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TITLE: Relationship Factors Contributing to the Progression of Combat Related PTSD and Suicidality over Time

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<b>14. ABSTRACT</b> The RAMP project is designed to examine the key social context of intimate romantic relationships of active duty Army soldiers, and how interpersonal processes in this type of relationship can affect psychological functioning over time. The ultimate goal of this knowledge will be to enhance existing programs and therapies for military couples. This study will consist of online surveys to be completed by active duty Army males recently returned from an OEF deployment, along with their significant romantic partner. A total of 5 surveys across a two year period will be administered. In this report period, the study team obtained and maintained all relevant approvals from University of Colorado Institutional Review Board (COMIRB), US Army Medical Research & Materiel Command (USAMRMC) Human Research Protection Office (HRPO), and NIMH Certificate of Confidentiality (COC) program. We have launched the study; recruitment materials direct potential participants to a website where they can learn more about the study and complete an online screening survey. Most individuals who begin our online screening do not complete the screening or fail the screening. Some of these fails represent fraud and we maintain vigilance in fraud detection. Thus far, we have invited 250 couples (500 individuals) into the first survey. Thus far, approximately 95% of those invited complete Survey 1 in the allotted time (one month). Thus far, approximately 45% of couples completing Survey 1 are eligible for invitation into Survey 2. Of couples invited into Survey 2, thus far approximately 99% complete in the allotted time (two months). The study team has put in extensive efforts for recruitment, as recruiting has proved much more difficult than initially anticipated. We have used a variety of low cost or free strategies to spread the word about the study, and continue to receive consultation on this issue and expand our strategies.					
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## Introduction

This report highlights the progress and accomplishments of “Relationship Factors Contributing to the Progression of Combat Related PTSD and Suicidality Over Time” during our second year of funding from March 2, 2013 to March 1, 2014. Please note that the public title we have selected for use in IRB review, with our participants, and throughout this report is the “Relationships Among Military Personnel (RAMP) Project”. The RAMP project is designed to examine the key social context of intimate romantic relationships of active duty Army soldiers, and how interpersonal processes in this type of relationship can affect psychological functioning over time. The ultimate goal of this knowledge will be to enhance existing programs and therapies for military couples. This study consists of online surveys that are completed by active duty Army males recently returned from a hardship deployment, along with their significant romantic partner. Upon completion of the study, a total of 5 surveys across a two year period will be administered to these couples.

In this report period, the study team obtained final approvals from the University of Colorado Denver COMIRB as well as HRPO. We obtained a Certificate of Confidentiality from the National Institutes of Health. The RAMP Project officially opened to participants on June 17, 2013. Launching the study included launching the official RAMP website (<http://www.RAMPproject.net> or [www.armycouples.com](http://www.armycouples.com)), which allowed participants to take the online Eligibility Enrollment survey, and making the RAMP Facebook page accessible (<https://www.facebook.com/TheRAMPPProject>).

As of March 1, 2014, 1531 individuals completed the eligibility screening, 500 (250 couples) individuals were fully qualified and have been sent Survey 1 invitations, 418 participants (including 199 matched couples) have completed Survey 1, 158 Survey 2 invitations have been sent (79 couples), 156 participants have completed Survey 2 (including 77 matched couples). (Although this is out of the reporting period, readers may be interested to know that Survey 3 launched on March 3, 2013.) We plan to have up to 600 participating couples in Survey 1, and up to 270 participating couples in Surveys 2-5. We are currently reviewing initial data for power implications to consider whether we could propose fewer total participants.

We have hired and oriented 11 volunteer undergraduate research assistants throughout the year to help with recruitment, data management, and survey building within Qualtrics. We have also hired a paid consultant to help specifically with military recruitment and advisement. All subcontracts have been kept up to date.

The study team has put in extensive efforts for recruitment, as recruiting has proved much more difficult than initially anticipated. As detailed below, we have used a variety of low cost or free strategies to spread the word about the study, and continue to receive consultation on this issue and expand our strategies.

The team has also created comprehensive screening processes for fraudulent responders, detailed protocols for data checking and downloading, and ethics training for all study personnel (e.g., general human subjects certification, documented agreement to specific ethical practices regarding this study). We continue to consider additional options for verifying participant identity and data quality.

The study has submitted 3 University of Colorado Institutional Review Board (COMIRB) amendments during this time and received subsequent approval. With each COMIRB amendment, we let the compliance officer know at HRPO, and none were considered a modification. The study has received annual approval from COMIRB and the US Army Medical Research & Material Command (USAMRMC) Human Research Protection Office (HRPO) for our continued efforts.

The specific aims for the RAMP project are:

- Aim 1:** To examine couple and partner responses to PTSD symptoms, and how these responses affect PTSD, relationship functioning, and psychological risk factors for suicide over time.
- Aim 2:** Examine additional PTSD and relationship predictors of psychological risk factors for suicide.
- Aim 3:** Assess mechanisms of the relationship between PTSD and relationship functioning over time.
- Aim 4:** Determine adaptive and maladaptive patterns of communication regarding combat.

## Body

In our approved Statement of Work, we proposed eight general task categories to accomplish our specific aims:

1. Hiring and orientation of project staff, purchasing and installing equipment
2. Finalizing initial item pool
3. Creating IRB applications, obtaining initial IRB approval, and maintaining compliance
4. Finalizing surveys
5. Developing and maintaining study materials and infrastructure
6. Recruitment
7. Executing online surveys
8. Analysis and dissemination

A narrative of significant accomplishments, issues encountered, and synopsis of key milestones for each quarter related to these SOW task categories 1-8 are provided in Sections I – IV. Following these quarterly narratives, bulleted lists of key accomplishments are provided in the next section, *Key Accomplishments*, which are organized by task category and quarter.

### I. First Quarter (March 2, 2013 – June 30, 2013)

After receiving feedback from DOD/HRPO on our documents, we incorporated their feedback into an amendment to submit to COMIRB on 3/8/13. COMIRB reviewed our amendment and continued to approve the study as a minimal risk, expedited study on 4/5/13. Following this approval, we submitted the approved documents to HRPO for final review on 4/8/13, and received approval on 4/16/13. We also received a final approval letter from NIH/NIMH outlining the details of our Certificate of Confidentiality.

The project manager also collaborated with the UCD financial staff and UCD's Office of Grant and Contracts to renew subcontracts for the University of Denver and George Mason University. While our current project manager is leaving at the end of June to complete a required clinical internship through her doctoral program, we have also hired, oriented, and are currently training her replacement throughout June. We feel that this overlap between project managers will facilitate a smooth transition.

The annual in-person IRP meetings for Suicide Prevention Research allowed the PI to connect with other Defense Health Program researchers and foster discussion and collaboration among other investigators.

