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KNOWLEDGE AND ACKNOWLEDGEMENT OF POSTTRAUMATIC STRESS DISORDER AND EFFECTS ON MILITARY COUPLES

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ABSTRACT OF THESIS

KNOWLEDGE AND ACKNOWLEDGEMENT OF POSTTRAUMATIC STRESS DISORDER AND EFFECTS ON MILITARY COUPLES

This study used mixed methods to examine the impact of service-members' knowledge and acknowledgement of Posttraumatic Stress Disorder (PTSD) on relationship satisfaction of both the service-members and their spouses. Family stress theory was used to conceptualize the relationship between the occurrence of PTSD and relationship satisfaction. Forty individuals (i.e., 20 couples) completed questionnaires containing self-report measures of knowledge of PTSD, experience of PTSD symptoms, severity of PTSD symptoms, and relationship satisfaction. Participants also completed semi-structured interviews concerning PTSD symptoms, impact of PTSD symptoms on their relationship, and attitudes observed about PTSD. No significant links were found between knowledge, acknowledgement, and relationship satisfaction. Qualitative analysis of semi-structured interviews found that the couples' experiences of PTSD symptoms and the impact of PTSD on the couple relationships were consistent with the existing literature. Common attitudes regarding PTSD were reported by the couples, indicating a persistent negative attitude of PTSD.

KEYWORDS: Military, Deployment, Posttraumatic stress disorder, Couples, Family stress theory

Laura M. Compton

April 15, 2011

KNOWLEDGE AND ACKNOWLEDGEMENT OF POSTTRAUMATIC
STRESS DISORDER AND EFFECTS ON MILITARY COUPLES

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Laura Marie Compton

The Graduate School
University of Kentucky

2011

KNOWLEDGE AND ACKNOWLEDGEMENT OF POSTTRAUMATIC
STRESS DISORDER AND EFFECTS ON MILITARY COUPLES

THESIS

A thesis submitted in partial fulfillment of the
requirements for the degree of Master of Science in the
College of Family Studies
at the University of Kentucky

By

Laura M. Compton

Lexington, Kentucky

Director: Ronald J. Werner-Wilson, Professor of Family Studies

Lexington, Kentucky

2011

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To the men and women who continue to serve our country and the family members who unite to support them.

Acknowledgments

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Chapter 1

Introduction

The current military community is facing many stressors that are different from past decades. Military families are facing longer and more frequent deployments than in the past (Jumper et al., 2006). Another stressor includes the extensions added to the ends of deployments with little notice. In a 2006 survey conducted by Jumper et al., families reported that the length and frequency of separation have a detrimental effect on military families. Moreover, service-members are suffering more physical, life-altering injuries than in past wars. Ephron and Childress (2007) reported that 16 service-members suffer from injuries or experience illness for every death, while the ratio during World War II was estimated as 2:1.

In addition to an increase in physical injuries, there has been an increase in the attention placed on mental health concerns, such as posttraumatic stress disorder (PTSD). The American Psychiatric Association (APA) classifies PTSD as an anxiety disorder (APA, 2000). Individuals develop this type of disorder in response to a traumatic, life-threatening event (U.S. Department of Veterans Affairs [VA], 2010). A traumatic event can include a variety of situations, such as military combat, physical or sexual abuse, or natural disasters. Although most survivors of these types of events develop symptoms that improve over time, some individuals develop PTSD. Symptoms of PTSD typically do not improve or become worse without treatment (VA, 2010).

The Diagnostic and Statistical Manual-IV-Text Revision (DSM-IV-TR) describes PTSD as “the development of characteristic symptoms following exposure to an extreme

traumatic stressor...” (APA, 2000, p. 463). The DSM-IV-TR has specific diagnostic criteria for PTSD that is organized in six parts. The first part looks at an individual’s exposure to a traumatic event. Next, the criteria look at the ways in which the individual re-experiences the event. Thirdly, it assesses the individual’s behaviors that are an attempt to avoid the stimuli related to the traumatic event. The fourth part focuses on the symptoms associated with an increase in arousal following the trauma. The criteria then require that the duration of these symptoms last at least one month. Finally, the individual must exhibit distress that is clinically significant in essential areas of functioning. All of these parts must be addressed before a person can be clinically diagnosed with PTSD.

The placement of PTSD in the DSM-IV-TR has some benefits for those suffering from the disorder. Clinicians and mental health professionals can better assess and diagnose PTSD. Additionally, insurance companies are more likely to cover treatment. On the other hand, there are also negative consequences. Jonathan Shay (2007), a clinical psychiatrist who works with sufferers of combat trauma, wrote about the stigma associated with calling PTSD a “disorder” as opposed to an “injury.”

A variety of studies have looked at PTSD experienced by service-members. A study assessing more than 100,000 veterans found that almost one third of the veterans suffered from mental health problems (Lowe, 2007). Of these veterans, over 13,200 suffered from PTSD. The existence of PTSD may be affected by the multiple deployments experienced by service-members. Richardson, Naifeh, and Elhai (2007) found that rates of PTSD were higher among service-members with a history of more than one deployment. Another study found that rates of PTSD increased over time after return from deployment (Wolfe, Erickson, Sharkansky, King, & King, 1999). In addition to the knowledge that service-members are

facing longer and more frequent deployments, this information creates an overwhelming concern for military families of service-members who have recently returned from deployment.

In the military, there is a stigma against seeking help with concerns surrounding mental health (Marshall, 2006). Thus, with more cases involving mental health concerns being reported, it is important for research to focus on mental health issues in the military in order to better understand this population. In addition, researchers should look at service-members' abilities to recognize mental health symptoms and the effects these symptoms may have on family relationships. Increasing the understanding of the stigma and how mental health issues affect service-members and their family members can be an important step in reducing the stigma and helping military families. The stigma of seeking help for mental health coupled with the stigma of being diagnosed with a disorder can prevent service-members from recognizing that they may have a problem. These two stigmas may also increase the likelihood of the service-member denying the existence of symptoms. Therefore, this study looks at service-members' abilities and willingness to recognize the existence of PTSD symptoms and the effect that symptoms may have on the quality of their committed relationship.

Chapter 2

Relevant Literature

Relevance of PTSD Symptoms to Service-members

Previous research has focused on the symptoms associated with PTSD, which can take a variety of forms. Harkness and Zador (2001) described that characteristics of PTSD were similar to those commonly seen with depression. Taft, Street, Marshall, Dowdall, and Riggs (2007) have investigated anger as a symptom related to PTSD. They found that veterans suffering from PTSD had higher levels of anger. In comparison to veterans without PTSD, those with PTSD reported a greater increase in anger when introduced to a trauma situation. Anger-related symptoms of PTSD are related to perpetration of partner abuse, which will be explored later. Other symptoms of PTSD include problems with expressiveness (Carroll, Rueger, Foy, & Donahoe, 1985) and emotional numbing (Cook, Riggs, Thompson, & Coyne, 2004; Riggs, Byrne, Weathers, & Litz, 1998; Taft, Schumm, Panunzio, & Proctor, 2008). Along with determining the symptoms of PTSD, research has also focused on the characteristics of these symptoms over time.

Research has previously looked at the lasting impact of PTSD. For example, Floyd, Rice, and Black (2002) discussed the lasting effect of PTSD on veterans of World War II. They suggested that some symptoms can return months or even years after the traumatic event. In addition, researchers have focused more specifically on the changes in rates of PTSD over time. Another study found that the rates of PTSD increased over time: rates of PTSD in service-members were higher two years after return from deployment than immediately after return from deployment (Wolfe et al., 1999). This study suggests that

service-members are more likely to report symptoms of PTSD as time progresses following their return. It is unclear if this increase occurs due to a delay in developing symptoms or a lack of awareness of symptoms. In addition to investigating the symptoms of PTSD, researchers have also looked at the effects of PTSD on committed relationships.

Relevance of PTSD Symptoms to Intimate Relationships

Research suggests that PTSD has a major effect on the committed relationships of military families. For example, individuals in relationships where one member was a veteran with PTSD were more likely to report problems in the relationship than individuals in relationships where the veteran did not have PTSD (Cook et al., 2004). Studies have revealed that couples where at least one partner has PTSD report lower levels of relationship satisfaction than those in which neither individual has PTSD (Nelson Goff, Crow, Reisbig, & Hamilton, 2007; Renshaw, Rodrigues, & Jones, 2008). Further research has focused on the specific areas that contribute to lower levels of relationship satisfaction.

One study revealed that PTSD is related to service-members having problems in self-disclosure and expressiveness with their significant others (Carroll et al., 1985). Relational problems in service-members with PTSD have also included problems in intimacy (Cook et al., 2004; Riggs et al., 1998), communication (Cook et al., 2004), and relationship adjustment (Carroll et al., 1985; Cook et al., 2004; Jordan, et al., 1992; Taft, Schumm, Panuzio, & Proctor, 2008). The majority of studies concerning PTSD appear to involve the effect of anger and physical aggression on committed relationships. Studies have revealed a link between the occurrence of PTSD and intimate partner violence (Carroll et al, 1985; Jordan et al., 1992; Marshall, Panuzio, & Taft, 2005; Orcutt, King, & King, 2003; Sherman, Sautter,

Jackson, Lyons, & Han, 2006; Taft et al, 2007). Orcutt et al.'s (2003) study revealed, even more than a link, PTSD appears to increase a person's risk of becoming a perpetrator of intimate partner violence. Research has also shown that individuals with PTSD perpetrate more violence than those suffering from problems with adjustment (Sherman et al., 2006). Although many researchers have looked at the symptoms of PTSD and the effect of PTSD on committed relationships, scholars can also use family theories as conceptual models for understanding the impact of PTSD.

