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Potential Role of Social Support Systems and Post Traumatic Stress Disorder

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Potential Role of Social Support Systems and Post Traumatic Stress Disorder

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ABSTRACT

Potential Role of Social Support Systems and Post Traumatic Stress Disorder

This research is being conducted to determine the possible relationship between an individual's resistance to developing PTSD and his or her social support system. The goal is for this information to be used in clinical settings to develop/facilitate better treatment profiles for individuals suffering from PTSD. In order to determine if a valid and reliable relationship exists between cognitive resistance to developing PTSD and social support systems, a screening tool had to be created. A mixture of biographical information, Impact of Events Scale – Revised, Beck's Hopelessness and Depression Scales was utilized to gather co-relational data so that a factor analysis could be run from the comparison of responses between deployed troops that have returned to the US within the last 12 months and those who have been back for over 12 months. Subjects were pulled from within the US Army Reserves units that have deployed during Operation Iraqi Freedom (Iraq) and Operation Noble Eagle (Afghanistan). The targeted subjects were screened as either having returned from deployment within the last 12 months or over 12 months ago. A presenter was trained to disseminate the screening material to the subjects and collect back up the completed material. The consent forms were left with each of the participants and the tests were completed and collected in such a way as to maintain anonymity. The completed brief self-report questionnaires were collected, sealed in a container and delivered to Gregory Harris for data collection and analysis of responses. The goal was to determine if social support systems within an individual's life can impact and potentially shield him or her from developing PTSD symptomology. If the data reflect a positive correlation, then a therapeutic model can be developed as a treatment modality to aid in the treatment of PTSD. Participants were advised prior to answering questionnaires that their answers will not be seen by

the US military and that they are not obligated to answer any questions if they are not comfortable with the study.

DEDICATION

This is dedicated to my wife Vicki and newborn son Ryan. Without God blessing me with them in my life I don't believe any of this would have been possible. Their love, support, and tolerance of my messes, moods, and long hours locked away at my studies gave me the strength to succeed. It is for them that I strive to be a better person, husband, father, and professional.

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ROLE OF SOCIAL SUPPORT SYSTEMS AND PTSD

Research in recent years has begun to look at potential effects that a person's social support system has upon their susceptibility to developing Posttraumatic Stress Disorder (PTSD). Review of available literature and information illustrates possible reasons for symptomology, treatment, and potential correlates to why some individuals do not become asymptomatic. The research presented in this thesis discusses the potential variables that may protect individuals during a traumatic life event, and how it protects their emotional and cognitive response to that event. A greater understanding of the determents that blocks a person from being susceptible to PTSD may lead to a greater understanding of preventative measures to protect others from the emotional carnage of the traumatic events.

Social Support

Hembree, E. A., Street, G. P., Riggs, D. S., & Foa, E. B. (2004) study examined the hypothesis that variables such as history of prior trauma, assault severity, and type of assault, previously found to be associated with natural recovery, would also predict treatment outcome. In contrast to the rich body of literature on the efficacy of various treatments, studies examining predictors of outcome are scarce (Hembree, 2004). Many studies have examined predictors of chronic PTSD following trauma (Brewin, Andrews, & Valentine, 2000). Among the most robust predictors of failure to recover from an assault (i.e., for the development of chronic PTSD) were prior victimization (Resick, 1993); trauma severity, as indexed by injury or perception of life threat (Kilpatrick, D. G., Saunders, B. E., Amick-McMullan, A., Best, C. L., Veronen, L. J., & Resnick, H. S., 1989); and type of trauma, with rape more commonly associated with subsequent PTSD than nonsexual assault (Foa & Riggs, 1995).

Foa and Rauch (2004) additionally, researched cognitive changes related to prolonged exposure and its positive impact, treatment that included prolonged exposure resulted in clinically significant, reliable, and lasting reductions in negative cognitions about self, world, and self-blame as measured by the Posttraumatic Cognitive Inventory. Change in total negative cognitions was significantly correlated with change in total PTSD symptoms (Foa & Rauch, 2004). All correlations between change in PTSD symptom clusters and Negative Cognitions about Self and World subscales were significant (Foa & Rauch, 2004).

Foa & Rauch (2004) hypothesized, treatment that included Prolonged Exposure (PE) resulted in negative cognitions about self, world, and self-blame. The degree of change was substantial and reduced the overall sample median from over 2.5 standard deviations to less than one standard deviation above the median of non-traumatized individuals. The majority of participants (72%) demonstrated reliable change. These cognitive changes were maintained at follow-up (Foa & Rauch, 2004).

Stressors

Of the assault characteristics examined in this study, (Hembree et al., 2004), only physical injury sustained during the assault was negatively associated with outcome. The failure to find a relationship between perceived life threat during the index trauma and treatment outcome is inconsistent with studies of natural recovery from trauma in which assault victims who reported perception of life threat were less likely to recover and more likely to develop PTSD (Kilpatrick et al., 1989). Interestingly, in Hembree et al., (2004) study, they were not able to account for 60% of the variance in the treatment model.