Lastly, after finalizing the eligibility survey, survey 1, survey 2, and corresponding payment selection surveys through our online provider (Qualtrics), we were able to officially launch and begin recruiting and enrolling participants mid-June. The project launch included making the RAMP website live (<http://www.RAMPproject.net>), making the RAMP Facebook page accessible (<https://www.facebook.com/TheRAMPPproject>), and allowing participants to take the online Eligibility Enrollment survey. Recruitment advertisements were also set up through MilitaryWives.com and SargesList.com. A blog post about the study was on Spouse Buzz.

Key milestones this quarter:

- **FY13, Yr2 Q1, 03-08-2013:** Submitted to COMIRB an amendment to include updated language incorporating the Certificate of Confidentiality and suggested changes from DOD's HRPO, for their review.
- **FY13, Yr2 Q1, 03-22-2013:** Approved survey measures allocated for each time point, gender, and contingency (e.g., leaving army, break-up, etc.).
- **FY13, Yr2 Q1, 04-05-2013:** Received approval from COMIRB on our revised documents we included in our amendment.
- **FY13, Yr2 Q1, 04-08-2013:** Submitted the approved, revised documents we received from COMIRB to Susie Stubbs at HRPO for review.
- **FY13, Yr2 Q1, 04-16-2013:** Received HRPO approval from Parameshwar Mahasreshti, PhD, a Human Subjects Protection Scientist at HRPO.
- **FY13, Yr2 Q1, 04-26-2013:** After much back and forth, we received full approval from Target to use their logo on our payment surveys and mailed documents with participants.

- **FY13, Yr2 Q1, 05-06-2013:** Received final Certificate of Confidentiality (COC) approval letter (dated 4/23/13) from Yolanda Green (NIMH COC Program Assistant).
- **FY13, Yr2 Q1, 05-15-2013:** PI attended the Suicide Prevention Research Portfolio's In Progress Review (IPR) Meeting in Frederick, MD to learn about studies that are currently being funded in the area of suicide prevention.
- **FY13, Yr2 Q1, 06-01-2013:** In preparation for recruitment and gap in coverage from project manager, increased PRA time on the project from 50% FTE (20 hours/week) to 75% FTE (30 hours/week). This is consistent with budget allocations already planned.
- **FY13, Yr2 Q1, 06-07-2013:** Hired, oriented, and began training a new project manager for the RAMP Project, as the current project manager is transitioning out of the project to begin her clinical internship for her doctoral program. New project manager set to fulfill 50% FTE (20 hours/week) in June, will be off in July for personal reasons, and will resume on the project mid-August to fulfill 50% FTE (20 hours/week).
- **FY13, Yr2 Q1, 06-07-2013:** Received Year 3 award funding from DOD.
- **FY13, Yr2 Q1, 06-10-2013:** Due to gap in coverage from project manager, PRA completed procurement card application. PRA completed the university-required fiscal trainings online. Transferred gift card custodianship from current project manager to PRA.
- **FY13, Yr2 Q1, 06-13-2013:** Received final approval to renew the University of Denver and George Mason University's subcontracts with the University of Colorado Denver's Office of Grants and Contracts.
- **FY13, Yr2 Q1, 06-14-2013:** Finalized internal protocols that delineate specific instructions of how the RAMP team verifies eligibility status, invites eligible and interested participants into Survey 1 (Phase 1) and Surveys 2 – 5 (Phase 2), and how to provide compensation to participants upon completion of surveys.
- **FY13, Yr2 Q1, 06-17-2013: Recruitment opens.** The RAMP study team officially launched their website (<http://www.RAMPproject.net>), Facebook page (<https://www.facebook.com/TheRAMPProject>), and online Eligibility Enrollment survey. Recruitment advertisements were also set up through MilitaryWives.com and SargesList.com.
- **FY13, Yr2 Q1, 06-25-13:** SpouseBuzz runs piece about RAMP project.
- **FY13, Yr2 Q1, 06-25-13:** New project manager completed university-required fiscal trainings online.

## II. Second Quarter (July 1, 2013 – September 30, 2013)

To handle some of the emerging challenges of the study (e.g., difficulty recruiting, a GRA taking a leave), we have appointed 7 undergraduate volunteer research assistants, including two Army veterans. This RA team is helping with tasks such as recruitment, data management, and survey building within Qualtrics. We have developed protocols to handle all aspects of this, including (a) ethics training (e.g., general human subjects certification, documented agreement to specific ethical practices regarding this study), (b) task protocols which build in regular cross checks of accuracy and supervisory structure to ensure high quality work.

Our new GRA (who began this process in the prior quarter) completed all relevant hiring, training, certification, and approval processes.

We have submitted and received approval for COMIRB amendment that included the option to expand our criteria for participation (such as extending time since deployment or to dual military couples), expanding our recruitment methods (including direct e-mail and media appearances), sending a reminder e-mail if only one partner has completed the screen, temporarily downloading IP addresses in order to screen applicants, error corrections, updated measures, and updated COMIRB format.

Our recruitment efforts have been quite extensive this quarter, as recruiting has proved much more difficult than initially anticipated. As detailed above, we have used a variety of low cost or free strategies to spread the word about the study, and continue to receive consultation on this issue and expand our strategies.

Examination of certain eligibility responses from our participants suggests that many individuals are attempting to join the study fraudulently. We had anticipated this in our methods and had a screening

process in place, but have expanded our time and options (e.g., also using IP address) for a close case by case evaluation of applicants.

The RAMP Project officially launched the eligibility survey on 06/17/13. As of September 30, 2013: 447 individuals completed the eligibility screening, 124 individuals were fully qualified and have been sent Survey 1 invitations (62 matched couples), 104 participants (49 matched couples) have completed Survey 1, 44 Survey 2 invitations have been sent (22 couples), 42 participants have completed Survey 2 (20 matched couples). Our target is 1200 participants (600 couples) for Survey 1 so we are behind schedule on recruitment.

