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14. ABSTRACT The overall objectives of this study are to: (I) demonstrate the effectiveness of the Yellow Ribbon Reintegration Program (YRRP); and (II) examine the role and potential of the YRRP as a post-deployment community-building platform to restore and to enhance the psychological health of service members and their family members. Assessments include short surveys at YRRP sites focusing on program elements, and telephone followup surveys identifying individual, family and community factors affecting service member and family reintegration. Data collection is scheduled to be completed in the middle of Year 3. Aim 1 analyses demonstrate the efficacy of the YRRP as a military family-centered reintegration training program. Preliminary findings show an overall increase in the knowledge and ability aspects of self-efficacy regarding post-deployment reintegration issues over the course of the YRRP event, and a further overall increase after attendance at a second YRRP event. Further, the initial gain of family members is greater than soldiers. There was no improvement in attitude toward stigma of mental illness as a result of attending YRRP. These preliminary findings are consistent with a previous pilot study. Overall, the results point to the importance of large-scale secondary prevention program implementation for both National Guard members and their families.

**Family as a Total Package: Restoring and Enhancing Psychological
Health for Citizen Soldiers and Families
(FAMPAC)**

**Cooperative Agreement Number W81XWH-11-2-0108
Annual Report Number 1
March 2012**

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A. INTRODUCTION

The overall objectives of this study are to: **(I)** demonstrate the effectiveness of the Yellow Ribbon Reintegration Program (YRRP); and **(II)** examine the role and potential of the YRRP as a post-deployment community-building platform to restore and to enhance the psychological health of service members and their family members. The National Defense Authorization Act in 2008 (P.L. 110-181) mandated a nation-wide expansion of the YRRP; it represents one of the DoD's responses to the reintegration needs of returning service members and their families.

Following from these overall objectives, study specific aims are: **(1)** demonstrate the efficacy of the YRRP as a military family-centered reintegration training program; **(2)** examine enhanced learning effects due to family member participation in the YRRP; **(3)** identify program components and contexts that enhance self-efficacy for restoring and enhancing psychological health; **(4)** identify the psychological health, family, and other reintegration needs, and service use, and barriers to care among service members and families; **(5)** identify dyadic relations which decrease the chance of service members' long-term psychological injuries; and **(6)** deliver recommendations to develop evidence-based family postvention resiliency building programs tailored to YRRP.

The current study design consists of: **(i)** collecting on-site short surveys at the beginning and end of each 30-day (T2 & T3) and 60-day (T5 & T6) post-deployment YRRP (SOW Task 3); **(ii)** conducting telephone followup surveys with service members (experimental group) and their spouses/partners who attended YRRP and also with service members who did not attend YRRP (control group) during the interval of time between the 30- and 60-day post-deployment period (T4) (SOW Task 3); and **(iii)** conducting a second in-depth followup interview 6 months post-deployment (T7) (SOW Task 4). Further, data from the YRRP on-site short surveys will be augmented by the analysis of After Action Reports (AAR) collected by the Missouri National Guard (T3 & T6) (SOW Task 3).

B. BODY

The Principal Investigator (PI) and project manager (PM) have provided all requested and required documents to CDMRP, U.S. Army Medical Research Acquisition Activity (USAMRAA), and U.S. Army Medical and Research and Materiel Command (USAMRMC) Human Research Protection Office (HRPO) both before and since the award date for this project. The three quarterly progress reports were submitted on time for the first year of the study. This annual progress report summarizes activities for the first year of the study, and is inclusive of previously reported completed tasks in the quarterly progress reports for the first year.

B1. Statement of Work (SOW) Tasks 1 and 2.

SOW Task 1 items (instrumentation, human subject approvals, and start up) and Task 2 items (staffing, training, and other preparations to implement fieldwork) were either completed or mostly completed during the first quarter of year one of the study, on or ahead of schedule. Institutional Review Board (IRB) approval was obtained from Washington University's Human Research Protection Office (HRPO) November 9, 2010 in advance of the February 15, 2011 award date. U.S. Army Medical and Research and Materiel Command (USAMRMC) Office of Research Protection (ORP), Human Research Protection Office (HRPO) approved the study on March 31, 2011. Ad-hoc consultation was conducted with members of the Missouri Military and Veterans (MMV) Health Consortium during the first quarter to develop and refine data collection instruments. The PI, Co-Investigators, and the PM began to liaison with Missouri National Guard (MONG) YRRP leadership to coordinate attendance at YRRP for data collection efforts on February 28, 2011. Data entry programs for on-site YRRP short surveys and scheduling and tracking of participants, as well as the web-assisted telephone survey modules for the T4 interviews, were developed during the first quarter.

A major revision to the T4 and T7 instruments was completed in September 2011 after the initial stage of data collection. Washington University HRPO approved the changes and gave annual continuing review approval to the FAMPAC study on October 21, 2011. The USAMRMC HRPO acknowledged the continuing review approval on December 14, 2011. The FAMPAC study currently has Institutional Review Board (IRB) approval until October 19, 2012.

We began to hire and train personnel for the study during the 1st quarter, and have continued to do this since then. Training is expected to be an on-going task throughout the course of the study as current staff members move onto other activities and new staff members are hired.

The first collaborator meeting was held on June 1, 2011, with subsequent collaborator meetings held quarterly since then (September 7, 2011; January 11, 2012). In addition to quarterly collaborator meetings, several regular subgroup and ad hoc meetings to cover instrument revisions, fieldwork issues, data quality assurance, data analysis strategies, and publications have been held as well. The strategy of quarterly collaborator meetings supplemented by subgroup and ad hoc meetings were judged optimal and time efficient for the needs of the study. We plan to continue this approach over the course of the FAMPAC study. Further, Co-Investigators are invited to lab meetings which are held at least twice per month. Lab meetings focus on fieldwork issues, data analysis, manuscript preparations, and other lab issues.

B2. SOW Task 3 and 4.

Several Task 3 items were started during the first quarter, over two months ahead of schedule. Data collection efforts are the primary focus of Task 3 activities, and will be the primary focus of this study until the mid part of Year 3 of this study. Data collection began on April 30, 2011 with attendance at the first 30-day YRRP event. The Washington University study team has attended three Post 1 (30-day) YRRP events (April 30-May 1, August 6-7, December 10-11) and three Post 2 (60-day) events (June 4-5, September 10-11, and January 7-8, 2012) for pre-and post-survey data collection. These are all post-deployment YRRPs held for the Missouri Army National Guard (MOARNG), the population of the FAMPAC study. T4 telephone interviews began on June 17, 2011 (Month 5, on schedule). Follow up T7 telephone interviews (Task 4) also began on schedule on November 1, 2011 (Month 9, on schedule).

