), may reflect concerns that are unique to partners of service members. Unlike the previously identified factor model by Varra et al., which included factors related to other, self, and safety; the current four factor model differentiates concerns for the safety of others or external safety from self-imposed safety concerns. This is particularly important given past research that highlights concern for safety of the service member as being a primary stressor for partners of service
members (Allen et al., 2011). Additionally, unlike the original ten factor structure identified by Pearlman (2003), the current factor structure has benefits of parsimony while still maintaining interpretability based on Constructivist Self Development Theory (CSDT). Similar to the framework which includes the five needs areas (safety, trust, esteem, intimacy, and control) in relation to views about self and others proposed by CSDT, the current factor model highlights one’s beliefs about self and others, with additional focus on areas of self and other safety. As Varra et al. suggest, the distinction of a separate factor related to safety may be due to the salience of safety being a central need, particularly with those who have experienced primary or secondary trauma.

Research question four examined the extent to which marital status, length of the relationship, service member rank, number of deployments, perceived and actual experienced risk to the service member’s safety during deployments, and level of cognitive schema disruption contribute to relationship satisfaction. The results of a hierarchical regression confirmed that these variables significantly predict relationship satisfaction. In the final model, marital status, actual experienced risk, and level of cognitive schema disruption were found to be statistically significant predictors with non-martial relationship status, lower actual experienced risk to service member safety, and lower levels of cognitive schema disruption predicting higher relationship satisfaction.

These results greatly support the Double ABCX model, given that in the current study stressors (actual experienced risk to the service member) appear to impact partners’ cognitive schemas or perceptions, and together influence relationship satisfaction or adaptation. Additionally, characteristics such as relationship status, which may represent pre-existing resources, also contribute to relationship satisfaction. Research by Allen et al., (2011) also
supports consideration of risk to service member safety, as issues around physical or psychological injury were identified as factors around which partners of service members reported experiencing highest stress. Interestingly, actual experienced risk to the service member was significant, while perceived risk to the service member’s safety was not. This suggests that, in relation to relationship satisfaction, actual experienced risk (PTSD, mental health issues, or disabling injury) is more impactful than the perception one has of the likeliness of those issues occurring during deployment.

Beyond similarities to the Double ABCX model, each component of the current regression model also relates closely with previous research on partners of service members. First, a primary area of previous research has assessed the effects of PTSD on partner trauma symptoms and relationship satisfaction. In both cases, current findings support past literature. More specifically, there has been a breadth of research that has found a negative association between military partner PTSD symptoms and relationship satisfaction (Allen et al., 2010; Erbes et al., 2011; & Solomon et al., 2008). The current study extended this to consider service member PTSD diagnosis as well as other mental health issues and disabling injury, which together significantly predict relationship satisfaction. Furthermore, findings of the current study that identified TABS Total scores as predicting relationship satisfaction also support previous literature that found an association between military partner trauma symptoms and subsequent trauma symptoms in at-home partners (Dirkzager et al., 2005; Nelson Goff et al., 2009; & Ahmadi et al., 2011).

In terms of the predictive value of service member rank, unlike past research that identified being of lower rank as a factor that contributed to risk (Spera, 2009), in the present study rank was not identified as a significant predictor of relationship satisfaction in the final
model, after other demographic and risk variables were accounted for. Similarly, length of the relationship did not significantly predict relationship satisfaction, unlike findings from Spera that suggest individuals in newer marriages tended to report more issues with deployment. However, after the overlapping effects of other variables were accounted for, relationship status did contribute significantly to relationship satisfaction. This result, again, is somewhat contrary to past research that suggested non-marital partners of service member would have more difficulty with deployment (Spera, 2009). Lastly, number of deployments did not significantly predict relationship satisfaction, which may be due to other correlated relational variables (relationship status and length of the relationship) accounting for most of the unique variance.

**Strengths and Limitations**

The present study has a distinct set of strengths and weaknesses that should be noted. Regarding strengths, several previously identified weaknesses of past literature were addressed in the current study. First, unlike past research that evaluated the experience of partners of service members, the current study included non-marital partners and established a basis for considering relationship status, as the unique characteristics of non-marital partners appear to impact relationship satisfaction. The method of recruitment used in the present study likely contributed to the substantial response received by non-marital partners, as unlike previous studies that recruited from military provisioned support networks, the current study made contact with participants via support networks available through social media. This particularly highlights the important role recruiting methods play in reaching various populations, especially when evaluating more restricted populations such as military families. Additionally, the current study gathered information directly from partners of service members, which, unlike past research that collected service member perceptions of their partner’s reactions/experience,
reduces issues such as perception bias and likely contributed to the overall reliability of the information collected.