Key milestones this quarter:

- **FY 13, Yr 2 Q2, 07-08-13:** Submitted COMIRB amendment that included the option to expand our criteria for participation (such as extending time since deployment or to dual military couples), expanding our recruitment methods (including direct e-mail and media appearances), sending a reminder e-mail if only one partner has completed the screen, temporarily downloading IP addresses in order to screen applicants, error corrections, updated measures, and updated COMIRB format.
- **FY 13, Yr 2 Q2, 07-30-13:** Received approval from COMIRB on previously mentioned amendment.
- **FY 13, Yr 2 Q2, 09-20-13:** Trained all new undergraduate RAs, fully transitioned to new GRA team.
- **FY 13, Yr 2 Q2, 09-30-13:** As of September 30, 2013: 447 individuals completed the eligibility screening, 124 individuals were fully qualified and have been sent Survey 1 invitations (62 matched couples), 104 participants (49 matched couples) have completed Survey 1, 44 Survey 2 invitations have been sent (22 couples), 42 participants have completed Survey 2 (20 matched couples).
- **FY13, Yr2 Q2, 09-30-13:** As of September 30, our recruitment efforts include: (a) online classified ads (including those that target the military population);
  - (b) advertising on Army Wife Network and MilitaryWives.com;
  - (c) a blog posting on SpouseBuzz based on an interview with PI;
  - (d) circulation of an announcement for the study by Bill Coffin in various online military sites
  - (e) posting the study in various psychological research, military, and couples sites;
  - (f) snowball sampling;
  - (g) direct outreach to FRGs;
  - (h) outreach to professional psychological organizations and military support organizations (e.g., ABCT- Military Psych Special Interest Group, Family Advocacy Program Coordinators, Yellow Ribbon Reintegration State Program Specialists, Family Readiness Division Coordinators/Liaisons; Military Family Research Institute, Military Suicide Research Consortium);
  - posting comments on related media articles.

### III. Third Quarter (October 1, 2013 – December 31, 2013)

To help address our ongoing difficulties with attracting qualified couples, we have hired a consultant to specifically help with recruitment. This uniquely qualified individual, as outlined above, is helping with several aspects of recruitment including contact with appropriate individuals about the study, reviewing and advising on current recruitment efforts, and helping with our social media presence.

We have submitted and received approval for a COMIRB amendment that (1) increased the pool of items we can include in our survey to include better measures of guilt and moral injury (a core construct in the research), improve our ability to verify participants, and assess issues relevant to any female who has broken up with her partner; (2) updated eligibility criteria to better reflect the reality of returning soldiers by changing the eligibility to indicate that the activity duty male has experienced a “combat deployment and certain other hardship deployments” and no longer specifying that the deployment had to be to Iraq or Afghanistan and (3) provided updates to recruitment materials and personnel roles.

To screen fraud, we continue to follow our protocol, outlined in the previous quarter's summary, to ensure that the participants we are following are indeed who they say they are. We continue to discuss these cases weekly and institute decision rules and get consultation as needed.

The RAMP Project officially launched the eligibility survey on 06/17/13. As of December 31, 2013: 799 individuals completed the eligibility screening, 268 (134 couples) individuals were fully qualified and have been sent Survey 1 invitations, 232 participants (including 113 matched couples) have completed Survey 1, 116 Survey 2 invitations have been sent (58 couples), 109 participants have completed Survey 2 (including 52 matched couples). Our target is 1200 participants (600 couples) for Survey 1 so we remain behind schedule on recruitment.

Key milestones this quarter:

- **FY13, Yr2 Q3, 10-09-13:** Hired a new consultant on the project to assist with recruitment.
- **FY13, Yr2 Q3, 10-14-13:** Received W-9 and approved SOW for new consultant, and set her up in CU's system in order to be paid for invoices.
- **FY13, Yr2 Q3, 10-28-13:** Submitted COMIRB annual continuation form.
- **FY 13 Yr2, Q3, 11-21-13:** Submitted COMIRB amendment that added a few measures and questions that will allow us to more effectively capture the aims of the study, help with validity checks, and track our participants longitudinally; updated our eligibility criteria to include all males with "combat deployment" and not specifically deployment to Iraq or Afghanistan; and included updates of our improvements to recruitment flyers and website content.
- **FY13, Yr2 Q3, 12-6-13:** Received approval from COMIRB for annual continuation form.
- **FY13, Yr2 Q3, 12-27-13:** Received approval from COMIRB on previously mentioned amendment.
- **FY13, Yr2, Q3, 12-31-13:** As of December 31, 2013: 799 individuals completed the eligibility screening, 268 (134 couples) individuals were fully qualified and have been sent Survey 1 invitations, 232 participants (including 113 matched couples) have completed Survey 1, 116 Survey 2 invitations have been sent (58 couples), 109 participants have completed Survey 2 (including 52 matched couples).
- **FY13, Yr2, Q3, 12-31-13:** As of December 31, our recruitment efforts include:
  - online classified ads (including those that target the military population);
  - advertising on Army Wife Network and MilitaryWives.com;
  - Two separate blog postings on SpouseBuzz based on an interview with PI;
  - circulation of an announcement for the study by Bill Coffin in various online military sites
  - posting the study in various psychological research, military, and couples sites;
  - snowball sampling;
  - direct outreach to FRGs;
  - outreach to professional psychological organizations and military support organizations (e.g., ABCT- Military Psych Special Interest Group, Family Advocacy Program Coordinators, Yellow Ribbon Reintegration State Program Specialists, Family Readiness Division Coordinators/Liaisons; Military Family Research Institute, Military Suicide Research Consortium);
  - posting comments on related media articles
  - Facebook ads directed towards the population of our study
  - Blue Star newsletter
  - news articles in Killeen Herald and on Military.com about our study with an interview from the PI

#### IV. Fourth Quarter (January 1, 2013 – March 1, 2014)

To continue our efforts with recruitment, Survey 3 finalization and deployment, and data processing this quarter, we have carefully considered our staffing needs. We have extended the contract for a consultant who is uniquely qualified to help with military recruitment. We are staffed with one paid GRA and additional volunteer RAs (rotating each semester). In February, we increased the PRA (project manager) time on the project from 50% FTE to 75% FTE, which was the original planned time.

This quarter, we submitted an amendment to IRB for use of a University of Colorado Denver press release about the study. After receiving an annual continuation from COMIRB last quarter, we submitted an annual continuation form to HRPO this quarter and received subsequent approval to continue our research efforts for another year.

To continue our efforts to screen fraud in the study, we continue to follow our protocol, outlined in the second quarter's summary, to ensure that the participants we invite are indeed who they say they are. We continue to discuss these cases weekly and institute decision rules and get consultation as needed.

We continue to maintain relationships with our gift card vendors. This quarter, we updated our Target logos within study materials to reflect the latest Target usage terms and logos and received subsequent approval from Target for use of their logo for another year.

We have submitted four poster abstracts for submission at conferences using data from this study. One abstract was submitted to the Rocky Mountain Psychological Association (RMPA) 2014 conference and has been accepted. Three abstracts were submitted to the Association of Behavioral and Cognitive Therapies (ABCT) 2014 conference and acceptance results will be sent out in May.