Table 1 (next page) provides accrual numbers for each of the sample groups across relevant data points (T2-T3, T4, T5-T6, and T7). This table is structured in a format consistent with the Statement of Work (SOW) for easy comparison. Table 1 has four columns consisting of previous reported cumulative accrual numbers (Month 9 – Quarterly Report #3), current reporting period cumulative accrual numbers (Month 12), planned cumulative accrual numbers for the next month detailed in the SOW, and final sample size goals for the study. **Figure 1** shows current sample accrual in a flow chart format. Fieldwork recruitment is largely behind schedule according to the scheme of the SOW, in part because the quarterly sample size accrual goals detailed in the SOW spread fieldwork data collection uniformly over the course of the study. However, actual numbers available at the specific data points will fluctuate per quarter depending on the deployment tempo (and thus demobilization) of the Missouri Army National Guard (MOARNG), which is beyond the control of the study team. Limited numbers of MOARNG service members returned in the last several months. Several large sized MOARNG units begin to return from deployment beginning in the spring of 2012. This should put sample accrual numbers back on schedule with the SOW within the next few months. The most recent YRRP schedule provided by the MONG YRRP team shows that there are enough units returning over the next two years of the study to successfully meet the recruitment goals specified in the SOW. The next MOARNG YRRP event is May 6-7, 2012.

Recruitment of control group participants proved difficult. The PI has discussed the problem with the Scientific Officer (SO), LCDR Mark Clayton; and the PI is currently monitoring the situation. We attempt to recruit the control group sample from those service members that have returned from deployment, but did not attend a YRRP program as mandated. The MONG is assisting with the recruitment of participants in the control group by identifying and contacting

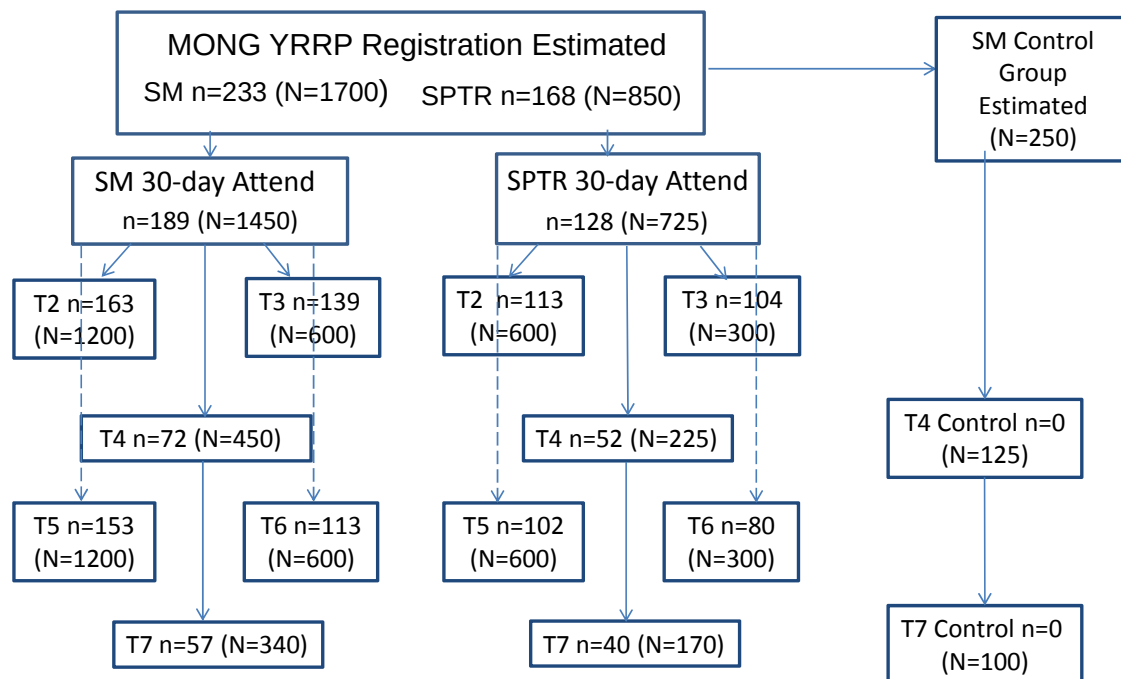
the potential participants for the control group on behalf of the study team (HRPO approval obtained February 7, 2012). The MONG YRRP team identified 21 MOARNG soldiers that have not attended a YRRP event and emailed them with information about participating in the study on February 10, 2012. One interview has been scheduled so far, but was completed after the current reporting period (February 14, 2012).

An alternative approach is being discussed with the SO to assess the effect of YRRP attendance over time. This approach uses “dose response” outcomes with respect to the number of YRRP events attended. The scientific merit of the control group as defined originally was to assess the efficacy of YRRP programs over and above the effects of contexts outside YRRP and of over time natural maturation. However, we found that over half of the service members in fact reported attending other YRRP trainings. Thus, the cumulative effects of YRRP trainings, operationally defined as the number of YRRP events attended would be a better measure to use. Furthermore, this option would also resolve the potential complications due to “cross-over” of participants from control (no YRRP after the most recent deployment) to experimental group or vice versa (e.g., a respondent who was determined not to have participated in a given YRRP, is found to have participated in another YRRP at the time for a telephone followup). This design change is conceptual and analytical; thus would not involve changes in current data collection procedures.

Data management procedures have been established to encompass the longitudinal data collection and followup interview process. Quality assurance efforts to ensure the integrity of the data are fully implemented. Procedures for ensuring the integrity of on-site YRRP short survey data entry have been developed in consultation with the statistician for the study, Dr. Ken Schechtman at the onset of the study. A first and second edit protocol has been developed. The interviewer completes the first edit at the end of the interview to check her work; the second edit is done later and involves a detailed review addressing several areas.

Table 1. Sample groups and Statement of Work (SOW) cumulative accrual goals.				
Sample groups and data collection points	Previous period cumulative accrual (Month 9)	Current reporting period cumulative accrual (Month 12)	Next SOW period cumulative accrual (Month 13)	Final sample size goals
T2-T3 30-day Pre- and Post-YRRP surveys¹				
Service member experimental	145	163	360	1200
Supporter	101	113	180	600
Combined	246	276	540	1800
T4 follow up interviews				
Service member experimental	61	72	135	450
Supporter	46	52	68	225
Service member control	0	0	37	125
Combined	107	124	240	800
T5-T6 60-day Pre- and Post-YRRP surveys¹				
Service member experimental	128	153	360	1200
Supporter	91	102	180	600
Combined	219	255	540	1800
T7 follow up interviews				
Service member experimental	21	57	76	340
Supporter	15	40	38	170
Service member control	0	0	22	100
Combined	36	97	136	610
Notes: 1. Numbers reported are based upon those respondents turning in T2 / T5 pre –surveys.				

Figure 1. FAMPAC Sample Categories, Time Period, and Accrual Numbers (Feb 15, 2011 - Feb 14, 2012)



Notes: (1) SM=Service Member, SPTR=Supporter (2) n=current sample size, N=goal sample size over course of study (3) T2, T3, T5, and T6 participants are not necessarily the same people. For example, some may have completed only T3 survey, but not T2, etc. (4) Some of those completing T5 and T6 surveys did not attend the 30-day YRRP. (5) SM Control Group Population: Potential candidates to recruit for the Control Group include those that are “No Shows” on the registration list and those that never registered to attend YRRP.

B3. SOW Tasks 5 and 6.

Tasks 5 & 6 consist primarily of data analysis and dissemination efforts. These items are in progress and will continue throughout the duration of the study. A summary of analysis and dissemination efforts is provided below in section C.