The present study also sampled individuals with a range of important deployment experiences including partners whose service members were in various stages of deployment, partners who had experienced multiple deployments during their relationship with their service member, partners of service members currently serving in the United States military and with service in recent conflicts such as OIF, OEF, and OND. This adds to the generalizability of current results to partners of service members with a range of deployment experiences. Furthermore, a younger demographic in terms of age and length of the relationship was sampled, gaining valuable information about partners of service members who were not previously substantially evaluated.

Lastly, the present study evaluated secondary trauma using the TABS, a measure that has been utilized in other populations commonly exposed to secondary trauma. As opposed to simply evaluating for the presence of PTSD symptoms in each partner, the TABS was used to gain information on cognitive schema disruption. This information has the potential to be particularly useful in clinical settings given that the TABS can easily be incorporated into applying empirically validated treatments such as cognitive behavioral therapy as well as specific treatments for trauma such as cognitive processing therapy.

While the present study has an impressive set of strengths, there are also several weakness that should be noted and addressed in future research. First, the sample lacked diversity in terms of race and sexual orientation. Additionally, there was a deficit of respondents from the Coast Guard, Air Force, and Marine Corps. This general lack of heterogeneity in sampling limits generalizability of results to these underrepresented populations. Furthermore,
recruitment methods using Facebook may have introduced bias into the sample. While the specific nature of this bias is unknown, it is possible that partners of service members who are connected to supportive networks may inherently present with reduced stress and less cognitive schema disruption. Alternatively, there is also a possibility that more distressed individuals tend to seek out supportive networks, thus resulting in an over sampling of partners with higher levels of distress. In either case, one should consider this potential sampling bias when applying current research findings.

Issues with evaluating number of deployments were also present. As was pointed out by one participant, the current questionnaire did not allow participants to identify the nature of their service members’ deployments. While the current study attempted to do so via a question asking participants to report locations of deployment, information gained from this question was ultimately not utilized due to many partners being unable to report this information for various reasoning including worries related to violating operations security restrictions, being unaware of the service member’s deployment location, or those in the Navy being deployed to various underwater and non-identifiable locations. Future research could correct this issue by both allowing participants to report number of months away from home due to both deployment and training, as well as specifically collecting information pertaining to conflicts that service members are involved in (e.g. OEF and OND).

As has been a limitation of past research, the current study also did not assess for prior or personal trauma that may have been experienced by each partner. As was uncovered by Renshaw, Allen et al. (2011), it is possible that participants’ TABS scores were impacted by personal experiences of trauma that were unrelated to partner military deployment. Thus, one cannot conclusively say that cognitive schema disruptions were specifically in response to
deployment related stress and secondary trauma. This issue can be addressed in future research by including a screening questionnaire that asks participants to specify if they have experienced an event they would consider to be traumatic in their own lives that is not associated with military deployment. Further assessment as to the enduring effects of any personal trauma would also be useful in distinguishing between the effects of personal trauma and a possible reaction to deployment stress related secondary trauma.

Lastly, the cross-sectional research design of the present study limits conclusions that can be made regarding directionality. More specifically, using current findings one cannot determine if partners are more or less satisfied with their relationships before or after deployment. Similarly, when evaluating cognitive schema disruption, without the use of a longitudinal research design, it is unknown if partners cognitive schemas actually changed due to deployment, as no pre and post deployment measure was taken. Thus, future research may benefit from collecting longitudinal data to make such inferences.

**Future Directions**

Given the previously mentioned strengths and weaknesses of the present study, there are various areas that may benefit from further research. First, given that the current study is one of the first to specifically recruit for and include non-marital partners of service members, there is a need for future research to replicate and confirm current findings. Furthermore, while the present study uncovered differences in relationship satisfaction between marital and non-marital partners of service members, it is unclear what characteristics related to non-marital partners may be influencing this difference. Thus, better understanding could be gained by future research that applies the Double ABCX model to specifically assess non-marital partners’ use and availability of resources, level of stress, and unique perceptions of their relationship, stressors, and resources.
Additionally, to expand on the current understanding of deployment-related stressors, it may also be useful to include other areas of life stress that may change during deployment such as issues with children, financial strain, loneliness, and stress caused by the media. This could further clarify the effect of stress pile-up on adaptation in partners of service members.