The RAMP Project officially launched the eligibility survey on June 17, 2013. As of March 1, 2014: 1531 individuals completed the eligibility screening, 500 (250 couples) individuals were fully qualified and have been sent Survey 1 invitations, 418 participants (including 199 matched couples) have completed Survey 1, 158 Survey 2 invitations have been sent (79 couples), 156 participants have completed Survey 2 (including 77 matched couples). Thus far, approximately 95% of those invited complete Survey 1 in the allotted time (one month). Thus far, approximately 45% of couples completing Survey 1 are eligible for invitation into Survey 2. Of couples invited into Survey 2, thus far approximately 99% complete in the allotted time (two months). Our target is up to 1200 participants (600 couples) for Survey 1 so we remain behind schedule on recruitment. However, our weekly rate of recruitment has been steadily improving, except for the 2013 holiday season where we did have a relative lull.

Key milestones this quarter:

- **FY14, Yr2 Q4, 01-21-2014:** Brought on two additional Research Assistants (RAs) to assist with data downloads, recruitment, and eligibility screening and processing.
- **FY14, Yr2 Q4, 01-29-2014:** RAs completed the CITI Human Subjects research training, the Social and Behavioral research courses online, and the ethical/confidentiality statement.
- **FY14, Yr2 Q4, 01-29-2014:** Submitted materials and received acknowledgement of annual continuation of the study from HRPO.
- **FY14, Yr2, Q4, 02-03-2014:** Increased PRA time on the project from 50% FTE (20 hours/week) to 75% FTE (30 hours/week) in order to help with participant processing and survey builds. This is consistent with budget allocations already planned.
- **FY14, Yr2, Q4, 02-07-14:** Extended the contract for a consultant on the study to continue to help with recruitment.
- **FY14, Yr2, Q4, 02-12-14:** Submitted a COMIRB amendment to obtain approval for a press release to be released by the University of Colorado Denver about the study.
- **FY14, Yr2, Q4, 02-14-14:** Updated our Target logos within study materials to reflect the latest Target usage terms and logos; received full approval from Target to use their logo on our payment surveys and mailed documents with participants for the next year.
- **FY14, Yr2, Q4, 02-24-14:** Brought on an additional research assistant with army experience (and currently IRR) to help with recruitment and consultation on the study.
- **FY14, Yr2, Q4, 02-28-14:** Received acknowledgment of acceptance for poster submission at the 2014 Rocky Mountain Psychological Association.
- **FY14, Yr2, Q4, 03-01-14:** Submitted three poster submissions for acceptance at the 2014 Association of Behavioral and Cognitive Therapies (ABCT) using data from this study.
- **FY14, Yr2, Q4, 03-01-14:** RA with army experience completed the CITI Human Subjects research training, the Social and Behavioral research courses online, and the ethical/confidentiality statement.
- **FY14, Yr2, Q4, 03-01-14:** As of March 1, 2014: 1531 individuals completed the eligibility screening, 500 (250 couples) individuals were fully qualified and have been sent Survey 1 invitations, 418 participants (including 199 matched couples) have completed Survey 1, 158

Survey 2 invitations have been sent (79 couples), 156 participants have completed Survey 2 (including 77 matched couples).

- **FY14, Yr2, Q4, -3-01-14:** From the beginning of recruitment (6/17/14) to March 1, 2014, our recruitment efforts include:
  - (a) online classified ads (including those that target the military population);
  - (b) advertising on Army Wife Network, MilitaryWives.com, and Army Wife 101;
  - (c) Two separate blog postings on SpouseBuzz based on an interview with PI;
  - (d) circulation of an announcement for the study by Bill Coffin in various online military sites
  - (e) posting the study in various psychological research, military, and couples sites;
  - (f) snowball sampling;
  - (g) direct outreach to FRGs, USOs, WRC, ACS, Chaplains
  - (h) outreach to professional psychological organizations and military support organizations (e.g., ABCT- Military Psych Special Interest Group, Family Advocacy Program Coordinators, Yellow Ribbon Reintegration State Program Specialists, Family Readiness Division Coordinators/Liaisons; Military Family Research Institute, Military Suicide Research Consortium);
  - (i) posting comments on related media articles
  - (j) Facebook ads directed towards the population of our study
  - (k) Blue Star newsletter
  - (l) news articles in Killeen Herald and on Military.com about our study with an interview from the PI

### Key Research Accomplishments

Below are our key accomplishments, organized by task category and then quarter.

Table 1. Hiring and orientation of project staff, purchasing and installing equipment.

First Quarter	<ul style="list-style-type: none"> <li>• New project manager hired, oriented, and being trained on the project by old project manager who will be leaving at the end of June 2013 to complete her doctoral program requirements.</li> <li>• New project manager had completed CITI human subjects training at her prior university and has now completed additional CITI human subjects for this university. Orientation has been supplemented with regular meetings and readings.</li> </ul>
Second Quarter	<ul style="list-style-type: none"> <li>• 7 undergraduate volunteer research assistants, including 2 Army veteran volunteers, have been brought on to help with recruitment, data management, and survey building within Qualtrics.</li> <li>• All 7 undergraduate volunteer research assistants have completed CITI human subjects training and a confidentiality and ethical agreement for the lab. All are under the oversight of the PI, all training has been supplemented with regular meetings with core staff.</li> <li>• A new GRA (who began this in the prior quarter) has been fully hired, oriented, trained, and approved for all relevant roles (e.g., fiscal) within the project.</li> <li>• All subcontracts continue to be maintained/renewed as needed.</li> </ul>
Third Quarter	<ul style="list-style-type: none"> <li>• A new consultant has been hired on to specifically help with recruitment, including: (1) informing military community members about the study; (2) reviewing current recruitment efforts and advising staff on nature and placement of additional advertising and; (3) advising staff on content and strategies to make the current study website and Facebook page more effective.</li> <li>• All subcontracts continue to be maintained/renewed as needed.</li> </ul>
Fourth Quarter	<ul style="list-style-type: none"> <li>• Brought on two undergraduate research assistants (RAs) to help with recruitment, data downloads and processing, and eligibility screening; RAs completed CITI Human</li> </ul>

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	<p>Subjects, Social/Behavioral Research trainings, and an ethical/confidentiality agreement.</p> <ul style="list-style-type: none"> <li>• Brought on additional research assistant, an army veteran/current IRR, to help with recruitment and consultation; RA completed CITI Human Subjects, Social/Behavioral Research trainings, and an ethical/confidentiality agreement.</li> <li>• Extended the contract for a consultant to help with recruitment.</li> <li>• All subcontracts continue to be maintained/renewed as needed.</li> </ul>
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Table 2. Finalizing the initial item pool. -