C. KEY RESEARCH ACCOMPLISHMENTS

Using the data from YRRP short surveys that include pre- and post-YRRP data collection of Missouri National Guard service members returning from a Kosovo peace-keeping mission and those returning from Iraq and Afghanistan, we (Price et al., in submission) found that:

- The knowledge and ability aspects of self-efficacy regarding reintegration and psychological health improved at the end of each YRRP event and over the two repeated YRRP event exposures.
- Family members' initial gain was larger than service members.
- Attitude toward stigma of mental illness did not improve as a result of participating in YRRP training and this was observed both for service members and their family members.
- The results are comparable between Kosovo returnees and Afghan and Iraq returnees, despite considerable differences in combat experience.

We conducted analysis of YRRP short surveys to identify the need for and the type of psychosocial services accessed by MONG service members and their family members following their deployment to Iraq and Afghanistan. Results (Matthieu et al., in submission) show that:

- Both service members and their family members reported highest levels of needs for services related to education and health and least for legal issues, family or relationship concerns, mental health, and employment.
- Of service members and their family members who expressed a need at either a 30- or 60- day post-deployment YRRP event, over 50 % had their needs met regardless of the type of service.

The telephone followup results last tabulated for main variables, while preliminary, show that:

- While service members are predominantly male (80%), supporters are mostly spouses or significant others (95% female).
- About half and one third of service members and supporters, respectively, have a 4 year college degree or higher level of education.
- Childhood parental problems were shared similarly by both service members and supporters, for example, about 25 % reported a parent having had a problem with drugs, and about 40% reported parents' divorce or separation.
- Although war-zone experiences were higher among service members, as expected, other stressful life events were often similar between service members and supporters (e.g., death of someone close was 68% among service members and 60% among supporters).
- Indicators of psychological health are rather similar between service members and supporters (e.g., past month visit to professional for psychological problem was 12% among service members and 12% and 10% among supporters), although psychological problems during deployment was higher among supporters (17% among service members vs. 37% among supporters).
- Levels of depression and PTSD symptoms were slightly worse among supporters, compared to service members (PHQ means among service members was 3.6 vs. 5.7 among supporters; PCL means among service members 27.0 vs. 28.3 among supporters).

Taken together, family members appear to have experienced about the same level of stress and even PTSD symptoms as have soldiers.

D. REPORTABLE OUTCOMES

Conference and meeting presentations are listed below:

Price RK. Family as a Total Package (FAMPAC): Restoring and Enhancing Psychological Health for Citizen Soldiers and Families. Presented at the Annual Military Operational Medicine Research Program (MOMRP) / Joint Program Committee Military Operational Medicine (JPC5) In Progress Review (IPR) Meeting, July 2011, Frederick, Maryland.

Widner G, Matthieu MM, True WR, McGhee KL, Kilmer R., Proctor E, Schechtman K, Balan S, Swensen A & Price RK. Restoring and enhancing psychological health of Missouri's citizen soldiers and families: a university-military partnership. Washington University Institute for Public Health Fourth Annual Conference, poster presentation. October, 2011.

Balan S, Widner G, Matthieu MM, True WR, McGhee KL, Kilmer R., Proctor E, Schechtman K, Swensen A & Price RK. Restoring and enhancing psychological health of Missouri's citizen soldiers and families: Preliminary findings from the first three phases. Washington University School of Medicine, Department of Psychiatry, Second Annual Postdoc/Predoc Poster Symposium, poster presentation. October, 2011.

Price RK, Winder G, Balan S. Trauma spectrum disorder: Implications for substance abuse research of traumatized populations. College on Problems of Drug Dependence, 71th Annual Scientific Meetings, Hollywood, FL, June 2012 (abstract accepted for poster presentation).

E. CONCLUSION

So far, the data point to the evidence that a large-scale brief secondary prevention program, such as the Yellow Ribbon Reintegration Program (YRRP) implemented for National Guard

members and family members is effective in changing perceptions about self-efficacy in the short-term. However, perception toward stigma appears to be deeply embedded in the culture of the military as well as in the community. It is more difficult to change the perceived stigma associated with psychological problems than self-efficacy.

Our data justify repeated YRRP events after demobilization. They also justify the costs for inclusion of family members in the YRRP events.

Telephone followup surveys assessing individual characteristics, mental health and reintegration issues indicate an increased need for family-level prevention and intervention efforts because levels of stress and psychological strains among family members are at times similar or slightly higher than service members, even though most family members were not deployed to overseas conflict regions.

Based on our findings related to the stigma of psychological problems in the military, we obtained seed funding to test our Phase II clinical trial of a stigma reduction training targeted to National Guard service members and their families. Currently, the feasibility and acceptability of a group training utilizing Motivational Interviewing is being assessed.

F. REFERENCES

Price RK, Matthieu M, Widner G, McGhee KL, Balan, S, Proctor E, True WR. Efficacy of A Mandate Reintegration Program for National Guard Service Members and Their Families (in submission – American Journal of Public Health).

Matthieu M, Widner G, Chen HJ, Proctor E, True W, Price RK. Yellow Ribbon Reintegration Programs: Improving Access to Care for Returning National Guard Service Members and Their Spouses (in submission – Military Medicine).

G. APPENDIX COVER PAGE

Family as a Total Package: Restoring and Enhancing Psychological Health for Citizen Soldiers and Families

Appendix Item

PI Presentation: Family as a Total Package (FAMPAC): Restoring and Enhancing Psychological Health for Citizen Soldiers and Families. Presented at the Annual Military Operational Medicine Research Program (MOMRP) / Joint Program Committee Military Operational Medicine (JPC5) In Progress Review (IPR) Meeting, July 2011, Frederick, Maryland.

Scientific Poster Presentation: Restoring and Enhancing Psychological Health of Missouri's Citizen Soldiers and Families: A University-Military Partnership. Washington University Institute for Public Health Fourth Annual Conference, poster presentation. October, 2011.

Abstract: Efficacy of A Mandate Reintegration Program for National Guard Service Members and Their Families (manuscript in preparation – American Journal of Public Health).