Chapter 3

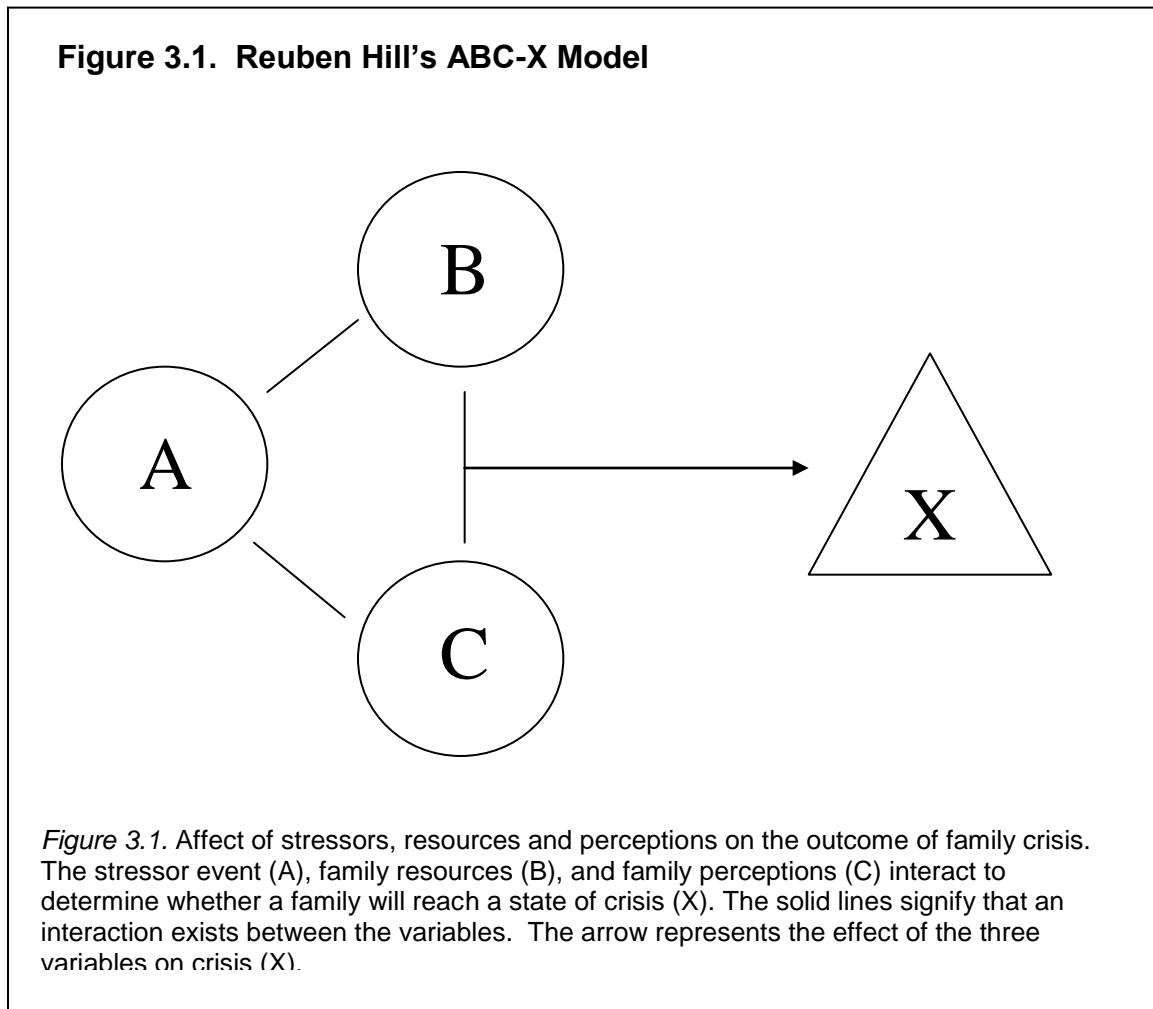
Theoretical Application

Family Stress Theory

Background. As previously discussed, research has shown that PTSD can negatively impact the quality of romantic relationships. Nonetheless, a concise picture does not exist for why negative effects occur for some couples but not all. Theoretical application can provide a conceptual framework for how this negative effect occurs. The discrepancy can be better understood by looking at Family Stress Theory. The theory began with Reuben Hill's model, the "roller-coaster profile of adjustment to crisis," which examined the stages families experience when facing a stressful event (Hill, 1949, p. 14). The stages include crisis, the event that causes the family to enter into crisis; disorganization, in which members try to cope with the stressful event; recovery, when the family determines how to cope; and reorganization, when a new type of organization is developed for the family. Continuing on this idea, Hill developed the ABC-X model to explain how families adjust to crisis following a stressor situation (Hill, 1949). This model became the focus for explaining Family Stress Theory.

Main components. The ABC-X model is comprised of four different components: stressor events, resources, perceptions, and crisis (Hill, 1949). Figure 3.1 demonstrates the relationships between these components. *A* represents the stressor event which can be either positive or negative depending on the family's interpretation of the event. Certain criteria have been found to determine the extent to which the stressor will affect the family (Smith, Hamon, Ingoldsby, & Miller, 2009). These criteria have been edited to involve the following

topics: internal or external, whether it affects one or all family members, sudden or gradual onset, level of severity, amount of time available to adjust, expected or unexpected, natural or human-made, and the family's belief about whether or not they can solve the situation (Smith et al., 2009). For example, the stressor event of deployment would be external, affecting all family members, and human-made. The other criteria, such as onset and level of severity, would vary depending on each family's situation.



The components *B* and *C* explain how a family deals with the stressor event. *B* refers to the resources available to the family as they attempt to cope with the stressful situation (Hill, 1949). These resources may be individual (e.g., work ethic), family (e.g.,

encouragement from family members), or community (e.g., agencies that help with veteran benefits) resources (Smith et al., 2009). The stress of deployment can be lessened or exacerbated by the amount of resources available to the family. *C* refers to the family's perception or definition of the stressor (Hill, 1949). For example, a family who believes that a service-member is fulfilling a worthy duty by deploying may feel proud of the service-member and hopeful for his or her return. In contrast, a spouse that blames the military for his or her partner's deployment and believes the service-member will definitely be injured will be more likely to have a higher amount of anxiety regarding the stressor event.

The previous components determine whether or not the family will reach a point of crisis, which comprises component *X*. Stressor events do not always lead to a state of crisis. Families enter crisis when they are unable to maintain their usual level of functioning because of the stressor (Smith et al., 2009). The result of a crisis can vary. Some families fall apart while others become stronger following a crisis state.

Basic assumptions. Family Stress Theory applies to military families because researchers can use it to explain why some couples are able to adapt to the stress of PTSD while others are not. Using Family Stress Theory, one can speculate about the reasons why some couples are unable to adapt to the occurrence of PTSD. The stressor of PTSD can vary depending on severity, amount, and type of symptoms. While it is experienced by an individual, in this case the service-member, it is a stressor that impacts the couple. To respond to the stressor, some couples have a wide range of resources, such as close family relationships or community resources, while others may have distant family relationships, a conflicted couple relationship, or a rural area with a limited understanding of military issues. In addition, couples may vary in their perception of the occurrence of PTSD. Some couples

may believe that PTSD reflects weakness or a lack of masculinity, and others may adopt the belief that PTSD is simply another type of injury sustained during war, similar to a physical wound. Each of these factors impacts the likelihood that the stressor of PTSD will develop into a crisis for the couple.

Relationship Quality

Elements of satisfying relationships. The Sound Marital House theory explains that a satisfying marriage involves friendship, Positive Sentiment Override (PSO), conflict regulation, and shared meaning (Gottman, 1999). The aspect of friendship is comprised of three components: cognitive room, fondness and admiration, and actions of turning toward one's partner. In PSO, individuals use their partners' negative affect as a sign that the topic is important or upsetting to the partner rather than as a personal attack (Gottman, 1999). Conflict regulation allows the couple to have conflict discussions and be able to physiological soothe one another without escalation. Finally, a shared meaning exists when couples are able to support one another's life dreams and to utilize shared methods of connection (i.e., rituals, roles, goals, and symbols).

Benefits of satisfying relationships. Research has shown that satisfying and long-lasting relationships have many benefits. Studies conducted by Verbrugge and House have found that those who are happily married live an average of four years longer than those who are unhappily married (Gottman & Silver, 1999). In addition, they found that people in satisfying relationships live healthier lives. They found that individuals who are unhappily married are 35% more likely to become sick (Gottman & Silver, 1999). Overall, research has

shown that happily married couples are more likely to be health-conscious and less likely to have the ailments caused by physical and emotional stress.

Deployment and Relationship Quality. Deployment has the potential to decrease the benefits individuals receive from a satisfying relationship because it threatens to undermine the components of the Sound Marital House. Friendship can be harder to maintain during times of separation when communication can be inconsistent and limited. It can also be more difficult to create positive sentiment override when stress levels are increased (e.g., an increase in stress due to combat for the service-member or financial struggles for the spouse at home). In addition, regulating conflict can also become more difficult during high amounts of stress and when there is not an adequate amount of time to discuss conflict issues. Finally, deployment can prevent the creation of a shared meaning by putting on hold a couple's attempts to reach individual life dreams and preventing the use of rituals, roles, goals, and symbols in everyday interactions.