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First Quarter	<ul style="list-style-type: none"> <li>• Item pool completely finalized and tested for surveys 1 and 2. Very close to finalized for surveys 3, 4, and 5, pending some development for unique contingencies, which could occur later in time for the sample such as re-deployment. These will be submitted as amendments when developed. Investigators and consultants on the project have reviewed completed the item pool in conjunction with aims, and provided feedback.</li> </ul>
Second Quarter	<ul style="list-style-type: none"> <li>• Item pool completely finalized and tested for surveys 1 and 2. Very close to finalized for surveys 3, 4, and 5, pending some development for unique contingencies, which could occur later in time for the sample such as re-deployment. These will be submitted as amendments when developed.</li> </ul>
Third Quarter	<ul style="list-style-type: none"> <li>• Item pool completely finalized and tested for surveys 1 and 2. Very close to finalized for surveys 3, 4, and 5.</li> <li>• After the latest COMIRB approval, we added a few measures and items that will allow us to more effectively capture the aims of the study, help with validity checks, and track our participants longitudinally.</li> </ul>
Fourth Quarter	<ul style="list-style-type: none"> <li>• Item pool completely finalized for survey 3 and revisions conducted on surveys 1 and 2. Item pools are very close to finalized for surveys 4 and 5.</li> <li>• Have clarified language on validity questions within the surveys to help ensure that participants know that the reason we ask validity questions is to make sure they are reading carefully.</li> </ul>

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Table 3. Creating IRB applications, obtaining initial IRB approval, and maintaining compliance.

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First Quarter	<ul style="list-style-type: none"> <li>• Received final approval letter for the Certificate of Confidentiality (COC).</li> <li>• Submitted revised documents to COMIRB and received subsequent approval to include additional information in the consent form regarding the COC and additional feedback changes requested by HRPO.</li> <li>• Submitted documents to HRPO for final review and received approval.</li> </ul>
Second Quarter	<ul style="list-style-type: none"> <li>• Submitted revised documents to COMIRB and received subsequent approval as detailed above.</li> <li>• Created an undergraduate research assistant protocol that is now signed by every research assistant that is helping with this project, including a confidentiality statement and an ethical adherence statement to ensure and maintain compliance with all staff, regardless of their role as official study personnel or not.</li> </ul>
Third Quarter	<ul style="list-style-type: none"> <li>• Submitted annual continuation form to IRB and received subsequent approval to continue our research efforts.</li> <li>• Submitted an IRB amendment and received subsequent approval for adding measures and updating eligibility requirements.</li> </ul>

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	<ul style="list-style-type: none"> <li>• These changes were also communicated to HRPO and designated by HRPO as not meeting HRPO reporting requirements. The communications regarding this approval sent to Regulatory Compliance Specialist.</li> <li>• All staff continues to maintain compliance with ethical and standards of the lab and IRB.</li> </ul>
Fourth Quarter	<ul style="list-style-type: none"> <li>• Submitted an annual continuation form to HRPO and received subsequent approval to continue our research efforts.</li> <li>• Submitted COMIRB amendment to obtain approval for a press release to be released by the University of Colorado Denver about the study.</li> </ul>

Table 4. Finalizing surveys for Phase 1 and Phase 2.

First Quarter	<ul style="list-style-type: none"> <li>• The eligibility survey, survey 1, survey 2, and the payment selection surveys have been finalized and entered into our online survey provider (Qualtrics) with appropriate skip logic, prompts, variable names, and variable labels.</li> <li>• Multiple pilot tests have been conducted on the surveys listed above to ensure proper working condition for study's official launch.</li> </ul>
Second Quarter	<ul style="list-style-type: none"> <li>• Survey 1 and subsequent payment surveys officially launched on 06-17-13.</li> <li>• Survey 2 is completed and has been launched.</li> <li>• Survey 3 is largely finalized and is in the process of being built in Qualtrics.</li> </ul>
Third Quarter	<ul style="list-style-type: none"> <li>• Survey 1 and subsequent payment surveys officially launched on 06-17-13.</li> <li>• Survey 2 is completed and has been launched.</li> <li>• Survey 3 is largely finalized and is in the process of being built in Qualtrics.</li> </ul>
Fourth Quarter	<ul style="list-style-type: none"> <li>• Survey 1 and subsequent payment surveys officially launched on 06-17-13.</li> <li>• Survey 2 is completed and has been launched.</li> <li>• Survey 3 built and tested in Qualtrics, almost ready to launch.</li> </ul>

Table 5. Developing and maintaining study materials and infrastructure.

First Quarter	<ul style="list-style-type: none"> <li>• Continuing to update our online resource and citation library via <i>Mendeley</i>.</li> <li>• Consent forms that incorporated feedback from HRPO and that were adapted for each of the five assessment points were approved and stamped by COMIRB.</li> <li>• Applications for the PRA and new project manager to get procurement cards have been submitted. PRA has completed the university-required trainings; new project manager is in the process of completing these trainings.</li> <li>• Transferred gift card custodianship from current project manager to PRA.</li> <li>• Received final approval to renew the University of Denver and George Mason University's subcontracts with the University of Colorado Denver's Office of Grants and Contracts.</li> <li>• Drafts of emails to participants for full range of study contingencies (e.g., invites, reminders, non-eligible for study note, payments) have been finalized.</li> </ul>
Second Quarter	<ul style="list-style-type: none"> <li>• Continuing to update our online resource and citation library via <i>Mendeley</i>.</li> <li>• Procurement card was received by the project manager and all university-required trainings were completed.</li> <li>• Transferred gift card custodianship from PRA to project manager on 09-06-13</li> </ul>

Third Quarter	<ul style="list-style-type: none"> <li>• Continuing to update our online resource and citation library via <i>Mendeley</i>.</li> <li>• Continue to work and maintain relationships with gift card vendors to ensure proper and timely payment to our participants.</li> <li>• Have created an annotated bibliography of Internet Research (e-Research) best methods to ensure best practices with this form of methodology.</li> <li>• Creating processes to check and double check all data downloads from Qualtrics to SPSS; creating decision rules to ensure proper cleaning and sorting of data.</li> </ul>
Fourth Quarter	<ul style="list-style-type: none"> <li>• Continuing to update our online resources and citation library via Mendeley.</li> <li>• Continue to work and maintain relationships with gift card vendors to ensure proper and timely payment to our participants.</li> <li>• Updated our Target study materials with Target’s current usage guidelines and logos; received approval from Target for our study materials for the next year.</li> <li>• Created processes to check and double check all data downloads from Qualtrics to SPSS; ongoing improvement of decision rules to ensure proper checking, cleaning, and sorting of data.</li> </ul>

Table 6. Recruitment.