Abstract: Yellow Ribbon Reintegration Programs: Improving Access to Care for Returning National Guard Service Members and Their Spouses (manuscript in preparation – Military Medicine)

	 Washington University in St. Louis SCHOOL OF MEDICINE	 GEORGE WARREN BROWN SCHOOL of Social Work	
Family as a Total Package (FAMPAC): Restoring and Enhancing Psychological Health for Citizen Soldiers and Families Rumi Kato Price, PhD, MPE Department of Psychiatry Washington University School of Medicine Award Number: W81XWH-11-2-0108 (Feb 2011 – Feb 2014) Contract Officer Representative: Mr. Ayi Ayayi Project Officer: Mark D. Clayton, PhD, LCDR, USPHS			

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- ☐ Center for Mental Health Services Research (CMHSR)
- ☐ Brown Center for Violence and Injury Prevention (BCVIP)
- ☐ VA Health Services Research & Development
- ☐ Anonymous donors
- ☐ Co-Investigators and collaborators
 - William True, PhD, MPH, WUSM, Dep't of Psychiatry
 - Enola Proctor, PhD, WU School of Social Work
 - Monica Matthieu, PhD, LCSW, WU Social Work
 - Ken Schechtman, PhD, WUSM, Division of Biostatistics
 - LTC K. Llewellyn McGhee, DMin, MO National Guard
 - LTC Regina Kilmer, MA, MO National Guard
 - Jay McDonald, MD, St. Louis VA Medical Center
 - Gregory Widner, MSW, WUSM Dep't of Psychiatry

Study Background & Rationale

- ❑ WU collaboration with the MONG since 2006.
- ❑ Missouri Military & Veterans (MMV) Health Consortium formed in 2009 to assist in improving health and other reintegration services for military personnel and veterans in Missouri.
- ❑ Yellow Ribbon Reintegration Program (YRRP):
 - ❖ A mandated universal secondary prevention program for Guard and Reserves.
 - ❖ Enacted in 2008 but evidence of efficacy missing.
 - ❖ Potential for success as an unprecedented public health campaign by military in a civilian environment.
- ❑ MONG represents a Guard population reintegrating back to geographically-spread rural communities. Long-term effects of deployment and reintegration not studied.
- ❑ FAMPAC focus on post-deployment psychological health reintegration among soldiers and their families.



Yellow Ribbon Reintegration Program



Research Question(Specific Aims)

- ☐ Demonstrate the efficacy of the YRRP as a military family-centered reintegration training program.
- ☐ Examine enhanced learning effects due to family member participation in the YRRP.
- ☐ Identify program components and contexts that enhance self-efficacy for restoring and enhancing psychological health.
- ☐ Identify the psychological health, family, and other reintegration needs, and service use, and barriers to care among service members and families.
- ☐ Identify dyadic relations which decrease the chance of service members' long-term psychological injuries.
- ☐ Deliver recommendations to develop evidence-based family postvention resiliency building programs tailored to YRRP.

Hypotheses

- ☐ **Booster effect is detectable with repeated exposures to YRRP (Aim 1).**
- ☐ **Self-efficacy improvement due to YRRP is detectable up to 6 months (Aim 1).**
- ☐ **Family participation increases YRRP efficacy (Aim 2).**
- ☐ **YRRP briefings and sessions designed by MONG receive better ratings than standard briefings delivered by contract service providers (Aim 3).**
- ☐ **Individual psychopathology affects the level of individual-based barriers to help seeking (Aim 4).**
- ☐ **Unit characteristics are an independent predictor of stigma (Aim 4).**
- ☐ **Family-dyad measures improve prediction of service member's post-deployment psychological health beyond prediction based solely on service members characteristics (Aim 5).**

Design and Methodology: Longitudinal Design Details

Time Point	T1	T2	T3	T4	T5	T6	T7
Description samples for main data sources	Pre-deployment	30-day post-deployment		Between 30- & 60-days	60-day post-deployment		6-month post-deployment
Aim 1, 2, 4 & 6 YRRP WU on-site survey sample: (n~1,200 Guards; n~600 supporters)		Pre-YRRP	Post-YRRP		Pre-YRRP	Post-YRRP	
Aim 3 YRRP MONG on-site reports sample: total ~1200 (Guards & n~600 supporters)		Anonymous After-Action Report		Limited post YRRP assessment via phone interview	Anonymous After-Action Report		Limited 6-month assessment via phone interview
Aim 4 & 5 WU Telephone follow-up sample (YRRP participant Guards n=450, spouses n=225, T4; non-participants Guards n=125, T4)	Retrospective assessment at T4			Post-deployment up to T4			Post-deployment from T4 to T7
Assessment type	Phone interview administered at T4	Short self-administered surveys		Phone interview administered at T4	Short self-administered surveys		Phone interview administered at T7

Design and Methodology: Weekend Training (“intervention” sessions)

Friday (Soldiers are required to wear ACU uniform)

Your weekend at a glance

	1000-1130	1130-1300	1300-1320	1320-1420	1420-1450	1500-1530	1530-1600
<i>Patrol</i>	REGISTRATION TB TEST	LUNCH	Commander Welcome	SUICIDE PREVENTION	TRICARE	MOS	ESGR
<i>Liberty</i>	REGISTRATION TB TEST	LUNCH	Commander Welcome	SUICIDE PREVENTION	VA	SAFETY	MVC
<i>Freedom</i>	REGISTRATION TB TEST	LUNCH	Commander Welcome	PDHRA Video	SUICIDE PREVENTION	SUICIDE PREVENTION	Chaplain
<i>Victory</i>	REGISTRATION TB TEST	LUNCH	Commander Welcome	PDHRA Video	MH	MH	VA
<i>Noble</i>	REGISTRATION TB TEST	LUNCH	Commander Welcome	PDHRA Video	Chaplain	Chaplain	TRICARE

Saturday (Soldiers are required to wear ACU uniform)

	0800-0830	0830-0930	0930-1000	1000-1030	1030-1100	1100-1130	1130-1200	1200-1330	1330-Until completed
<i>Patrol</i>	MVC	Education	Booth Display	LEGAL	MH	MH	VA	LUNCH	Freedom Salute
<i>Liberty</i>	LEGAL	TRICARE	MOS	Education	ESGR	Chaplain	Chaplain	LUNCH	Freedom Salute
<i>Freedom</i>	MH	MH	VA	TRICARE	PDHRA	PDHRA	College	LUNCH	Freedom Salute
<i>Victory</i>	College	MVC	Chaplain	PDHRA	PDHRA	Booth Display	TRICARE	LUNCH	Freedom Salute
<i>Noble</i>	SUICIDE PREVENTION	SUICIDE PREVENTION	College	Chaplain	Chaplain	Process Vouchers	Booth Display	LUNCH	Freedom Salute

Sunday (Soldiers may wear Casual/Business Casual)

	0800-0830	0830-0900	0910-0940	1000-1030	1030-1100	1100-1130	1130-1200	1200-1330	1330-1400	1330-1400
<i>Patrol</i>	Optional Worship Services	USAA	Process Vouchers	MFLC	Safety	Chaplain	Chaplain	LUNCH	Commander Closing	READ TB TEST
<i>Liberty</i>	Optional Worship Services	Booth Display	MH	MH	Process Vouchers	MFLC	USAA	LUNCH	Commander Closing	READ TB TEST
<i>Freedom</i>	Optional Worship Services	MVC	MFLC	PDHRA	Booth Display	USAA	Process Vouchers	LUNCH	Commander Closing	READ TB TEST
<i>Victory</i>	Optional Worship Services	SUICIDE PREVENTION	SUICIDE PREVENTION	USAA	Chaplain	Process Vouchers	MFLC	LUNCH	Commander Closing	READ TB TEST
<i>Noble</i>	Optional Worship Services	VA	MVC	MFLC	USAA	MH	MH	LUNCH	Commander Closing	READ TB TEST

Design and Methodology: YRRP On-site Survey Measures

- ☐ **Knowledge Self Efficacy (5 items, 0-20):**
 - ❖ Perceived knowledge of reintegration issues and resources
- ☐ **Ability Self Efficacy (5 items, 0-20):**
 - ❖ Perceived ability to act to get help with reintegration problems
- ☐ **Help-Seeking Propensity (8 items, 0-32):**
 - ❖ Subscale from the Inventory of Attitudes Toward Seeking Mental Health Services (IASMHS)
- ☐ **Indifference to Stigma (8 items, 0-32):**
 - ❖ Subscale from (IASMHS)
- ☐ **Matrix of Reintegration Needs:**
 - ❖ Yes / No matrix if attendee has concerns; would like more information; would like help; and did YRRP provide information or help.
 - ❖ Domains: education, employment, health care, mental health, alcohol use, relationships, etc.
- ☐ **Matrix of Service Use:**
 - ❖ Yes / No matrix to assess if attendee learned about program or service; if made and appointment or seeking help from program as a result of attending YRRP.
 - ❖ Programs and services: Vet Center, Military One Source, Chaplain Services, etc.