Chapter 4

The Present Study

Gaps in Current Research

Although researchers have completed a broad range of research on the impact of PTSD, some holes in the research still exist. The majority of the research conducted on PTSD includes World War veterans, Vietnam veterans, and Operation Desert Storm veterans. The published research looking at the specific effects of the wars in Iraq and Afghanistan is limited. As previously discussed, these wars present unique stressors and problems for military families that deserve to be investigated in their own right. Moreover, mental health professionals need current information in order to work with these families. Without the knowledge that is specific to service-members in current areas of conflict, professionals will not be able to offer the best forms of treatment. Along with the need for research on this specific group, other gaps exist in the current information.

A survey conducted on behalf of the National Military Family Association found that military families need more information related to issues of deployment, including mental health concerns (Jumper et al, 2006). More research needs to be conducted concerning the impact that mental health knowledge has on the couple relationship and the effects of PTSD. There is relatively little research regarding knowledge and a service-members' ability or willingness to acknowledge PTSD symptoms. Furthermore, there is even less research examining the relationship between the ability or willingness of service-members to acknowledge PTSD-related symptoms and the effect this acknowledgement has on committed relationships. For these reasons, this study examined service-members' knowledge of PTSD, the incongruence between acknowledgement of experiencing PTSD

and severity of PTSD symptoms, and the effect these two factors have on relationship satisfaction.

Purpose Statement

This study looked at the relationships between knowledge and acknowledgement of PTSD and the effect these aspects have on relationship satisfaction. PTSD has a negative impact on not only the service member but also his or her spouse. Moreover, the symptoms of PTSD can have a long-lasting effect on military couples. The purpose of this study was to determine the relationship between knowledge of PTSD, acknowledgement of PTSD, and the effect they have on relationship satisfaction.

Research Question and Hypotheses

This study aimed to answer the following question: “What is the relationship between service-members’ knowledge of PTSD, service-member’s ability or willingness to acknowledge symptoms of PTSD, and relationship satisfaction?” The following hypotheses were developed:

- H1: Service-members’ knowledge of PTSD is positively correlated with the incongruence between PTSD acknowledgement and PTSD symptoms.
- H2: The incongruence between PTSD acknowledgement and PTSD symptoms is positively correlated with both the service-members’ and the spouses’ relationship satisfaction.
- H3. The service-members’ overall knowledge of PTSD is positively correlated with the relationship satisfaction of both the service-members and the spouses.

Chapter 5

Methodology

Participants

Participants were 21 heterosexual couples that included a service-member who was either enlisted in the United States Army and stationed at Fort Knox or who was enlisted in the Kentucky Army National Guard. Results from the present study were based on data collected as part of a larger and on-going study. Recruitment methods included flyers placed on the University of Kentucky campus and emails distributed by military leaders and community agencies. Inclusion criteria consisted of the participants being over the age of 18 and the couple having been in a committed relationship at some point during deployment. Couples who participated in the study received \$250 as well as compensation for mileage.

Twenty of the couples consisted of a male service-member and one couple included a female service-member. Missing data exists for some aspects of the background information, as noted. Information reported about the couple was taken from the service-member. All of the participants who reported their relationship status stated that they were married ($n = 19$), and the length of marriage ranged from 1-16 years ($M = 5.97$, $SD = 3.83$, $n = 18$). Reports of combined income for the family consisted of 9.5% earning \$10,000-\$19,999; 9.5% earning \$20,000-\$29,999; 19.0% earning \$30,000-\$39,999; 19.0% earning \$40,000-\$49,000; 14.3% earning \$50,000-\$59,999; 14.3% earning \$60,000-\$69,999; 9.5% earning \$70,000-\$79,999; and 4.8% earning \$80,000 or above. Background information for the couple can also be seen in Table 5.1.

Table 5.1. *Couple Demographic Information*

Item	Category	N	%
Income	\$10,000-19,999	2	9.5
	\$20,000-29,999	2	9.5
	\$30,000-39,999	4	19.0
	\$40,000-49,999	4	19.0
	\$50,000-59,999	3	14.3
	\$60,000-69,999	3	14.3
	\$70,000-79,999	2	9.5
	\$80,000 or above	1	4.8
Branch	Army	18	85.7
	National Guard	3	14.3
Rank	Specialist	6	28.6
	Sergeant	9	42.9
	Staff/Tech. Sergeant	3	14.3
	First/Second Lieut.	3	14.3

Demographics of service-members. Ages of the service-members ranged from 23-46 (M = 28.38, SD = 5.01). Approximately 76% percent of the service-members were Caucasian, 14.3% Africa-American, and 9.5% Hispanic. Education level of the service-members consisted of 44.4% with a high school degree, 33.3% with some college, 5.6% with an associate's degree, and 16.7% with a bachelor's degree ($n = 18$). For religion, 28.6% reported that they were Protestant, 14.3% Catholic, 28.6% Non-denominational and 28.6% marked None. Service-members reported that 85.7% represented the Army and 14.3% represented the National Guard, and their total time in service ranged from 2-26.5 years (M = 7.95, SD = 5.69). Roughly 28% of the participants listed their rank as Specialist, 42.9% as Sergeant, 14.3% as Staff Sergeant or Technical Sergeant, and 14.3% as First or Second

Lieutenant. The length of the participants' most recent deployment ranged from 5-16 months (M = 11.00, SD = 2.68). Total number of deployments ranged from 1-4 (M = 2.19, SD = .98), and the total time spent deployed ranged from 5-45 (M = 24.90, SD = 10.20). Time since return from deployment ranged from 1-39 months (M = 8.60, SD = 11.13).

Demographic information for the service-members is displayed in Table 5.2.

Table 5.2. *Individual Demographic Information*

Item	Category	Service-members		Spouses	
		N	%	N	%
Gender	Male	20	95.2	1	4.8
	Female	1	4.8	20	95.2
Ethnicity	Caucasian	16	76.2	15	71.4
	African-American	3	9.5	1	4.8
	Hispanic	2	9.5	1	4.8
	Pacific Islander	-	-	1	4.8
	Mixed or Other	-	-	3	14.4
Education	High School Degree	8	44.4	5	23.8
	Some College	6	33.3	4	22.2
	Associates Degree	1	5.6	4	22.2
	Bachelor's Degree	3	16.7	5	27.8
Religion	Protestant	6	28.6	5	23.8
	Catholic	3	14.3	5	23.8
	Non-Denom.	6	28.6	7	33.3
	None	6	28.6	2	9.5
	Other	-	-	2	9.6

Demographics of spouses. Spouses' ages ranged from 20-46 ($M = 28.05$, $SD = 6.11$). Ethnicities of the spouses were 71.4% Caucasian, 4.8% African-American, 4.8% Hispanic, 4.8% Pacific Islander, and 14.4% reported a mixed ethnicity or other. For spouses, 27.8% had a high school degree, 22.2% had completed some college, 22.2% had an associate's degree, and 27.8% had a bachelor's degree ($n = 18$). Spouses' religion consisted of 23.8% Protestant, 23.8 Catholic, 33.3% as Non-denominational, 9.5% marked None, and 9.6% reported Other. Table 5.2 displays the background information for the spouses.

Procedures

As previously noted, data was collected as part of a study looking at the physiological and neurological reactions of military couples during stress conducted by the University of Kentucky. Questionnaires were distributed to these participants as part of the survey packet used by the study. The larger study took approximately three hours to complete. First, the participants completed informed consent forms. Next, questionnaires were distributed to the participants as part of a larger set of surveys. The questionnaires for this study took approximately 15-20 minutes to complete. The questionnaires were completed before the collection of physiological or neurological data. Following the physiological and neurological data collection, couples participated in a semi-structured interview that lasted approximately 10 minutes.

Measures

This study included measures that assessed the following variables: the service-members' knowledge of PTSD and related symptoms, service-members' acknowledgement

of experiences with PTSD, the service-members' self-report of symptoms of PTSD, the similarity between service-members' recognition of experiences and their report of symptoms with PTSD, and the quality of their committed relationships. The service-members' current knowledge of PTSD and related symptoms was measured by a 10-question multiple-choice assessment created specifically for this study (see Appendix B). The assessment included questions about how PTSD may occur (e.g., *Which of the following events can cause the development of PTSD?*), the symptoms related to PTSD (e.g., *Which of the following is not a symptom typical of PTSD?*), and the treatment of PTSD (e.g., *Which of the following is an example of who people should not talk to for help if they experience symptoms of PTSD?*).

The second variable, service-members' acknowledgement of experiencing PTSD, was defined by the service-members' self-report of their experience with PTSD symptoms. This variable was measured using a Likert Scale to answer the question "I have experienced symptoms of PTSD" (see Appendix C). Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*).