First Quarter	<ul style="list-style-type: none"> <li>• Official study launch occurred on 06/17/13, which included rolling out the RAMP website (<a href="http://www.RAMPproject.net">http://www.RAMPproject.net</a>), a RAMP Facebook page (<a href="https://www.facebook.com/TheRAMPProject">https://www.facebook.com/TheRAMPProject</a>), and making the online Eligibility Enrollment survey available and accessible for interested participants to take.</li> <li>• Recruitment advertisements were set up through MilitaryWives.com and SargesList.com. A blog post about the study was on Spouse Buzz 6/25/13.</li> </ul>
Second Quarter	<ul style="list-style-type: none"> <li>• As of September 30, our recruitment efforts include: (a) online classified ads (including those that target the military population); (b) advertising on Army Wife Network and MilitaryWives.com; (c) a blog posting on SpouseBuzz based on an interview with PI; (d) circulation of an announcement for the study by Bill Coffin in various online military sites (e) posting the study in various psychological research, military, and couples sites; (f) snowball sampling; (g) direct outreach to FRGs; (h) outreach to professional psychological organizations and military support organizations (e.g., ABCT- Military Psych Special Interest Group, Family Advocacy Program Coordinators, Yellow Ribbon Reintegration State Program Specialists, Family Readiness Division Coordinators/Liaisons; Military Family Research Institute, Military Suicide Research Consortium); (i) posting comments on related media articles.</li> </ul>
Third Quarter	<ul style="list-style-type: none"> <li>• As of December 31, our recruitment efforts include: (a) online classified ads (including those that target the military population); (b) advertising on Army Wife Network and MilitaryWives.com; (c) a blog posting on SpouseBuzz based on an interview with PI; (d) circulation of an announcement for the study by Bill Coffin in various online military sites (e) posting the study in various psychological research, military, and couples sites; (f) snowball sampling; (g) direct outreach to FRGs; (h) outreach to professional psychological organizations and military support organizations (e.g., ABCT- Military Psych Special Interest Group, Family Advocacy</li> </ul>

Program Coordinators, Yellow Ribbon Reintegration State Program Specialists, Family Readiness Division Coordinators/Liaisons; Military Family Research Institute, Military Suicide Research Consortium);  
 (i) posting comments on related media articles  
 (j) Facebook ads directed towards the population of our study  
 (k) Blue Star newsletter  
 (l) news articles in Killeen Herald and on Military.com about our study with an interview from the PI

Fourth Quarter	<ul style="list-style-type: none"> <li>• From the beginning of recruitment (6/17/14) to March 1, 2014, our recruitment efforts have included:           <ul style="list-style-type: none"> <li>(a) online classified ads (including those that target the military population);</li> <li>(b) advertising on Army Wife Network, MilitaryWives.com, and Army Wife 101;</li> <li>(c) Two separate blog postings on SpouseBuzz based on an interview with PI;</li> <li>(d) circulation of an announcement for the study by Bill Coffin in various online military sites</li> <li>(e) posting the study in various psychological research, military, and couples sites;</li> <li>(f) snowball sampling;</li> <li>(g) direct outreach to FRGs, USOs, WRC, ACS, Chaplains</li> <li>(h) outreach to professional psychological organizations and military support organizations (e.g., ABCT- Military Psych Special Interest Group, Family Advocacy Program Coordinators, Yellow Ribbon Reintegration State Program Specialists, Family Readiness Division Coordinators/Liaisons; Military Family Research Institute, Military Suicide Research Consortium);</li> <li>(i) posting comments on related media articles</li> <li>(j) Facebook ads directed towards the population of our study</li> <li>(k) Blue Star newsletter</li> <li>(l) news articles in Killeen Herald and on Military.com about our study with an interview from the PI</li> </ul> </li> </ul>
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Table 7. Executing online surveys.

First Quarter	<ul style="list-style-type: none"> <li>• The RAMP Project officially launched the eligibility survey on 06/17/13.</li> <li>• Several individuals have completed eligibility, but examination of their responses suggests that many of them are not valid responders. Participants who are not eligible will be notified of their status. Processes are in place to invite eligible and interested participants into Survey 1 upon eligibility verification.</li> </ul>
Second Quarter	<ul style="list-style-type: none"> <li>• Examination of some eligibility responses suggests that many of them are not valid responders, and therefore processes are being followed to eliminate false responders.</li> <li>• The RAMP Project officially launched the eligibility survey on 06/17/13. As of September 30, 2013: 447 individuals completed the eligibility screening, 124 individuals were fully qualified and have been sent Survey 1 invitations (62 matched couples), 104 participants (49 matched couples) have completed Survey 1, 44 Survey 2 invitations have been sent (22 couples), 42 participants have completed Survey 2 (20 matched couples).</li> </ul>
Third Quarter	<ul style="list-style-type: none"> <li>• Examination of some eligibility responses continue to suggest that many of them are not valid responders, and therefore processes are continuing to be followed to eliminate false responders.</li> <li>• The RAMP Project officially launched the eligibility survey on 06/17/13. As of December 31, 2013: 799 individuals completed the eligibility screening, 268 (134 couples) individuals were fully qualified and have been sent Survey 1 invitations, 232</li> </ul>

participants (including 113 matched couples) have completed Survey 1, 116 Survey 2 invitations have been sent (58 couples), 109 participants have completed Survey 2 (including 52 matched couples).

Fourth Quarter	<ul style="list-style-type: none"> <li>• Examination of some eligibility responses continue to suggest that many of them are not valid responders, and therefore processes are continuing to be followed to eliminate false responders.</li> <li>• Created processes to ensure survey response continuity across all surveys to screen out fraudulent responders.</li> <li>• The RAMP Project officially launched the eligibility survey on June 17, 2013. As of March 1, 2014: The RAMP Project officially launched the eligibility survey on 06/17/13. 1531 individuals completed the eligibility screening, 500 (250 couples) individuals were fully qualified and have been sent Survey 1 invitations, 418 participants (including 199 matched couples) have completed Survey 1, 158 Survey 2 invitations have been sent (79 couples), 156 participants have completed Survey 2 (including 77 matched couples).</li> </ul>
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Table 8. Analysis and dissemination

First Quarter	<ul style="list-style-type: none"> <li>• N/A this quarter</li> </ul>
Second Quarter	<ul style="list-style-type: none"> <li>• N/A this quarter</li> </ul>
Third Quarter	<ul style="list-style-type: none"> <li>• A research assistant on the project will be using data from the first 150 males to complete survey 1 for an honors thesis. She defended her proposal this quarter and will be analyzing the data next quarter.</li> </ul>
Fourth Quarter	<ul style="list-style-type: none"> <li>• A research assistant on the project submitted a poster abstract, based on her honors thesis, to the Rocky Mountain Psychological Association (RMPA) 2014 and received notice of acceptance.</li> <li>• Three poster abstracts were submitted to the Association of Behavioral and Cognitive Therapies (ABCT) 2014 conference, acceptance decisions will be sent out in May.</li> </ul>

### Reportable Outcomes

Challenges in recruitment have caused a delay in producing reportable outcomes this year such as manuscripts and presentations. However, a research assistant on the project recently had a poster abstract accepted at the Rocky Mountain Psychological Association (RMPA) 2014 conference (Glenn and Allen, 2014; Appendix 1). This RA is also using data from Survey 1 to complete her undergraduate honors thesis. Further, three poster abstracts were submitted to the Association of Behavioral and Cognitive Therapies (ABCT) 2014 conference and we are waiting to hear of acceptance in May (Glenn et al., 2014; Kenny et al. 2014a, Kenny et al., 2014b; Appendices 2, 3, and 4). Another important reportable outcome is employment or research opportunities received based on experience/training supported by this grant.