To better understand the possible traumatic effects of partner military deployment, future research could also gain clarity through the use of longitudinal research designs. While longitudinal research tends to be more costly in terms of time and financial commitment, this research has the potential to greatly expand on current understanding of the experience of partners of service members and the relative effects of partner military deployment. Additionally, further assessment of the TABS factor structure when the measure is applied to a sample of partners of service members is needed to confirm the four factor structure found in the present study. If the factor structure is confirmed, this could offer clinicians a valuable new way to interpret TABS scores when working with partners of service members.

Lastly, more information on relationship satisfaction relative to current stage of deployment is needed. Because past studies have generally sampled participants in a single stage of deployment, little is known about the possible effects of transitioning between the various different stages of deployment. Again, this may be most effectively done through the use of longitudinal techniques, but could also be explored through intentional sampling and comparison of individuals in different stages of deployment. Information gained from this research could potentially provide the military and mental health providers with an awareness of when military relationships are at greatest risk of dissolution.
Clinical Implications

The results of this study can be applied to improve the care of partner of service members. First, new understanding about the importance of relationship status in assessing adaptation in military couples can be applied to better tailor care to the specific relationship status of each couple. Mental health care providers and the military should consider and give each variety of relationship its due time and attention. It is apparent that as relationships change with time and more couples choose to delay marriage (Copen et al., 2012), non-marital partnerships cannot be discounted merely on the basis that they lack a legal commitment. As with the general population, service members may choose to delay marriage for a variety of reasons that are impacted by changing social norms, religious beliefs, and familial experiences, to name a few. Additionally, even though there has recently been great progress in expanding the rights of same-sex couples, consideration of marital status should also take into account persisting legal and social restrictions that may influence a couple’s marital status. Furthermore, similar considerations should be made for couples that include those who identify as transgender, as the continued lack of equal rights for transgender people in the military may also influence marital status. Thus, in moving toward increased consideration for various facets of diversity, clinicians are encouraged to consider relationship status as a factor of diversity, as well as how a range of other areas of diversity impact one’s current relationship status.

Lastly, the results of the current study demonstrate the importance of not only considering stressors associated with deployment, but also how one’s perceptions and resources interact to influence adaptation. Information related to cognitive schema disruption gained from the TABS can also provide clinicians with useful information to assist them in both understanding their clients’ world view, as well as aid in treating partners of service members.
Given the importance of safety, specifically related to the safety of loved ones and general sense of safety in the world, mental health care providers may benefit from exploring client cognitive schemas in this area. As suggested previously, information gained from the TABS can be applied to various empirically validated treatments and may potentially increase the efficiency and efficacy of these treatment modalities.
References


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deployment on personnel and their families. Presented at the American Psychological

*Military Medicine, 156*, 357-361.

397-382.


Appendix A

Consent Form

The Effects of Deployment Stress and Cognitive Schema Disruption on Relationship Satisfaction among Non-Marital and Marital Partners of Service Members

Dear Potential Participant,

You are being asked to take part in a research study carried out by Amy Buchanan and Dr. Laurie McCubbin. This form explains the research study and your part in it if you decide to participate. Please read the form carefully, taking as much time as you need. Contact the researchers to explain anything you don’t understand. You can decide not to join the study. If you join the study, you can quit at any time without penalty. Based on the Exemption Determination Application submitted for the study titled “The Effects of Deployment Stress and Cognitive Schema Disruption on Relationship Satisfaction among Non-Marital and Marital Partners of Service Members,” and assigned IRB# 13730, the WSU Office of Research Assurances has determined that the study satisfies the criteria for Exempt Research based on 45 CFR 46.101(b)(2).

What is this study about?

This study is being done to explore relationship satisfaction in partners of service members relative to the effects of deployment stress and partner’s beliefs about themselves and their world. This study specifically looks to assess for differences between marital and non-marital partners in relation to the aforementioned factors. You are being asked to participate because, as a partner of a service member, we value your experience and perceptions.

To participate in this study you must be:

- At least 18 years old
- In a relationship with an active duty service member.
- Not currently serving in the military yourself

Your participation in this study will consist of completing an online survey that will take about 15-20 minutes. If you choose to participate, you will be asked to anonymously provide demographic information about yourself and your military partner, as well as answer questions about your level of satisfaction with your current relationship, your beliefs pertaining to yourself and your world, and your experience of various deployment related stressors.