The service-members' report of their actual PTSD symptoms was measured by the *Posttraumatic Stress Disorder Checklist – Military Version* (PCL-M; Weathers, Litz, Herman, Huska, & Keane, 1993; see Appendix D). This assessment is a 17-item, DSM-IV-based tool that measures how often a person experiences PTSD symptoms using a 5-point Likert Scale format with choices ranging from 1 (*not at all*) to 5 (*extremely*). It assessed the extent to which PTSD symptoms have been experienced following a stressful military experience. Questions included PTSD symptoms related to a military experience such as "*Repeated, disturbing memories, thoughts, or images of a stressful military experience.*"

The scale assessed symptoms from Criterion B, Criterion C, and Criterion D of the DSM-IV. Evidence of test-retest reliability of the PCL-M was .96 (Weathers et al., 1993). Internal consistency was found using alpha coefficients of each criterion: Criterion B .93, Criterion C .92, Criterion C .92, and Total Scale .97 (Weathers et al., 1993). The PCL-M has a range of scores from 1 to 85.

The next variable consists of relationship satisfaction, which was measured using the Revised Dyadic Adjustment Scale (RDAS; see Appendix E). The RDAS is a 14-item measure designed to measure the participants' perception of the quality of a romantic relationship (Busby, Christensen, Crane, & Larson, 1995). This instrument is a revised version of the Dyadic Adjustment Scale (Spanier, 1976). The RDAS consists of three subscales: dyadic consensus, dyadic satisfaction, and dyadic cohesion. Evidence of construct validity was found when compared to the Locke-Wallace Marital Adjustment Test and Dyadic Adjustment Scale, with correlation coefficients of .68 ($p < .01$) and .97 ($p < .01$), respectively. Criterion validity was found in comparison to the DAS. Both the DAS and the RDAS classified 81% of cases of distressed and nondistressed couples correctly. When measured separately, each subscale correctly classified the following percentage of cases correctly: Consensus subscale 74%, Satisfaction subscale 75%, and Cohesion subscale, 73%. Internal consistency was evidenced by the alpha coefficients. Alpha coefficients of .81 for the Consensus subscale, .85 for the Satisfaction subscale, .80 for the Cohesion subscale, and .90 for the total RDAS are within an acceptable range to prove internal consistency.

During the qualitative portion of the study, couples were asked questions associated with attitudes about PTSD in the military. The interview consisted of open-ended questions

(see Appendix F). Topics of the questions included experience with symptoms of PTSD, effects of PTSD on relationships, and attitudes observed about PTSD.

Data Analysis Procedures

Variables. An independent variable examined in this study was knowledge of PTSD. The dependent variable consisted of level of relationship satisfaction. The incongruence between service-members' experiences of PTSD and symptoms of PTSD (i.e., accuracy between reports of PTSD) was both an independent and a dependent variable. Figure 5.1 represents the relationships between these variables. The unit of analysis consisted of the individual, and descriptive statistics were used to illustrate the characteristics of the sample, including gender, age, education, ethnicity, religion, military branch, time since deployment, number of deployments, and total number of months deployed.

Pre-data analysis. The variable of incongruence between service-members' acknowledgement of experiencing PTSD and their report of symptoms with PTSD was created using these two variables. The following formula was used to create the new variable:

$$\text{Incongruence} = |(5\text{-point Likert scale of Acknowledgement}) - (\text{PCL-M Score})|$$

The absolute value was used in order to show the overall difference between the two variables in order to facilitate interpretation of the results.

Figure 5.1. Hypothesized Relationships Between Variables

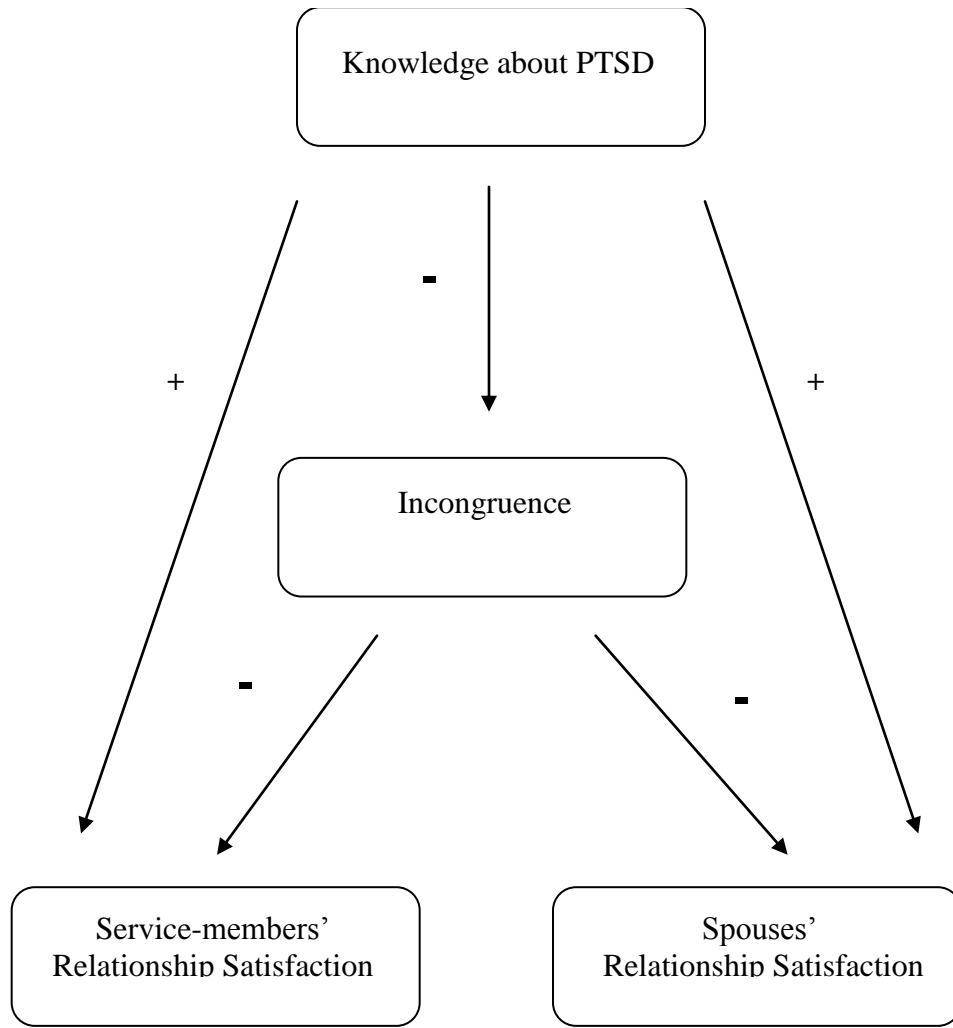


Figure 5.1. Correlations between independent and dependent variables. The arrows show that a relationship is hypothesized between the independent variable and the dependent variable to which the arrow is directed. Each arrow begins with an independent variable and points to a dependent variable. The symbol, +, denotes a positive correlation. The symbol, -, denotes a negative correlation.

Data analysis. The hypotheses were tested using correlation and regression analyses. The correlations were calculated between the following variables: (a) service-members' knowledge of PTSD and incongruence, (b) incongruence and RDAS scores of service-

members, (d) incongruence and RDAS scores of spouses, (e) knowledge of PTSD and RDAS scores of service-members, and (f) knowledge of PTSD and RDAS scores of spouses. Linear regression analysis was also used to analyze the effects of both knowledge of PTSD and incongruence between PTSD reports on level of marital satisfaction.

Data analysis of the open-ended questions took place in two parts: classification and interpretation. After transcribing the interviews, the transcripts were coded to find information that belonged to the following three categories: (a) experiences, (b) influence on relationships, and (c) attitudes regarding PTSD. First, common experiences described by the couples were found. Next, common stories about how PTSD has influenced the family relationships of the military couple were identified. Finally, common attitudes that participants had observed about PTSD were noted.