- Over the course of the year, we have provided training and experience to three compensated Graduate Students and one Professional Research Assistant (who graduated from University of Colorado Denver December 2014).
- We have provided training and experience to eleven volunteer undergraduate Research Assistants this year.
- We have had subcontracts with four co-investigators and four consultants (three consultants at this time).

- Several measures have had initial development for this study; our data collection will allow us to test and refine them.
- 3 poster abstracts were submitted to the 2014 Association of Behavioral and Cognitive Therapies (ABCT) Conference (Glenn et al., 2014; Kenny et al. 2014a, Kenny et al., 2014b; Appendices 2, 3, and 4).
- 1 poster abstract was submitted and accepted at the 2014 Rocky Mountain Psychological Association (RMPA) conference (Glenn and Allen, 2014; Appendix 1).
- As of March 1, 2014, 250 couples have been invited into the study.

## Conclusions

This report highlights the progress and accomplishments during the second year of funding (March 2, 2013 to March 1, 2014) for the study: “Relationship Factors Contributing to the Progression of Combat Related PTSD and Suicidality Over Time” (publically known as the Relationships Among Military Personnel [RAMP] Project).

We officially launched the study on June 17, 2013 and have deployed surveys 1 and 2. Throughout this year, we have employed several low-cost or no-cost recruitment strategies that have yielded us 250 couples invited into the study. During the past year, we have provided training and experience for 11 undergraduate Research Assistants (RAs) including CITI human subjects training, ethical and confidentiality training, weekly lab meetings, and supervision from study personnel.

We have submitted four COMIRB amendments and received approvals for minor modifications such as: (a) hiring one new graduate research assistants (b) continually updating and improving the item pool to be used across all five surveys, (c) continually increasing our recruitment avenues and efforts, (d) expanding our eligibility criteria to extend the time since deployment, (d) continually updating our website to better engage potential participants, (e) temporarily downloading IP addresses in order to help screen fraudulent individuals out, and (f) approval for a press release about the study.

Examination of certain eligibility responses from our participants suggests that many individuals are attempting to join the study fraudulently. We had anticipated this in our methods and had a screening process in place, but have expanded our time and options (e.g., also using IP address) for a close case by case evaluation of applicants. We have also created an annotated bibliography of Internet Research (e-Research) studies and methods to ensure best practices with this form of methodology. In response to our difficulties in recruitment and the delay that has brought to enrolling eligible participants, we are currently preparing for a one year no-cost extension.

We have submitted three poster abstracts to the 2014 Association of Behavioral and Cognitive Therapies (ABCT) (Glenn et al., 2014; Kenny et al. 2014a, Kenny et al., 2014b; Appendices 2, 3, and 4). One poster abstract was submitted and accepted at the 2014 Rocky Mountain Psychological Association (RMPA) conference (Glenn and Allen, 2014; Appendix 1).

We feel prepared going into Year 3, and look forward to providing our funders with updates on the project. Thank you for the opportunity to conduct this work and share with you our progress.

## References

- Glenn, D. A., Allen, E. (2014). *The effects of perceived burdensomeness and failed belongingness on the relationship between combat exposure and the acquired capability of self-injury*. Poster to be presented at the 2014 Rocky Mountain Psychological Association Conference. Salt Lake City, UT.
- Glenn, D. A., Allen, E., Renshaw, K., Fredman, S. J., Kenny, J. J., Kern, C. A. (2014). *Associations between numbing symptoms of PTSD and perceived burdensomeness: The role of partner support*. Poster submitted to the 2014 Association for Behavioral and Cognitive Therapies. Philadelphia, PA.
- Kenny, J. J., Allen, E., Kern, C. A., Glenn, D. A., Renshaw, K. (2014a). *Advancing our understanding of the impact of physical injury on intimate relationships for military personnel*. Poster submitted to the 2014 Association for Behavioral and Cognitive Therapies Conference. Philadelphia, PA.
- Kenny, J. J., Allen, E., Fredman, S. J., Rhoades, G., Kern, C. A., Glenn, D. A., Renshaw, K. (2014b). *A comparison of male and female partner perceptions of accommodation to PTSD symptoms*. Poster submitted to the 2014 Association for Behavioral and Cognitive Therapies Conference. Philadelphia, PA.

## Appendices

### **Appendix 1**

#### The effects of perceived burdensomeness and failed belongingness on the relationship between combat exposure and the acquired capability of self-injury

Authors: Danielle A. Glenn and Elizabeth. S. Allen

The Interpersonal Psychological Theory of Suicide includes three critical risk factors: a sense of burden, low belonging, and the capability for self-injury. Using a military population, the current study evaluated the possible potentiating effects of psychological pain in the relationship between combat exposure and the acquired capability of self-injury.

### **Appendix 2**

#### Associations between numbing symptoms of PTSD and perceived burdensomeness: The role of partner support

Authors: Danielle A. Glenn, Elizabeth S. Allen, Keith Renshaw, Steffany J. Fredman, Jessica J. Kenny, Catherine A. Kern

PTSD symptoms, particularly emotional numbing, are associated with relationship distress (e.g., Taft, Schumm, Panuzio, & Proctor, 2008). Moreover, symptoms of PTSD are associated with a greater perception of being a burden, and again, this association is particularly strong for avoidance/numbing symptoms (Monteith, Menefee, Petit, Leopoulos, & Vincent, 2013). Importantly, a personal sense of being a burden on others is a risk factor for suicidal ideation and behavior (Joiner, 2005). Thus, understanding the link between PTSD and perceptions of burdensomeness is important. There are likely many factors which could help explain this association. The focus of the current study is to examine the extent to which a lower level of contribution to one's intimate relationship might mediate the association between PTSD-related avoidance/numbing and sense of oneself as a burden.

To address this question, the current study will analyze self-report data from Active duty Army males and their female civilian partners. These participants were recruited through general nationwide and military targeted advertising to participate in a larger online, longitudinal study. Couples had to be aged 18-65, English fluent, and in a long term relationship. Couples consisted of a female civilian partnered with a male who had a recent combat deployment while in the Army, Army Reserves, or Army National Guard. At this writing, 120 couples have been recruited; data collection is ongoing and it is anticipated that 200 couples will be available for analysis. Initial analyses confirmed the finding in the literature that, whereas all self-reported male PTSD clusters are associated with males' sense of self as a burden, the emotional numbing symptom cluster was most strongly related to burden.