While there is no direct benefit to you for participating in this study, you will get the opportunity to contribute to current understanding of the experience of partners of service members and the effects of deployment on relationship satisfaction in military couples. The data for this study will be kept confidential to the extent allowed by federal and state law. No published results will identify you and the information that you provide will not be linked to any personal identifying
information. However, the online survey platform “SurveyMonkey” may record your IP address which could be used to identify you as a participant. The results of this study may be published or presented at professional meetings, but the identities of all research participants will remain anonymous. The survey data linked to the questionnaire for this study will be kept for seven years.

At the end of the survey, you will have the opportunity to provide your contact information if you wish to be entered into a drawing for 1 of 8 $25 Amazon gift cards. Upon completion of this survey, you will be directed to the raffle entry webpage where you will have the option to provide your contact information to be used only to contact you in the event you are selected as a gift card recipient. This contact information will be collected independent of your survey responses and will not be linked to your original survey to maintain your confidentiality.

Participation in this study poses minimal psychological risk to participants. Participants may, however, experience some psychological discomfort or fatigue as a result of completing this survey. If you experience concern related to your psychological health or wish to seek psychological help for yourself or your military partner, you may consider contacting the following sources:

Military OneSource
Free support resources for service members and their families
1-800-342-9647
www.militaryonesource.mil

Veterans Crisis Line
Confidential help for veterans and their families
1-800-273-8255
www.veteranscrisisline.net

Vet Center Program
Readjustment counseling services offered to eligible veterans and their families.
1-877-WAR-VETS (1-877-927-8387)
http://www.vetcenter.va.gov

Mental Health Services Locator (SAMHSA)
Locate mental health services available to the general public as well as veterans
http://findtreatment.samhsa.gov/MHTreatmentLocator

National Suicide Prevention Hotline
24-hour suicide prevention service available to anyone in suicidal crisis.
1-800-273-TALK (1-800-273-8255)
www.suicidepreventionlifeline.org

If you have any questions regarding this study, please contact either of the following research investigators:
Laurie McCubbin, Ph.D.
Principal Investigator
Associate Professor - Counseling Psychology
Email: mccubbin@wsu.edu

Amy Buchanan, M.A.
Co-Investigator
Doctoral Candidate - Counseling Psychology
Email: albuchanan@wsu.edu

If you have any questions regarding your rights as a research participant, or would like to report a concern or complaint about this study, please contact the Washington State University Institutional Review Board via email at irb@wsu.edu or by phone at 509-335-3668.

By participating in this survey, you are acknowledging that you are at least 18 years old and that you agree to the terms and conditions above. Please print this form if you wish to have a copy for your records.

Thank you for your time and consideration of this important study. Your participation is greatly valued and appreciated.

Thank You

By clicking “Next” you certify that you understand your rights and are giving consent to proceed with the questionnaire.
Appendix B

Facebook Recruiting Message

Generic request to have study posted on support group Facebook pages:

Hello! My name is Amy Buchanan and I am a doctoral candidate in the Counseling Psychology program at Washington State University. I am conducting my dissertation research on the effects of deployment stress on marital and non-marital partners of service members. I am contacting you to see if you would be willing to post information about this research on your group’s Facebook page. Your Facebook group provides a place for partners of service members to not only receive support from each other, but also helps build a vital sense of community among your followers. I would greatly appreciate your help in furthering my research on the experience of partners of service members. Additionally, I would like to thank you for your time and your contributions to the many military families you support.

If possible, please post the following on your group’s Facebook page:

Request to participate in the following survey based study: The effects of deployment stress on marital and non-marital partners of service members.

Hello to you all! My name is Amy Buchanan and I am a doctoral candidate in the Counseling Psychology program at Washington State University. I am conducting my dissertation research on the effects of deployment stress on marital and non-marital partners of service members. I would greatly appreciate your help in furthering my research on this very important topic. The anonymous web-based survey will take approximately 15-20 minutes to complete. In return for your time, you will have the option to be entered into a drawing for 1 of 8 $25 Amazon gift cards.