Chapter 6

Results

Quantitative Results

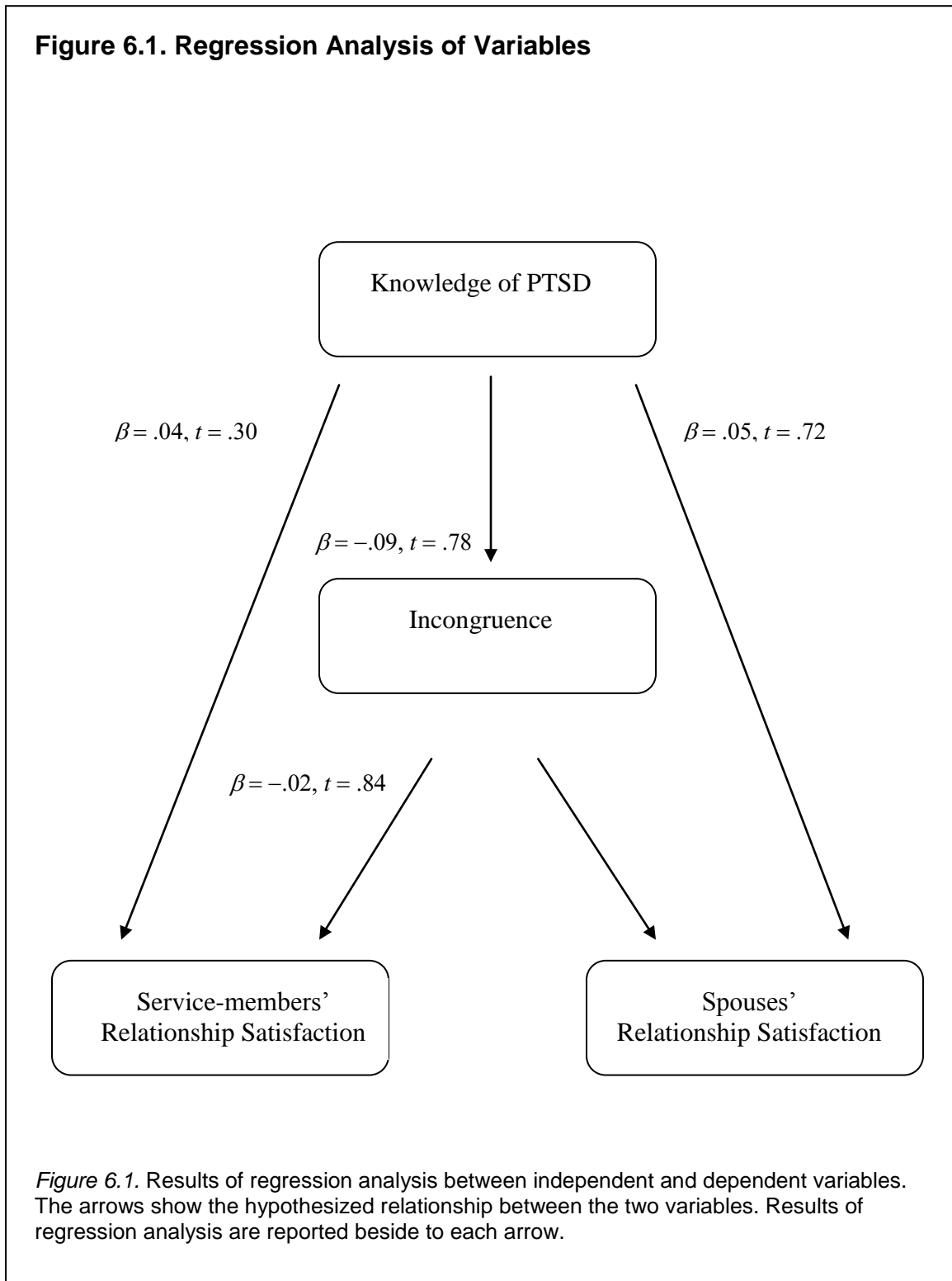
Correlation Analysis

Correlation analysis was used to assess the relationships between service-members' knowledge of PTSD and incongruence, incongruence and service-members' RDAS scores, incongruence and spouses' RDAS scores, service-members' knowledge of PTSD and service-members' RDAS scores, and service-members' knowledge of PTSD and spouses' RDAS scores. None of the correlations were significant. Knowledge of PTSD was negatively correlated with incongruence, $r = -.07$, and positively correlated with service-members' RDAS scores, $r = .07$, and spouses' RDAS scores, $r = .09$. Incongruence was negatively correlated with service-members' RDAS scores, $r = -.05$, and spouses' RDAS scores, $r = -.14$.

Regression Analysis

Linear regression was used to evaluate effects of PTSD knowledge and incongruence on marital satisfaction. Service-members' knowledge of PTSD and incongruence were used as control variables for both service-members' and spouses' relationship satisfaction. Service-members' RDAS scores were not significantly predicted by either service-members' knowledge of PTSD, $\beta = .04$, $t = .30$, or incongruence, $\beta = -.02$, $t = .84$. RDAS scores of the spouses were not significantly predicted by service-members' knowledge of PTSD, $\beta = .05$, $t = .72$, or incongruence, $\beta = -.06$, $t = .58$. In addition, service-members' knowledge of PTSD

did not significantly predict incongruence, $\beta = -.09, t = .78$. Results of regression analysis are represented in Figure 6.1.



Qualitative Results

Analysis of the semi-structured interviews found consistent themes in the categories of PTSD symptoms, attitudes of PTSD, and influence of PTSD on family relationships.

Symptoms of PTSD

Experiencing dreams and flashbacks. This item was assessed based on responses to the question “*What has been your experience with symptoms of PTSD?*” One common PTSD symptom reported by the participants was bad dreams and flashbacks. The following exemplars explain the service-members’ experiences with these two symptoms.

1. *Spouse:* He even a few times would wake up in the middle of the night and grab my arm like it was his weapon. He would have bad dreams and stuff like that.
2. *Spouse:* [He] almost gets sad when he wakes up from his nightmares and sees his men in smoke.
3. *Service-member:* “The military has said that I have PTSD like dreams and all that...I used to wake up and scream.”
4. *Spouse:* “He has flashbacks to moments, and he will get sweaty. He had a moment where he ended up vomiting and crying and shaking.”

These statements exemplify how PTSD can result in bad dreams and flashbacks. These types of symptoms are ways that a service-member with PTSD re-experiences the traumatic event.

Triggered by loud noises. Participants also discussed being bothered by loud noises as a way of experiencing PTSD. The following statements are examples of this type of PTSD symptom.

1. *Spouse*: “We lived in a really populated area, and there was a lot of gunshots at night and sirens and cars backfiring. It was just really noisy, even at night time. And he would be afraid of that kind of thing.

2. *Service-member*: “[My parents] live out by the impact zone where they drop artillery, like to practice shooting artillery. And I think what it was, I was just, my defenses were down. We were just kind of sitting there. It was late at night, and then just explosions starting going, and it just really caught me off guard. It sent me off the deep end.”

3. *Service-member*: “[My symptoms] have been loud noises, loud sudden noises.”

Each of these statements are examples of a service-member feeling reminded of the traumatic event (i.e., triggered). The loud noises reference a similar experience that took place during the trauma.

Avoiding large crowds. The couples also reported that PTSD caused the service-member to avoid public places or crowded areas. These symptoms are reflected in the following statements.

1. *Spouse*: “He didn’t really like being out in public very much. The first few months, we stayed home a lot... We really only hung out with people he was in Iraq with.”

2. *Service-member*: “I avoid crowded places. I don’t like crowds.”

3. *Spouse*: “He doesn’t really like crowds of people.”

Several of the couples reported that the service-member developed a dislike for crowds and heavily populated areas.

Changes in affect. Finally, the last common symptom reported by several couples includes a change in affect or personality as a result of PTSD. Many couples reported the service-member not feeling the same as prior to deployment and the development of PTSD, as seen in the following examples.

1. *Service-member:* “I’m not as happy as I had been anymore... I can still be myself, but I’m just not as outgoing.”

2. *Service-member:* “You pretty much [feel] depressed, or [feel] not like yourself.”

The first statement represents a change in personality that took place within the service-member following deployment. The second report exemplifies a change in mood expressed by the service-member. Both of these examples are listed as ways in which the service-members’ affect changed after their return from deployment.

Influence of PTSD on Relationships

Increased communication. Several of the couples reported that the presence of PTSD influenced how they talk to one another. They explained that they now are more open with each other and talk about their feelings more.

1. *Spouse:* “I think you talk about your feelings more. When we first got married, he wasn’t very vocal about how he felt about things but now that he’s come back, he knows that he has to talk about it. I think it’s that you’ve opened up a lot more.”

2. *Spouse:* “It has put a little bit more stress on our relationship, but once he started to get the counseling, things seemed to ease a little bit more because we started talking more about what was happening to him and it wasn’t so ‘hush hush; between us.’”

These examples show how PTSD resulted in an increase in communication because both statements report that the couple maintained their relationship by talking to one another more often.

Influenced by symptoms. Another common influence was reported mainly by spouses. They explained that the service-members' symptoms of PTSD had an impact on themselves. Some of the participants described the symptoms as negatively influencing their relationship.

1. *Spouse:* "He twitches pretty bad in his dreams, and I'll get kicked. It makes sleeping next to him in the bed kind of hard. We sleep a lot more spaced apart than we used to, now."
2. *Spouse:* "It drives me crazy when we go out to crowded places because [he] watches everybody like a hawk."
3. *Spouse:* "We argued a lot because he didn't want to go anywhere. Our daughter was only one at the time. He really missed most of everything."

A repeated theme throughout the interviews focused on how the service-members' symptoms of PTSD impacted their spouses. Each of these statements reflects how the spouse felt affected by the PTSD symptoms.

Attitudes of PTSD

Viewing PTSD in extremes. Many couples reported that they have witnessed others refer to PTSD in only the extremes (i.e., the worst symptoms that could occur as a result of PTSD). These participants described that many people believe PTSD exhibits as extreme symptoms rather than on a continuum, as demonstrated in the following statements.

1. *Spouse*: “A lot of people think that if you have PTSD, you’re crazy. They think it’s a bad thing and you automatically need to be on medication, and it’s not always the case.”
2. *Service-member*: “They say that PTSD is the worst thing ever, and you are so mentally disturbed that nobody wants to be around you.”
3. *Spouse*: “You always know that person [who says] ‘oh, he’s going to beat the crap out of you if you don’t watch it.’ ”

Each of these examples reveals how service-members and spouses have witnessed the attitude that PTSD can only occur in extremes. Extreme symptoms reported include needing to take medication and domestic violence.

Being misinformed. Participants also reported that many people believe incorrect information about what PTSD is and how it impacts individuals and their families. Both service-members and spouses stated that they experienced this phenomenon.

1. *Spouse*: “People are very misinformed about it, not very many people understand it. I didn’t. When he deployed, I was terrified that he was going to come home and barricade the house.”
2. *Service-member*: “I think a lot of people don’t realize that you don’t have to have something traumatic. It’s relative to you. I think that’s a big problem that a lot of people don’t realize that it’s relative.”

These examples state that the public often believes incorrect information about PTSD. The first example also reveals that even some immediate family members do not have the correct information about PTSD.