Design and Methodology: Telephone Interview (T4, T7) Modules

- | | |
|--|--|
| <ul style="list-style-type: none"> ☐ Demographics ☐ Active and Reserve Military History ☐ Pre-Deployment Life Events ☐ Life Before Most Recent Deployment ☐ Concerns about Life and Family Disruption Scale ☐ Most Recent Deployment History ☐ National Guard Deployment History ☐ Combat Experiences ☐ Most Recent Deployment Injury and TBI Screen ☐ Most Recent Deployment Psychological Health ☐ Deployment Social Support Scale | <ul style="list-style-type: none"> ☐ Current Education and Employment (post-deployment) ☐ Post-deployment Support ☐ IASMHS & YRRP post survey ☐ Burns Relationship Satisfaction Scale ☐ Post-deployment Physical Health ☐ Alcohol Use Disorders Identification Test (AUDIT) ☐ PTSD Checklist (Military and Civilian Versions) ☐ Patient Health Questionnaire 9 ☐ Post-deployment Psychological Health ☐ Post-deployment Life Events ☐ YRRP attendance history ☐ Connor Davidson Risk & Resilience Inventory (CD-RISC) ☐ Barriers to Behavioral Health Care ☐ VA Barriers to Care |
|--|--|

NOTES: T4 – about 1 to 2 months after demob.; T7 – 6 months after demob. Red – T4 only; Blue – T7 only.

Current and Anticipated Challenges

- ☐ Some Air National Guard service members are now attending Army National Guard YRRP events.
 - A-priori exclusion is not possible.
 - Inclusion of these in the sample could complicate analysis because of different deployment lengths and experiences.
 - Inclusion of Air Guard as part of agricultural business development team is appropriate.
 - Post-hoc analysis may be appropriate.
- ☐ Budgetary limitations may make it difficult for fieldwork to progress as planned.
 - May require a longer fieldwork duration.
 - May require resource reallocation in the future.
- ☐ Sample accrualment is dictated by the deployment schedules of MO Army National Guard units. The extended JIT pre-award period led to loss of sample size.
 - Examining the YRRP response and attrition rates to assess projection for sample accrualment.

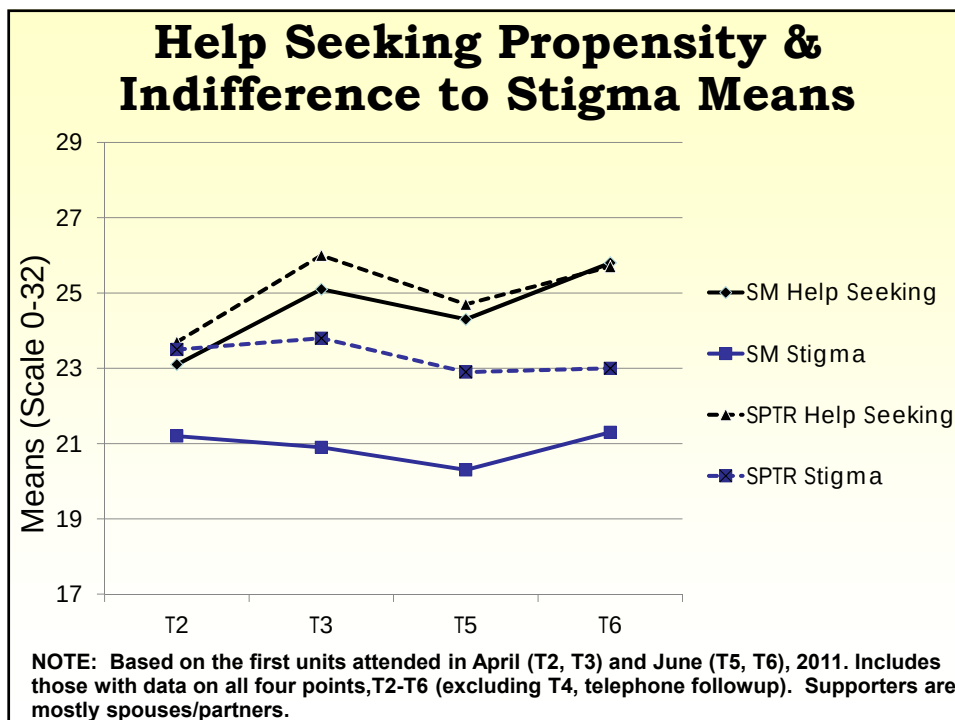
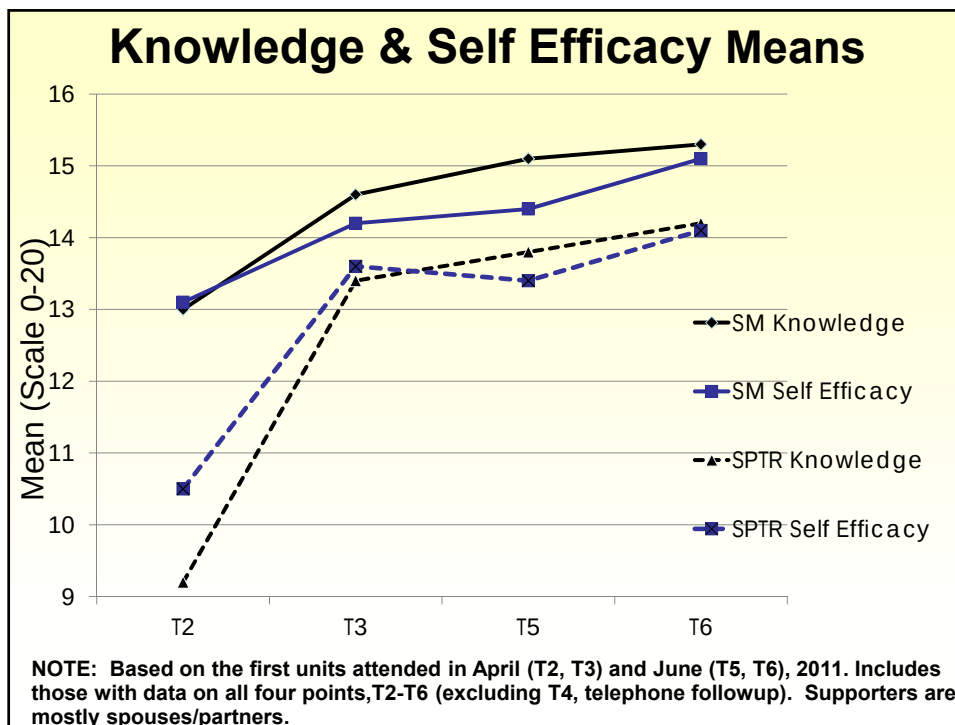
Study Progress: SOW Deliverables to Date