Specifically, correlations with a sense of burdensomeness were .35 for re-experiencing, .64 for emotional numbing, .37 for situational avoidance, and .50 for hyperarousal.

In this study, PTSD is measured with the PTSD Checklist (PCQ; Weathers, Litz, Herman, Huska, & Keane, 1993) and sense of self as a burden is measured with the perceived burdensomeness scale from the Interpersonal Needs Questionnaire (INQ; Van Orden, Witte, Gordon, Bender, & Joiner, 2008). Level of contribution to the intimate relationship will be operationalized by the degree to which the male reports that he provides social support to the female partner (based on the Support Provided scale of the Berlin Social Support Scales; BSS, Schulz & Schwarzer, 2004) and general items regarding how much the female partner reports that he contributes to parenting (when relevant) and domestic tasks. The female partner also provides a concurrent rating on a parallel measure of the social support that the male provides to her (the Support Received scale of the BSS), thus enabling us to evaluate the relative role of these two perceptions of his support.

A better understanding of the factors that contribute to a perception of oneself as a burden can help identify targets for intervention. This study will be particularly useful in increasing our understanding of the mechanisms of the link between PTSD and burden, and the dynamic interpartner perceptions of contributions to the relationship when emotional numbing symptoms are present.

### **Appendix 3**

#### Advancing our understanding of the impact of physical injury on intimate relationships for military personnel

Authors: Jessica J. Kenny, Elizabeth S. Allen, Catherine A. Kern, Danielle A. Glenn, Keith Renshaw

When a soldier returns home with war wounds, whether psychological, physical, or both, their relationships and families are impacted. While current research trends appear to be focused on the psychological and emotional stressors that returning from deployment may have on a soldier's relationships (e.g. Allen et al., 2009), far less is known about the impact of a combat related physical injury on relationship functioning. MacDermid Wadsworth (2010) suggests that injury to a service member leads to potentially drastic changes in family roles and the overall emotional climate of the family. An increased understanding of how a combat injury may impact relationship dynamics is important.

Using male soldier responses to multiple questions about injury, including an open-ended question regarding the impact of injury on their relationship with their intimate female partner, we plan to identify themes that may aid in understanding of the specific dynamics of relationships that are affected by physical injury. This data is from a sample of military males who have endured a combat-related injury, drawn from a larger longitudinal sample of military males who are within 1 year of returning from a hardship deployment and have been in a serious relationship for at least a year. There are currently 168 participants, 30 (17.8%) of whom have endured a combat related injury. Recruitment is ongoing, and if we continue at a rate of 17.8%, we may have 60 or more in time for analyses. Of the current sample of 30 males, the mean age is 33, and 50% have a score of 36 or higher on the PTSD Checklist (PCL; Weathers et al., 1993). A total score of 30 or above is considered to be PTSD positive for the general population as well as military populations (Bliese et al., 2008).

Coding will follow the recommendations of Hruschka et al. (2004), including segmentation of text, codebook creation, coding, initial assessment of reliability, codebook modification, and final coding with assessment of reliability. Preliminary results, based on the current sample of 30 soldiers, suggest themes such as increases in irritable mood, a lack of ability to fulfill household duties, no change in relationship, and/or increases in closeness and support (post-injury growth). Given that these questions were asked in the context of a rich longitudinal, dyadic (i.e. also including partner responses) dataset, we will be able to contextualize these responses in the larger social ecological framework.

The results of this study will contribute to the understanding of the impact of physical wounds on military relationships and aid in the future assessment of this area of reintegration. Clinically, this will help to bring awareness to other impacts of war that affect relationships aside from the psychological and emotional wounds. This will allow the field to provide more holistic and comprehensive clinical services to service men and their families upon return from deployment.

### **Appendix 4**

#### A comparison of male and female partner perceptions of accommodation to PTSD symptoms

Authors: Jessica Kenny, Beth Allen, Steffany J. Fredman, Galena Rhoades, Catherine A. Kern, Danielle A. Glenn, Keith Renshaw

Between 10% and 18% of service members returning from OEF/OIF show significant signs of PTSD symptoms (Hoge et al., 2006). PTSD symptoms are associated with poorer relationship adjustment in

military/veteran samples (e.g. Allen et al., 2009). This association is bidirectional, in that PTSD symptoms appear to increase relationship distress, but also that criticism and other negative behaviors by partners impede recovery from PTSD (Tarrier et al., 1999). Monson, Fredman, and Dekel (2010) have theorized that partners' altering their own behaviors in response to patients' PTSD symptoms to minimize patient distress or PTSD related relationship conflict may also have negative implications for the patient, the partner, and the couple's relationship adjustment. These behaviors, referred to as "partner accommodation to PTSD symptoms," have been operationalized in the form of a partner self-report questionnaire, the *Significant Others' Responses to Trauma Scale* (SORTS; Fredman et al., 2008). Greater accommodation is associated with partners' perceptions of patient PTSD severity, patient and partner depressive severity, and patient and partner anger and marital distress (Fredman et al., 2014). However, we lack knowledge regarding patient perceptions of these partner accommodating behaviors. To address this, we adapted the SORTS to assess trauma survivors' perceptions of their partners' accommodation to the survivors' own PTSD symptoms, the *Perception of Significant Others' Responses to Trauma Scale* (PO-SORTS). In a broader study of soldiers recently returned from deployment and their civilian partners, we gathered data on both the SORTS (from spouses/partners) and the PO-SORTS (from soldiers).

The first aim of this study is to determine psychometric adequacy of the PO-SORTS, following the same steps that Fredman et al. (2014) utilized in their validation of the SORTS (e.g. overall internal reliability and correlation with PTSD symptoms). The second aim of the study is to (a) compare the SORTS and the PO-SORTS in terms of factor structures and (b) examine concordance between patient and partner perceptions of partner accommodation to PTSD. This will allow us to see how the individuals' perceptions of ostensibly the same behaviors converge.

This study uses online survey data from a national sample of military couples in which the soldier has experienced a hardship deployment and is at risk for PTSD. Eighty couples have completed measures and with ongoing data collection we anticipate that an estimated sample of 300 couples will be available for analysis. Thus far, 50% of males in this sample have a PCL score of 30 or higher (PTSD Checklist; Weathers et al., 1993).

Results from this study will help to elucidate the cross-sectional concordance between patient and partner perceptions of partner accommodation. Continuing to use our on-going longitudinal data set, this research will help to elucidate the cross-sectional concordance between patient and partner perceptions of partner accommodation. Further, it will lay the groundwork for future research on the implications of accommodation and perceptions of accommodation for PTSD symptoms, suicidality, and relationship adjustment over time.