Using symptoms as an excuse. A common attitude described by many of the service-members is that people often believe that PTSD is used as an excuse. Some of the service-members had personal doubts while others reported skepticism in the public.

1. *Service-member:* “I see a lot of people try to get out of the Army because they trying to fake it.”

2. *Service-member:* “Some people can fake it. It’s easy to fake. You know, that’s just the way they are in the world, the military world.”

3. *Service-member:* “I’ve heard people say that PTSD is a crock of crap, that they don’t really believe in it.”

These statements exemplify two ways in which service-members have witnessed others using PTSD symptoms as an excuse. One attitude suggests that service-members use PTSD as a way not to serve or fulfill duties in the military. The second attitude suggests that service-members’ make up the presence of PTSD in order to achieve something or refrain from something.

Lack of support in military. A final theme that emerged is that the military has a negative attitude regarding PTSD. Participants also explained that that negative consequences may occur if one admits that he or she has PTSD.

1. *Spouse:* “We had to [get help] outside of the military because he wouldn’t go get help within the military because he was terrified. You are scared of it ending his career.”

2. *Spouse:* “I think it is still very ‘shhh’ about it inside the Army... I don’t think it’s treated with the respect that it needs to be treated with.”

3. *Service-member*: “My only concern is that the Army hasn’t caught up with the times yet. They think it’s a weakness. They like to say it isn’t. They think you should feel comfortable going to talk to a counselor, but you still have a lot of those that have been in the Army for a while that think it is almost taboo.”

4. *Service-member*: “Some of the older generations, the higher ranking, they don’t buy into it just yet, because a lot of them don’t experience what the lower enlisted would... For some of them, it is still kind of ‘whatever, it’s a weakness’.”

These examples reveal that higher-ranking service-members do not support those among lower ranks who admit to experiencing PTSD. These reports show that both spouses and service-members have witnessed this attitude.

Chapter 7

Discussion

Discussion of Quantitative Results

None of the quantitative results were statistically significant. Many possible explanations exist for why the results are insignificant. One explanation includes using a homogeneous sample. First, all of the service-members belonged to either the Army or the Army National Guard. This population is significantly different from those belonging to the Navy, Air Force, or Marine Corps. Recruitment methods aimed towards this population might have resulted in a heterogeneous sample. Second, the ratio of male service-members to female service-members was 20:1. This type of sample may also have caused the sample to be too homogeneous. Females in the military often have experiences that are significantly different from that of a male service-member. Recruiting more female service-members may have generated different results. Including dual-service couples could also have impacted the findings of this study. Finally, the small sample-size could have impacted the results. Further research should focus on using a larger sample as a method of verifying the results.

The definition of variables might have contributed to insignificant findings. The insignificant results might be due to the need for a different measure of relationship quality. Researchers have acknowledged that there are different ways of measuring the subjective variable of relationship quality (Fincham & Rogge, 2010). Including measures that assessed different areas of relationship quality could have resulted in different findings. Possible additional measures will be discussed later as topics for future research.

Additionally, the measures used in this study might have influenced the significance of the results. The 10-question multiple-choice assessment used to measure the service-

members' knowledge of PTSD was developed specifically for this study. It was not tested for reliability or validity. When reviewing the responses to the assessment, one of the questions was consistently answered incorrectly by service-members. Twelve of the service-members (57%) answered the following question incorrectly, "*Which of the following is not a symptom typical of PTSD?*" The large number of incorrect responses might be due to unclear response choices. Using a measure shown to be valid and reliable might result in different findings.

Another possible explanation includes the method of research that was included in this study. Although quantitative methods can allow a concise examination of the different variables, it does not allow for the exploration of opinions and experiences of the participants. Researching the topic of self-awareness of PTSD using a qualitative method would have allowed participants to discuss freely their opinions about the topic. Therefore, using quantitative methods could have limited the ability to find significant results. As discussed below, semi-structured interviews resulted in beneficial findings. These findings might have generated new information if conducted using qualitative methods.

Discussion of Qualitative Results

The semi-structured interviews provided useful information associated with participants' experiences of PTSD. Examples of common symptoms experienced by PTSD are similar to those outlined in the DSM-IV-TR (APA, 2000). Reports of bad dreams and flashbacks demonstrate one way in which service-members' relive the traumatic experience, consistent with the symptoms reported in the DSM-IV-TR (APA, 2000). The DSM-IV-TR states that symptoms of re-experiencing the event can take the form of memories that are

intrusive and distressing, recurring dreams, feeling as if the event is happening again (e.g., flashbacks), and recurring psychological or physiological reactions similar to when the event occurred (APA, 2000).

An unusual response to loud noises is consistent with the DSM-IV-TR's description of hyperarousal as a symptom of PTSD (APA, 2000). This type of response would fall under the descriptions of "exaggerated startle response" or "hypervigilance" that are described under the PTSD symptoms of increased arousal (APA, 2000, p. 468).

Avoiding well-populated areas has also been reported by the DSM-IV-TR (APA, 2000). This reaction is consistent with the DSM-IV-TR's description of symptoms related to avoidance. The manual explains that symptoms may appear as an effort to avoid places or people that may cause recollections of the traumatic event or a decreased interest in the participation of activities that were once significant (APA, 2000).

Examples of changes in affect are consistent with research that has shown that PTSD symptoms can be similar to symptoms of depression (Harkness & Zador, 2001). Feelings of depression and a decrease in outgoing behavior is also consistent with research showing that PTSD can lead to problems in expressiveness (Carroll et al., 1985) and emotional numbing (Cook et al., 2004; Riggs et al., 1998; Taft et al., 2008). The DSM-IV-TR also reports a change in affect as a symptom of PTSD, describing it as a "restricted range of affect" (APA, 2000, p. 468).

Examples of PTSD resulting in an increase in communication between partners is not consistent with the current research that states PTSD can result in problems with self-disclosure and expressiveness (Carroll et al., 1985); intimacy (Cook et al., 2004; Riggs et al., 1998); and communication (Cook et al., 2004). This discrepancy might have occurred

because the couples who took part in the study were still together. The sample may have consisted of couples who had found a way to cope with PTSD. Forcing themselves to be more expressive might serve as a positive and helpful way of coping with PTSD in order to maintain the relationship.

Reports of how PTSD symptoms impact the spouse are another finding not supported by the existing research. However, it suggests that couples experience a normal process of adjusting to PTSD symptoms and the changes that occur within the relationship. It also suggests that the couples who participated in this study found a way to cope with the changes while still maintaining their relationship.

The attitudes experienced by service-members regarding PTSD is a topic not well researched. Examples of witnessing others who believe PTSD can only occur in extremes highlight a common opinion that people have about symptoms of PTSD. This opinion of PTSD only occurring in extremes provides one explanation for why service-members would not be willing to admit they have symptoms of PTSD. If a service-member fears that others will expect him or her to be mentally disturbed or to become violent, he or she would be less likely to seek treatment. In addition, if a service-member believes that stating an experience of PTSD would lead to hospitalization, he or she would be much less likely to tell someone about the symptoms. Furthermore, not seeking treatment or being honest about symptoms of PTSD could impact the couple relationship by decreasing the openness and expressiveness that contribute to relationship quality.

Similar to the attitude of PTSD only occurring in extremes, the attitude that people are misinformed about PTSD suggests another reason for why service-members would be less likely to be honest about symptoms of PTSD. Recognizing that someone is misinformed

about PTSD might cause service-members to feel unsafe to talk about their experiences of it. This attitude could also prevent a service-member from being open with his or her spouse or from seeking treatment, which would negatively impact both the service-member and the relationship quality. The same reasoning can be applied to the attitude that PTSD is an excuse to not serve. This attitude could also impact service-members' willingness to admit or discuss their symptoms of PTSD. Thinking that PTSD is not real or fearing that other people will think PTSD is an excuse not to serve in the military would prevent service-members' from being honest about their experiences.

Finally, believing that the military does not support those who have PTSD is another deterrent for admitting that one has PTSD. As with other negative attitudes, this common opinion that the military does not support PTSD suggests another reason for why service-members would not admit to experiencing PTSD. This attitude suggests that service-members would fear a negative impact on their career and the respect they receive from their superior officers. It also suggests that officers in the military would not support a service-member seeking treatment, which could only exacerbate one's PTSD symptoms.

Future Research

Although the interviews generated some helpful findings, the possibility exists that the hypotheses are not appropriate for this population. To determine if a relationship does exist, researchers should conduct further studies with a larger, heterogeneous population. Based on the results of the current study, we can make some recommendations for further research. Future exploration should focus on the impact of mediating factors on incongruence and relationship satisfaction. Mediating factors could explain why a direct relationship does

not exist between the two variables. Possible mediating factors include level of attachment, attachment style, length of deployment, and type of deployment.

As mentioned previously, different areas contribute to relationship quality. In addition to relationship satisfaction, researchers have also argued that level of attachment is also a measurement of relationship quality (Selcuk, Zayas, & Hazan, 2010). The authors discuss how an attachment bond can aid in stress buffering (Selcuk et al., 2010). As assistance in managing the stress of PTSD, attachment may also be impacted by incongruence. Including a measure of attachment could also have impacted the results of this study. Therefore, future research should explore this influence further.