<u>Nov 9, '10:</u>	Washington University's Human Research Protection Office (HRPO) approval
<u>Feb15, '11:</u>	Notice of Award
<u>Feb-Mar 11:</u>	Consultation with Missouri National Guard and Missouri Military and Veterans (MMV) Health Consortium for instrumentation
<u>Mar 31, '11:</u>	USAMRMC Office of Research Protection (ORP), HRPO approved the study on March 31, 2011
<u>Mar '11:</u>	Began staff hiring
<u>May '11:</u>	First interviewer training
<u>June '11:</u>	First all Co-Investigator meeting
<u>Apr-Jun '11:</u>	First two YRRP on-site data collections resulting in 91% and 93% response rates, respectively
<u>Jun '11:</u>	Began T4 telephone interviews ; 65 enrolled to date
<u>Jun '11:</u>	Began data entry, compilation, and quality assurance
<u>Jun-Jul '11:</u>	Completed preliminary data analysis for Aims 1 and 2 based on first returning unit YRRP cohort

First YRRP Preliminary Data Demographics (%)

	<u>Service Member</u> (n=45)	<u>Supporter</u> (n=35)	<u>Combined</u> (n=81)
<u>Race</u>			
White	95.4	94.1	94.8
Black	2.3	2.9	2.6
Other	2.3	2.9	2.6
<i>Hispanic origin</i>	4.4	5.7	5.0
Male	97.8	5.7	57.5
Female	2.2	94.3	42.5
<u>Age Group</u>			
18-20	0	0	0
21-24	18.2	17.7	18.0
25-29	31.8	14.7	24.4
30-39	20.5	23.5	21.8
>= 40	29.6	44.1	35.9

NOTE: Based on the first units attended in April (T2, T3) and June (T5, T6), 2011. Includes those with data on all four points, T2-T6 (excluding T4, telephone followup). Supporters mostly spouses and partners.



Dissemination and Transition Plan

- ☐ MONG collaborators will be kept abreast of findings and implications through quarterly Co-I meetings and quarterly progress reports.
- ☐ SOW Task: Recommendations and Know-How Transfer to MONG, NGB, and DoD begins Month 9 (November 2011).
- ☐ MONG can provide access to military channels for dissemination and technology transfer.
- ☐ Research team is in current communication with CAPT Joan Hunter, RN, MSW, USPHS, Director of Psychological Health at NGB to share research for the OSD Cost Assessment and Program Evaluation (CAPE) office conducting a Front End Assessment (FEA).
- ☐ Publication plans to be formulated starting at the next quarterly Co-I meeting (September, 2011).
- ☐ Missouri Military and Veteran (MMV) Health Consortium provides critical dissemination resources for the project.
- ☐ WU research team will provide relevant expert consultation to MONG leadership, NGB, and VA (e.g., suicide prevention).

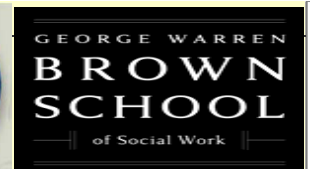
Impact of FAMPAC study

- ☐ Demonstrate the effectiveness of the YRRP.
- ☐ Provide data to help maximize the YRRP's program impacts for both service members and their families.
- ☐ Provide the evidence to justify continuing family-based programs.
- ☐ Provide information for how to enhance YRRP so that service members and their families can take ownership for their own family psychological health care.
- ☐ Assist in developing National Guard's own locally-based system of psychological resiliency programs.



Restoring and Enhancing psychological health of Missouri's citizen soldiers and families: a university-military partnership

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ABSTRACT

Introduction: About one in five U.S. service members come home from Iraq and Afghanistan suffering from combat- and stress-induced symptoms of post-traumatic stress disorder (PTSD) or other mental health problems, often comorbid with traumatic brain injury (TBI) and substance misuse. Members of the National Guard and Reserves are exposed to a similar level of combat trauma as their active component counterparts. However, they appear to be affected more from overseas deployment in part because they frequently shift between military and civilian roles. Of particular concern are Guard and Reserve members who return to rural areas where both physical and mental health services are less accessible. The National Defense Authorization Act in 2008 created the Yellow Ribbon Reintegration Program (YRRP) to facilitate reintegration after Guard and Reserve members return from deployment to overseas conflict regions. National Guard members are mandated to take this weekend informational and psycho-educational training. Family members and other supporters are encouraged to attend. The YRRP also provides a unique opportunity to access a large number of Guard members and families called together for the first time after deployment. To this date, there has been little systematic study conducted to examine the YRRP. No systematic study exists that examines the psychological health and reintegration needs of National Guard members and their family members in Missouri.

Objectives: The objectives of this poster are to: (1) to evaluate the effectiveness of the Yellow Ribbon Reintegration Program (YRRP) in changing attitudes toward using/receiving reintegration and other mental health services; (2) examine how the program impacts both soldiers and their supporters (family members); and (3) follow-up with soldiers and supporters 2 months after attending the program to examine mental health consequences of deployment within a longitudinal framework.

Methods: Washington University and the Missouri National Guard (MONG) have jointly conducted a series of studies. We administered pre- and post-program surveys to Missouri National Guard soldiers and their supporters (family members) during multiple reintegration training events to examine the immediate program effect on the knowledge and ability aspects of self-efficacy toward reintegration issues, mental health help seeking propensity, and indifference to stigma. This is followed by in depth telephone interviews with participants in YRRP events.

Results: We found that a brief secondary prevention program is effective for improving the knowledge and ability aspects of self-efficacy regarding reintegration and psychological health. Family members' initial gain is larger than soldiers. Repeated message giving is effective to some extent. Attitude toward stigma of mental illness, however, did not improve as a result of participating in this brief prevention program. Results are comparable between Kosovo returnees and Afghan and Iraq returnees, despite considerable differences in combat experience. While similar patterns were seen for supporters as well, an interaction pattern was seen as supporters seemed to benefit more than soldiers from these events at various points in time. Our follow up interviews with soldiers and supporters suggest that higher PTSD symptoms are associated with lower overall psychological health, which was lower for supporters than it was for soldiers. Positive relationships can be a protective factor. Reporting pattern of overall psychological health appears considerably different between soldiers and supporters.

Conclusion: Our findings point to the effectiveness of YRRP and the importance of reintegration and post-deployment support in mental health outcomes. Supporters are often more affected by deployment than soldiers.

ACKNOWLEDGMENTS

The series of studies are part of wider research-community collaboration efforts initiated by the Missouri Military and Veterans (MMV) Health Consortium. Financial and in-kind supports are obtained from: Institute of Clinical and Translational Sciences (ICTS); Center for Mental Health Services Research (CMHSR); Brown Center for Violence and Injury Prevention (BCVIP); St. Louis VA Health Services Research & Development (HSR&D); and Department of Defense, Defense Medical Research and Development Program (DMRDP).