In order to participate in the study you must be:

- At least 18 years old
- Currently in a romantic relationship with an active duty service member
- Not currently serving in the military yourself

If you are interested in participating in this survey, please follow the link below and use the password listed to access the survey:

https://www.surveymonkey.com/s/SRMSSNM

Password to access the survey (case-sensitive): MP24

Please share the above information with anyone you know who is currently in a relationship with a service member and may be interested in participating in this study.

Thank you very much,
Amy
Appendix C

Demographics Questionnaire

Please answer the following questions about yourself and your military partner:

What is your age?  _________________________

What is your gender?  □ Female  □ Male  □ Prefer not to say

What is your race? (check all that apply)

□ Black/African American  □ White/Caucasian  □ Latina/o  □ Asian

□ Native Hawaiian/Pacific Islander  □ Native American  □ Middle Eastern

What is the highest level of education you have completed?

□ Less than High School  □ High School  □ 2 years of college

□ Bachelor’s Degree  □ Master’s Degree  □ Doctoral Degree

What is your approximate average household income?

□ $0-20,000  □ $20,001-40,000  □ $40,001-60,000

□ $60,001-80,000  □ $80,001-100,000  □ $100,001 and up

Have you ever served in any branch of the United States military?

□ Yes  □ No

If Yes, are you currently serving in the military?  ____________________________
What is your sexual orientation?

☐ Heterosexual    ☐ Gay/Lesbian    ☐ Bisexual

☐ Other: ___________________________

What is your current relationship status?

☐ Single    ☐ Dating    ☐ Cohabitating

☐ Engaged    ☐ Married/Domestic Partnership    ☐ Separated/Divorced

How long have you been in a relationship with your military partner?

Years: _______________    Months: _______________

Do you have any children?

☐ Yes    ☐ No

If Yes, how many?: ________________________________

What is your military partner’s age?            ______________________

Gender of your military partner?    ☐ Female    ☐ Male    ☐ Prefer not to say

Race of your military partner? (check all that apply)

☐ Black/African American    ☐ White/Caucasian    ☐ Latina/o    ☐ Asian

☐ Native Hawaiian/Pacific Islander    ☐ Native American    ☐ Middle Eastern
What branch of the United States military does your military partner serve in?

☐ Army  ☐ Air Force  ☐ Marine Corps

☐ Navy  ☐ Coast Guard  ☐ Other___________

Is your military partner a member of the National Guard or Reserves?

☐ No  ☐ National Guard  ☐ Reserves

What is your military partner’s current rank?

☐ Enlisted  ☐ Non-Commissioned Officer  ☐ Warrant Officer

☐ Commissioned Officer  ☐ Other (please specify): __________________________

How many total times has your military partner been deployed during your relationship?

Number of deployments: ___________________

Has your military partner ever been deployed to a combat zone?

☐ Yes  ☐ No

Please list the countries where your partner was deployed:

Locations deployed: ___________________________  Don’t Know/Can’t Say  ☐

________________________________

________________________________

________________________________
What is your military partner’s current deployment status?

☐ Not Deployed  ☐ Preparing to Deploy  ☐ Currently Deployed
  (has received orders to deploy)

☐ Returned home from a deployment within the past 6 months
Appendix D

Actual Experienced Risk

Has your military partner ever been diagnosed with Posttraumatic Stress Disorder (PTSD)?

☐ Yes  ☐ No

Has your military partner ever been diagnosed with any other mental health issue that developed during or after military deployment (e.g. depression, anxiety, grief, drug/alcohol abuse)?

☐ Yes  ☐ No

Has your military partner ever sustained a life-changing physical injury during a military deployment (i.e. a disabling injury)?

☐ Yes  ☐ No
Appendix E

Perceived Risk

How safe do you feel your military partner is during his/her deployments:

- Very Unsafe
- Somewhat Unsafe
- Somewhat Safe
- Very Safe

Rate the level of risk of your military partner being injured during his/her deployments:

- No Risk
- Low Risk
- Some Risk
- High Risk

Rate the level of risk of your military partner being killed during his/her deployments:

- No Risk
- Low Risk
- Some Risk
- High Risk

Rate the level of risk of your military partner developing psychological problems during his/her deployments:

- No Risk
- Low Risk
- Some Risk
- High Risk
Appendix F

Relationship Assessment Scale

(Hendrick, 1988)

Used with written permission from the author via personal email correspondence received on February 21, 2014.
Appendix G

Trauma and Attachment Belief Scale

(Pearlman, 2003)

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