Additionally, future research should focus on the development of a reliable measure for assessing knowledge of PTSD. At the time of this study, a well-documented measure of PTSD knowledge was not able to be found. This lack of discovery might have occurred because a reliable measure does not exist. If so, future research should be aimed at creating a reliable scale for measuring knowledge of PTSD.

Another possible mediating factor includes length and number of deployments. Although this data was collected as descriptive information, it was not included in the analyses. The number of deployments and the length of deployments would contribute to the amount of time separate from a romantic partner. Theoretically, not only longer separations but also repeated separations would impact the quality of the romantic relationship and relationship satisfaction. Future analyses should control for these factors to determine the relationship between incongruence and relationship satisfaction.

Future research should collect information on the type of deployment. The current study did not include a measure for either type of deployment or place of deployment. A

combat deployment differs significantly from a deployment in which a service-member is providing clerical and administrative assistance. In addition, a deployment that involves important yet non-combat work may send a service-member to a peaceful region abroad. The countries that require a higher percentage of combat deployments, such as Iraq and Afghanistan, often require the service-member to live in unsafe and hazardous conditions. Each of these factors could have impacted the development of PTSD symptoms and, therefore, the service-members' acknowledgement of symptoms. The variables of type and place of deployment should be considered in future research.

Future research would benefit from using qualitative methods. By providing the opportunity for participants to discuss freely their experiences and opinions, researchers can hear first-hand accounts that elicit possible reasons and explanations that had not been previously considered. In addition, researchers would have the setting to further explore those new findings with the participants. Because the topic of acknowledgement of symptoms of PTSD has not been explored, a qualitative method could give researchers the opportunity to obtain significant results without relying on previous expectations of what variables to include in the study.

Implications

Some implications for working with military couples exist based on the results from the semi-structured interviews. Educating couples on the importance of communication as a way to not only improve their relationship but also to cope with the development of PTSD would benefit couples tremendously. Hearing how couples were able to improve communication even when PTSD symptoms existed that prevent open discussion would

encourage other couples that coping with PTSD is possible. When hearing about the increasing divorce rate, couples may feel discouraged that their relationship can withstand the presence of PTSD. Educating couples on ways to maintain and improve communication would help them feel hopeful and capable to do so themselves.

Implications also exist based on the attitudes regarding PTSD reported by service-members and their spouses. Education about the facts of PTSD and the impact it can have on individuals and couples would help to deter those from believing in or spreading incorrect information. Moreover, it would also help service-members see that PTSD is a real mental health issue that causes real symptoms. Understanding that PTSD is not merely an excuse could encourage others to seek help or treatment. It could also persuade service-members to talk with their spouses about what they are experiencing.

Finally, encouraging military officers to support the treatment of PTSD and lobbying to stop the discrimination against seeking treatment is important. Service-members need a safe environment that is free of punishment and ridicule where they can admit to experiencing mental health issues. Without this safe atmosphere, the amount of service-members seeking treatment will remain low. Therefore, mental health professionals and researchers should continue efforts to lobby for the importance of a safe environment for talking about mental health concerns.

Limitations

Risks for internal invalidity existed for this study through selection biases and experimental mortality. Selection biases may have occurred because of the selection method. To decrease the likelihood of this error, a specific criterion of time since return from

deployment was not included as part of our eligibility criteria. This decision ensured that the participants came from a wide range of military deployments. Finally, a risk of internal invalidity existed through experimental mortality because of the size of the survey packet. Participants were given the questionnaires prior to the biofeedback portion of the study in an attempt to avoid this issue.

Some issues of external invalidity may have arisen within this study. Because this study specifically looks at PTSD, the findings are not able to be generalized to service-members with Acute Stress Disorder. This disorder is characterized in the DSM-IV-TR as exhibiting similar symptoms to PTSD, but diagnosis can be made within the first month (APA, 2000). In contrast, diagnosis of PTSD requires that symptoms last for at least one month. In addition, these findings will not be able to be generalized to individuals who demonstrate PTSD caused by nonmilitary-related experiences (e.g., individuals diagnosed with PTSD caused by sexual abuse). Finally, the subjects for this study included service-members from the wars in Iraq and Afghanistan. The results of this study may not apply to service-members from other wars or combat exposure.

Appendix A

Demographic Questionnaire

Age: _____

Gender: Male Female

What is your current relationship status? (Circle one)

- 1. Married How long? _____
- 2. Living with partner How long? _____
- 3. Dating How long? _____

How long have you known your current partner? _____

What is your religious affiliation? (Circle number)

- 1. Protestant (e.g., Baptist, Lutheran, etc.) Please specify: _____
- 2. Catholic
- 3. Jewish
- 4. None
- 5. Non-denominational
- 6. Other (Please specify) _____

How do you define your ethnicity? (Circle all that apply)

- 1. White (Caucasian)
- 2. African-American
- 3. Hispanic
- 4. Native American
- 5. Asian
- 6. Pacific Islander
- 7. Other (Please specify) _____

How would you describe your total household annual income? (Circle number)

- 1. \$0 – 9,999 2. \$10,000-19,999 3. \$20,000-29,999
- 4. \$30,000-39,999 5. \$40,000-49,999 6. \$50,000-59,999
- 7. \$60,000-69,999 8. \$70,000-79,999 9. \$80,000 or above

Appendix B

PTSD Knowledge Test

*Please write the **letter** of the correct answer on the line provided.*

- _____ 1. PTSD stands for _____.
- a. Posttraumatic Stress Injury
 - b. Post-Trauma Systems Design
 - c. Posttraumatic Stress Disorder
 - d. Post-Time Stress Display
- _____ 2. Which of the following events can cause the development of PTSD?
- a. A natural disaster
 - b. Child sexual or physical abuse
 - c. Combat or military exposure
 - d. All of the above
- _____ 3. Which of the following is **not** a symptom typical of PTSD?
- a. Numbing
 - b. Forgetting about the event
 - c. Avoidance
 - d. Depression
- _____ 4. PTSD can cause symptoms in the following areas
- a. Physical
 - b. Emotional
 - c. Substance Abuse
 - d. All of the above
- _____ 5. Which of the following can happen when someone takes too much responsibility for
a traumatic event?
- a. Self-blame
 - b. Guilt
 - c. Shame
 - d. All of the above
- _____ 6. Which of the following is **not** an example of re-experiencing the traumatic event?
- a. Flashbacks
 - b. Nightmares
 - c. Watching a war-themed movie
 - d. Feelings of intense distress

- _____ 7. Which of the following is an example of problems people with PTSD may have?
- a. Drinking or drug problems
 - b. Relationship problems including divorce and violence
 - c. Suicidal thoughts
 - d. All of the above
- _____ 8. Who can develop PTSD?
- a. Men
 - b. Women
 - c. Children
 - d. Men and Women
 - e. Anyone
- _____ 9. Which of the following is an example of who people should **not** talk to for help if they experience symptoms of PTSD?
- a. Friends and family members
 - b. Counselors
 - c. Children
 - d. Doctors
- _____ 10. People suffering from PTSD should expect treatment to _____.
- a. immediately cure the PTSD-related symptoms
 - b. stop all memories of the traumatic event
 - c. last only a couple days
 - d. none of the above

Appendix C

Perception of Experience with PTSD Scale

Please circle the number that best reflects your experience with symptoms related to PTSD.

I have experienced symptoms of PTSD.

1

2

3

4

5

Strongly Disagree

Moderately Agree

Strongly Agree

Appendix D

Posttraumatic Stress Disorder Checklist – Military Version (PCL-M)

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

	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Repeated, disturbing <i>memories, thoughts or images</i> of a stressful military experience?	1	2	3	4	5
2. Repeated, disturbing <i>dreams</i> of a stressful military experience?	1	2	3	4	5
3. Suddenly <i>acting or feeling</i> as if a stressful military experience were <i>happening</i> again (as if you were reliving it)?	1	2	3	4	5
4. Feeling <i>very upset</i> when <i>something reminded you</i> of a stressful military experience?	1	2	3	4	5
5. Having <i>physical reactions</i> (e.g., heart pounding, trouble breathing, sweating) when <i>something reminded you</i> of a stressful military experience?	1	2	3	4	5
6. Avoiding <i>thinking about or talking about</i> a stressful military experience or avoiding <i>having feelings</i> related to it?	1	2	3	4	5
7. Avoiding <i>activities or situations</i> because <i>they reminded you</i> of a stressful military experience?	1	2	3	4	5
8. Trouble <i>remembering important parts</i> of a stressful military experience?	1	2	3	4	5
9. <i>Loss of interest</i> in activities that you used to enjoy?	1	2	3	4	5

	Not at all	A little bit	Moderately	Quite a bit	Extremely
10. Feeling <i>distant or cut off</i> from other people?	1	2	3	4	5
11. Feeling <i>emotionally numb</i> or being unable to have loving feelings for those close to you?	1	2	3	4	5
12. Feeling as if your <i>future</i> somehow will be <i>cut short</i> ?	1	2	3	4	5
13. Trouble <i>falling or staying asleep</i> ?	1	2	3	4	5
14. Feeling <i>irritable</i> or having <i>angry outbursts</i> ?	1	2	3	4	5
15. Having <i>difficulty concentrating</i> ?	1	2	3	4	5
16. Being “ <i>superalert</i> ” or watchful or on guard?	1	2	3	4	5
17. Feeling <i>jumpy</i> or easily startled?	1	2	3	4	5

Appendix E

Revised Dyadic Adjustment Scale (RDAS)

Instructions: Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

	Always Agree	Almost Always Agree	Occasionally Agree	Frequently Disagree	Almost Always Disagree	Always Disagree
1. Religious matters						
2. Demonstrations of affection						
3. Making major decisions						
4. Sex relations						
5. Conventionality (correct or proper behavior)						
6. Career decisions						

	All the time	Most of the time	More often than not	Occasionally	Rarely	Never
7. How often do you discuss or have you considered divorce, separation, or terminating your relationship?						
8. How often do you and your partner quarrel?						
9. Do you ever regret that you married (or lived together)?						
10. How often do you and your mate "get on each other's nerves"?						