METHODS

Participants

- **Phase 1: Kosovo cohort:** Participants (N=326) were recruited from the Missouri National Guard (MONG) soldiers and supporters (family members, primarily spouses) who returned from a one year deployment in Kosovo as part of the NATO Peacekeeping mission in 2009. The participants completed pre- and post-surveys at two YRRP events, one 45 days after and another 90 days after their participation. Participants in this series of analysis include those that were able to be linked across both YRRP events.
- **Phase 2: Iraq/Afghanistan cohorts (on-going):** Participants (N=243) were recruited from MONG soldiers who returned from combat deployments to Iraq or Afghanistan and their supporters. The participants completed survey packets at two events one 30 days and the other 60 days after their return.
- **Phase 3: Iraq/Afghanistan cohorts (on-going):** Participants (N=105) were recruited for more in depth follow up telephone interviews from Phase 2 participants who attended a 30 day YRRP.

Measures

Demographics: Age, Race/Ethnicity, Gender and Marital status are presented for participants in three phases (Table 1).

Reintegration measures:

- **For Phase 1 and 2:** The subscales presented here were obtained from the pre- and post-reintegration event surveys (Figure 1):
 - **Knowledge** - Five questions measuring the knowledge aspects of self-efficacy regarding post-deployment reintegration issues, warning signs of reintegration problems, and community resources [0 (poor) - 4 (excellent)].
 - **Ability** - Five questions measuring the ability aspect of self-efficacy for post-deployment reintegration. [0 (poor) - 4 (excellent)].
 - **Help-Seeking** - Eight items that measure help-seeking propensity were used from the Inventory of Attitudes Toward Seeking Mental Health Services (IASMHS) [0 (disagree) - 4 (agree)].
 - **Stigma** - Eight items that measure indifference to stigma from the IASMHS. [0 (disagree) - 4 (agree)]. Higher score means more indifferent to stigma.

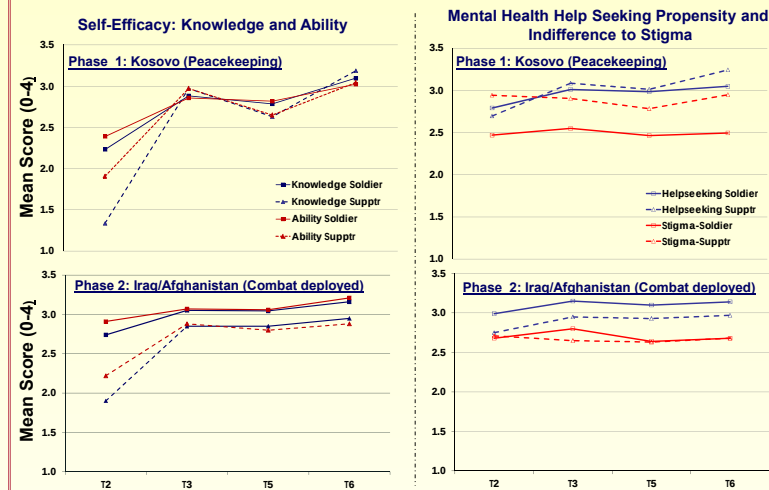
Mental Health Measures (Table 2): The measures presented are incorporated in the Phase 3- follow-up interviews. The data presented are preliminary.

- **PTSD Checklist:** The 17 item PCL was used to measure symptoms of PTSD. The military version was used for the National Guard soldiers, and the civilian version was used for supporters. Scale assessed occurrence of symptoms from 1= Not at all to 5= Extremely; a total score was computed.
- **Post-deployment Support:** 10 items from the Deployment Risk and Resilience Inventory (DRRI) were used. Scale ranged from 1= Strongly disagree to 5= Strongly agree; a total score was computed.
- **Relationship Satisfaction:** 7 items from the Burns Relationship Satisfaction scale were used for close relationship. A 7 point scale ranging from 1= Very Dissatisfied to 7= Very Satisfied was used; a total score was computed.
- **Combat Experiences (Soldiers only):** 18 item checklist from Hoge et al. (2004) was used. Response scale was Yes/No. A total frequency score was computed and used for further analysis.
- **Overall Psychological Health:** We used one item adapted from the Department of Defense's Post Deployment Health Reassessment (PDHRA). The scale ranged from 1= Excellent to 5= Poor. This scale was reverse coded.

Table 1. Demographics (%)

	Phase 1		Phase 2		Phase 3	
	Soldier	Supporter	Soldier	Supporter	Soldier	Supporter
	(n=234)	(n=92)	(n=145)	(n=98)	(n=60)	(n=45)
Race						
African American	7.1	3.5	4.0	2.0	8.3	4.4
Caucasian	91.0	89.5	90.0	94.0	85.0	93.3
Other race	1.9	7.0	6.0	4.0	6.7	2.3
Hispanics (any race)	2.1	3.3	5.0	4.0	3.3	4.4
Gender						
Men	85.3	5.7	84.1	8.3	78.3	8.9
Women	14.7	94.3	15.9	91.7	21.7	91.1
Age group						
<20	3.8	5.6	0.0	5.3	0.0	2.2
21-24	12.9	8.3	15.5	11.7	8.3	11.1
25-29	16.7	16.7	26.1	18.1	26.7	26.6
30-39	30.1	30.6	28.2	26.6	35.0	26.7
40+	36.6	38.9	30.3	38.3	30.0	33.3
Marital status						
Married	60.1	80.5	56.3	81.3	68.3	88.9

Figure 1. Mean scores for soldiers & supporters completing surveys at time points T2-T3-T5-T6 from Phase 1 (Peacekeeping) and Phase 2 (Combat deployed).¹



Notes: 1. Based on all non-missing repeated measures subscale scores. T2=Pre-Survey at 30 day YRRP; T3=Post-Survey at 30 day YRRP; T5=Pre-Survey at 60 day YRRP; T6=Post-Survey at 60 day YRRP (T4 is telephone followup interview time). The means are least square mean estimates generated by PROC Mixed ANOVA in SAS. For Phase 1 Kosovo cohort, YRRP events were 45 days and 90 days after deployment.

Table 2. Phase 3. Descriptive statistics and hierarchical regression results on self reported overall psychological health for soldier-only and soldier-supporter combined combat-deployed cohort follow-up interviews.

		Soldier only (N=60)	Supporter only (N=45)	Combined (N=105)	Soldier and Supporter- Combined Model 1	Soldier Only Model 2
	Scale	Mean(SD)	Mean(SD)	Mean(SD)	B SE b	B SE b
Overall Psychological Health (Outcome)	High Score=Better Health	3.80 (1.07)	3.48 (1.02)	3.66 (1.05)		
Predictors						
Marital Status	-1=Unmarried; 0=Married; 1=Separated				-.348 .168 -.159*	-.187 .216 -.099
Age		34.55 (8.43)	34.62 (9.36)	34.58 (8.80)	-.001 .010 -.012	-.012 .015 -.095
Group	-1=Soldier; 1=Supporter				-.154 .076 -.145*	
PTSD Score	High Score = More Symptoms	27.83 (11.54)	27.78 (10.76)	27.81 (11.16)	-.057 .008 -.607**	-.064 .011 -.693**
Relationship Satisfaction	High Score = High Satisfaction	35.58 (6.88)	33.64 (9.36)	34.75 (7.37)	-.022 .011 .159*	.025 .018 .159
Post-Deployment Social Support	High Score = More Support	41.77 (6.59)	41.56 (7.69)	41.68 (7.03)	.006 .013 .038	.001 .022 .003
Combat Experiences	High Score = More Experiences	4.93 (2.85)	NA			.047 .040 .125

**p<.0001, *p<.05. B is the unstandardized regression coefficient; SE is the standard error; b is standardized.

R² is .51 for soldier only model and .52 for soldier and supporter combined model

CONCLUSION

Our findings show an overall increase in self-efficacy (knowledge and ability aspects) regarding post-deployment reintegration issues over the course of the weekend YRRP event, and a further overall increase after attendance at a second YRRP event. A similar pattern is found for propensity to seek mental health help. We did not observe a change across time toward stigma of mental health. However, we did see differences in age groups and also soldiers and supporters with regard to mental health stigma. We observed similar patterns in the peacekeeping cohort (Phase 1) and the emerging results from the combat deployed cohort study (Phase 2). Preliminary findings from Phase 3 telephone interviews show that PTSD symptoms had a negative effect on psychological health in the post-deployment reintegration period, but positive relationship satisfaction was a protective factor as it had a positive relationship with psychological health. Supporters appear to report poorer overall psychological health. These results point to the importance of large-scale secondary prevention program implementation for both National Guard members and their families. Further investigation is needed to more systematically examine the impact of deployment on family members.

RESULTS

Results for Phase 1 and 2:

- Separately for Phase 1 and 2 cohorts, we performed repeated measures Mixed ANOVA on each of four measures across time (i.e., before T2 and after T3) attending the first YRRP event and again before T5 and after T6 attending the second follow-up event):
- The knowledge aspect of self-efficacy, ability aspect of self-efficacy, help seeking attitudes, mental health stigma, as well as gender and age were included in the model.
- The least square means across time points is presented separately for Phase 1 and Phase 2 (Figure 1).
- **For the Phase 1** peacekeeping cohort, increase in knowledge from T2 to T6 was observed (F = 173.39, p < .0001). Interaction effects wherein supporters showed greater increase in knowledge from T2 was seen (F = 28.17, p < .0001). Phase 1 main effect for increase in self-efficacy from T2 vs. T5 was seen (F=81.98, p<.0001). Interaction effects where supporters showed greater increases from T2 to T3 was seen as well (F= 11.16, p<.0001). A main effect for help seeking was seen where help seeking attitudes changed from T2 to T5 (F = 21.77, p < .0001). Differences in stigma attitudes between soldiers and supporters was also seen (F = 6.58, p<.05).
- **For the Phase 2** combat deployed cohort, increase in knowledge from T2 to T6 was observed (F = 57.30, p < .0001). Differences in knowledge of soldiers and supporters was seen as well (F = 8.45, p < .01). Interaction effects wherein supporters showed greater increase in knowledge from T2 was seen (F = 15.62, p < .0001). Phase 2 main effect for increase in self-efficacy from T2 vs. T5 was seen (F= 24.21, p<.0001). Interaction effects where supporters showed greater increases from T2 to T3 was seen as well (F= 7.92, p<.0001). Overall supporters showed greater increase in self-efficacy than soldiers (F=8.40, p < .01). A main effect was seen where help seeking attitudes changed from T2 to T5 (F = 5.86, p < .05). In terms of age groups, 21-24 year olds and 25-29 year olds showed different trajectories than those above 40.
- Similar patterns in knowledge, ability, help seeking, and stigma were seen in Phase 1 & 2. Differences in knowledge and ability between soldiers and supporters was seen in Phase 2 but not in Phase 1. Age group differences were seen in stigma for Phase 2 but not in Phase 1. In Phase 1 soldiers and supporters showed differences in stigma attitudes.

Phase 3 Preliminary findings from follow up interviews (Table 2):

- Two separate multiple regressions on the overall psychological health of soldiers and supporters were performed. Model 1 includes soldiers and supporters combined and Model 2 includes soldiers only.
- Overall Psychological Health was lower for supporters than it was for soldiers.
- Greater numbers of PTSD symptoms was associated with lower self reported psychological health.
- Higher satisfaction with a close relationship was associated with better psychological health.

RUNNING HEAD: EFFICACY OF A REINTEGRAION PROGRAM

Efficacy of A Mandate Reintegration Program for National Guard Service Members and Their
Families

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RUNNING HEAD: EFFICACY OF A REINTEGRAION PROGRAM

Efficacy of A Mandate Reintegration Program for National Guard Service Members and Their
Families

Abstract

Objective: We examined short-term self-efficacy improvement and stigma reduction among Missouri National Guard services members and their supporting family and other members who attended a federally-mandated secondary prevention program called the Yellow Ribbon Reintegration Program (YRRP).

Method: Two samples included Guard members who returned from a Kosovo peace keeping mission in 2009 and their family members, and Guard members who returned from Iraq and Afghanistan in early 2011 and their family members. Brief surveys were collected at the beginning and end of two YRRP, each being held as an over-weekend event. The knowledge, ability, help-seeking and stigma perception scales were analyzed to examine change patterns and differences according to participant characteristics.

Results: The knowledge and ability aspects of self-efficacy regarding reintegration and psychological health improved at the end of each session and over two event exposures. Family members' initial gain is larger than service members. Attitude toward stigma of mental illness did not improve as a result of participating in this brief prevention program. Results are comparable between Kosovo returnees and Afghan and Iraq returnees, despite considerable differences in combat experience.

Conclusions: A large-scale brief secondary prevention program implementation for National Guard and family members is effective in changing perceptions about self-efficacy in a short-term.

Pages of Text:

Words:

Tables:

Yellow Ribbon Reintegration Programs: Improving Access to Care for Returning National
Guard Service Members and Their Spouses

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**MANUSCRIPT IN PREPARATION FOR SUBMISSION TO MILITARY MEDICINE
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Abstract

This study identifies the need for and the type of psychosocial services accessed by Army National Guard service members and their supporters following deployment in support of Operation Iraqi Freedom (OIF). Using a longitudinal, pre-post survey design, 180 service members and 122 supporters attended Department of Defense (DoD) mandated Yellow Ribbon Reintegration Programs (YRRP) at 30 and 60 days post deployment. Results indicate that both service members and supporters reported highest levels of needs for psychosocial services related to education and health and least for legal issues, family or relationship concerns, mental health, and employment. Of service members and supporters who expressed a need at either 30 or 60 days post deployment, over 50 % had their needs met regardless of the type of service. The YRRP shows promise for providing centralized and timely access to services for the National Guard service members and their families.

MESH Keywords: Stress Disorder, Post-Traumatic, Veterans, Patient Preference, United States Department of Veterans Affairs

Abstract word count: 146/150