	Every Day	Almost Every Day	Occasionally	Rarely	Never
11. Do you and your mate engage in outside interests together?					

	Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often
12. How often do you and your partner have a stimulating exchange of ideas?						
13. How often do you and your partner work together on a project?						
14. How often do you and your partner calmly discuss something?						

Appendix F

Semi-Structured Interview Questions

1. What has been your experience with symptoms of PTSD?
2. How has PTSD influenced your marital and family relationships?
3. What are some attitudes that you have experienced or observed about PTSD?

Appendix G



Office of Research Integrity
IRB, IACUC, RDBS
315 Blake Hall
Lexington, KY 40506-0057
Tel: 257-9423
fax: 257-9499

Procedures/Modifications

Modification Review

Approval Ends
January 28, 2011

IRB Number
10-0036-F18

www.research.uky.edu/irb/

TO: Ronald Werner-Wilson, Ph.D.
Family Studies
315 Fousshouer Building
CAMPUS 0054
PI phone #: (859)257-7750

FROM: Chairperson/Vice Chairperson
Institutional Review Board (IRB)

SUBJECT: Approval of Modification Request for Protocol 10-0036-F18

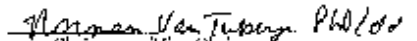
DATE: March 24, 2010

On March 24, 2010, the Institutional Review Board approved your request for modifications in your protocol entitled:

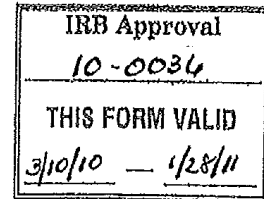
A Pilot Study Comparing Influence of Deployment on Military Families

If your modification request necessitated a change in your approved informed consent/assent form(s), attached is the new IRB approved consent/assent form(s) to be used when enrolling subjects. (Note, subjects can only be enrolled using informed consent/assent forms which have a valid "IRB Approval" stamp, unless waiver from this requirement was granted by the IRB).

For information describing investigator responsibilities after obtaining IRB approval, download and read the document "PI Guidance to Responsibilities, Qualifications, Records and Documentation of Human Subjects Research" from the Office of Research Integrity's Guidance and Policy Documents web page [<http://www.research.uky.edu/oir/human/guidance.htm#PIrcsp>]. Additional information regarding IRB review, federal regulations, and institutional policies may be found through ORI's web site [<http://www.research.uky.edu/oir/>]. If you have questions, need additional information, or would like a paper copy of the above mentioned document, contact the Office of Research Integrity at (859) 257-9422.


Chairperson/Vice Chairperson

Appendix H



Consent to Participate in a Research Study

A PILOT STUDY COMPARING INFLUENCE OF DEPLOYMENT ON MILITARY FAMILIES

WHY ARE YOU BEING INVITED TO TAKE PART IN THIS RESEARCH?

You are being invited to take part in a research study about the influence of deployment on couple relationships. You are being invited to take part in this research study because you or your spouse was recently deployed. If you volunteer to take part in this study, you will be one of about 60 people (30 couples) to do so.

WHO IS DOING THE STUDY?

The person in charge of this study is Ronald Werner-Wilson, Ph.D. of University of Kentucky Department of Family Studies. There may be other people on the research team assisting at different times during the study.

WHAT IS THE PURPOSE OF THIS STUDY?

The purpose of this study is to develop a better understanding about the influence of deployment on military personnel and their families.

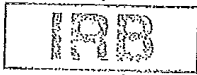
By doing this study, we hope to learn about the impact of deployment of relationship satisfaction and communication.

ARE THERE REASONS WHY YOU SHOULD NOT TAKE PART IN THIS STUDY?

You should not participate in this study if talking to your partner about a problem you would like to solve would create extreme stress for you personally.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

The research procedures will be conducted at the Family Interaction Research Lab at the University of Kentucky, 316 Funkhouser Building, University of Kentucky, Lexington, Kentucky. You will need to come to room 316 one time during the study. Participation will take approximately two hours.



WHAT WILL YOU BE ASKED TO DO?

You will answer some self-report questions; communicate with your partner about a problem you would like to solve in your relationship; and watch a video of the communication with your partner. We will attach sensors to your scalp, forehead, shoulders and wrists to measure your physical and mental responses to the conversation. These responses will show your physiological and mental arousal as well as your experience of stress during the communication exercises. After you complete a self-report questionnaire, you will participate in a short test where we measure your physical and mental responses during a relaxed state and while you watch a screen and say the name of colors. Next, you and your spouse will be asked to choose two different topics to discuss such as vacation plans, household chores, carpooling, etc. This communication exercise will be video recorded and you will view this session after both topics have been discussed.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

To the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life. You may find some questions we ask you (or some procedures we ask you to do) to be upsetting or stressful. If so, we can tell you about some people who may be able to help you with these feelings. Please note that state law requires the reporting of threats of violence, harm, or neglect toward children or adults. If you disclose that violence is occurring in your relationship, we are required by law to report this to Adult Protective Services. This would include reporting that you have hurt your partner or your partner has hurt you. Also, if you say anything that raises reasonable suspicion of child abuse, we are required to report to Child Protective Services.

WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?

There is no guarantee that you will get any benefit from taking part in this study. However, some people have experienced some level of understanding of their partner and problem solving as a result of spending time discussing issues with their partner. Your willingness to take part, however, may, in the future, help society as a whole better understand this research topic.

DO YOU HAVE TO TAKE PART IN THE STUDY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?

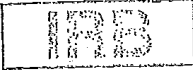
Each couple will receive \$250 plus mileage reimbursement for taking part in this study. You will receive the \$250 plus mileage reimbursement even if you do not complete the study.

WHO WILL SEE THE INFORMATION THAT YOU GIVE?

We will make every effort to keep private all research records that identify you to the extent allowed by law.

Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered. You will not be personally identified in these written materials. We may publish the results of this study; however, we will keep your name and other identifying information private.

We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. All information obtained from your participation including questionnaire responses, video recording, and physiological arousal measures will be stored on a locked computer in a locked office.



We may be required to show information which identifies you to people who need to be sure we have done the research correctly; these would be people from such as organizations as the University of Kentucky Human Subjects Committee.

CAN YOUR TAKING PART IN THE STUDY END EARLY?

If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decide to stop taking part in the study.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, CONCERNS, OR COMPLAINTS?

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator, Ronald Werner-Wilson, Ph.D. at 859-257-7750. If you have any questions about your rights as a volunteer in this research, contact the staff in the Office of Research Integrity at the University of Kentucky at 859-257-9428 or toll free at 1-866-400-9428. We will give you a signed copy of this consent form to take with you.

Signature of person agreeing to take part in the study

Date

Printed name of person agreeing to take part in the study

Name of [authorized] person obtaining informed consent

Date

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VITA

Laura M. Compton was born January 27, 1987, in Evansville, IN.

EDUCATION

Purdue University, West Lafayette, IN
B.S. in Youth, Adult, and Family Services, 2009
Minors in English and Psychology

PROFESSIONAL EXPERIENCE

Department of Family Studies, University of Kentucky
Research assistant, 2009-2011
Teaching assistant, 2010 - 2011

University of Kentucky Family Center
Marriage and Family Therapist Intern, 2009-2011

Military Family Research Institute, Purdue University
Research assistant, 2008-2009

Department of Child Development and Family Studies, Purdue University
Research assistant, 2006-2009

SCHOLASTIC & PROFESSIONAL HONORS

Mildred Sinclair Lewis Scholarship, 2009-2010

SCHOLARLY ACTIVITIES

Compton, L. M., & Werner-Wilson, R. J. (2011). Presented at Military Family Research Institute.

Compton, L., Parker, T., & Werner-Wilson, R. J. (2010) *Trauma variables and violence in military couples*. Poster presented at the American Association of Marriage and Family Therapy Conference, September 23-26, Atlanta, GA.

Compton, L., & Hosier, A. F. (2010). *Renewing infant attachment bond following military deployment*. College of Agriculture Extension Publication.

Compton, L., & Hosier, A. F. (2010). *Adolescence and military deployment*. College of Agriculture Extension Publication.

PROFESSIONAL MEETINGS & WORKSHOPS

Kentucky Association for Marriage and Family Therapy (KAMFT) Conference.
Louisville, KY, 2010

American Association for Marriage and Family Therapy (AAMFT) National Conference
Atlanta, GA, 2010

Family Psychological Services, Reaching Children Through Play Therapy Workshop, 2011

Active Relationships Center, Active Military Life and Resiliency Skills Workshop, 2010

PROFESSIONAL AFFILIATIONS

American Association of Marriage and Family Therapy (AAFMT)

Kentucky Association of Marriage and Family Therapy (KAMFT)

National Council on Family Relations (NCFR)

University of Kentucky Student Association for Marriage and Family Therapy (SAMFT)