In a study specifically designed to examine the potential burden associated with caring for a partner with chronic PTSD, Beckham and colleagues (Beckham, 1996) found that PTSD

severity was both cross-sectionally and prospectively related to significant caregiver burden and partner psychological distress among 58 spouses of Vietnam veterans with PTSD. Partners caring for patients with PTSD experienced higher levels of burden and had poorer psychological adjustment as compared with partners of help-seeking veterans with PTSD (Calhoun, Beckham, & et al., 2002). An examination of clinical variables that could affect caregiver burden revealed that among patients with PTSD, both symptom severity and the level of interpersonal violence were significantly associated with increased experience of caregiver burden. There was no evidence that demographic factors or the availability of social support moderated the relationship between PTSD symptoms severity and caregiver burden (e.g., Calhoun et al., 2002).

In a 2002 study by Piotrkowski and Brannen, they researched the potential of a victim's threat appraisal, view of their world post trauma, as a possible indicator of PTSD development. Piotrkowski and Brannen (2002) hypotheses, direct exposure to the attacks of 9/11, worries about future terrorist attacks (threat appraisal), and reduced confidence in self after 9/11 each predicted symptoms of PTSD, even after controlling for symptoms of anxiety and depression. Their research developed a positive correlation between the individual's perceived meaning between the traumatic event and PTSD symptoms. Baum (1991) noted that, in contrast with natural disasters (e.g., Hurricane Andrew), manmade disasters may be especially psychologically toxic because (a) they are unpredictable, (b) the lack a clear "low point" at which "the worst is over" and people can focus on healing and rebuilding, and (c) knowledge of how to deal with the event and its aftermath is limited.

The results supported the hypotheses that threat appraisal-measured through worries about future attacks-and loss of confidence in oneself as an effective person after 9/11 predicted symptoms of PTSD (Piotrkski & Brannen, 2002). Respectively, it was indicated that 'threat

appraisal' and 'lost confidence' encompassed over 33% of the entire variance in the PTSD symptoms. The findings further revealed that the 'threat appraisal' and 'lost confidence' did not apply equally to everyone within the demographics studied. The impact and severity of these feelings were mitigated by such environmental variables as level of financial independence and parent of a child. It appeared that those with a greater level of financial independence had less feelings of 'lost confidence' or threat appraisal', while parents of children reported higher rates that adults with no children.

HYPOTHESES

Hypothesis: Social support will be a stronger predictor than Stressors in predicting the potential for the development of Post Traumatic Stress Disorder.

Null Hypothesis: Stressors will be a stronger predictor than Social Support in predicting Post Traumatic Stress Disorder.

METHOD

Participants

The United States Army Reserves soldiers that had previously deployed to either Iraq or Afghanistan were selected to participate in this study. 123 packets were submitted for participation across 5 separate units that had returned from combat theater operations, 104 soldiers from these five units participated in this study (94 males and 10 females). Participants in this study ranged in age from 19 to 58 years of age, their exposure to traumatic situations varied as much by unit as it did by individual soldier. Soldiers at each unit were given a brief introduction by the researcher about the study being conducted and that their participation was anonymous. They were then given a testing packet containing consent for participation, biography page, three test questionnaires, and blank envelope to place the finished forms.

Materials

The first portion of the questionnaire asked them to provide some biographical information on themselves, i.e., deployment duration and duration since returning to the United States, age, gender, marital status, combat injuries, and number of close friends/family. The participants then completed the Impact of Event Scale – Revised (IES-R), the Beck Depression Index – II (BDI-II), and the Beck Hopelessness Scale (BHS).

The IES-R is a 22 question survey that looks at 3 sub-scales: Avoidant, Intrusive, and Hyperarousal behaviors to screen for PTSD symptomology. The items on the questionnaire are rated on a 5 point scale (0 = Not At All, 4 = Extremely). The IES-R which was developed by Daniel S. Weiss and Charles R. Marmar (1997) was chosen as the screening instrument for this study based on not only on its ease of administration and design around the DSM-IV's PTSD criterion but also based on it reliability and validity ratings. The IES-R and its previous version the Impact of Events Scale (IES) have been shown (Weiss et al., 1997) to be a good predictor of trauma. As reported by Weiss and Marmar (1997) internal consistency of the 3 subscales was found to be high, avoidance ranged from .84 to .86, intrusion alphas ranging from .87 to .92, and hyperarousal alphas ranging from .79 to .90. The data available on the test-retest with one-week interval is cited on Measurement Excellence and Training Resource Information Center's web site as .87 for the Total Scale, .89 for the Intrusion subscale, and .79 for the Avoidance subscale. IES-R's content validity according to Weiss and Marmar (1997) indicated that the Intrusion and Avoidance subscales had high endorsements of up to 85%, as referenced from (Horowitz, et al., 1979). Validity analysis of the test noted that it correlated with the PTSD MMPI scale at .79 and the SCL-90 at .78 (Measurement Excellence and Training Resource Information Center, 2005).

The BDI-II is a 21 question survey that is designed to screen for depressive symptoms on a 4 point scale (i.e., 0 = "I do not feel sad", 3 = "I am so sad or unhappy that I can't stand it"). The BHS is a 20 question true-false survey that screens for feelings of hopelessness and despair.

Design/Procedure

Each reserve unit's soldiers were gathered together into a conference room during their weekend reserve duty and briefly spoken to by the researcher. The researcher identified himself and the purpose of the study. He additionally spoke upon the criteria for participating in the research; i.e., prior deployment. Everyone, whether participating or not, were asked to removed the Consent for Participation cover sheet and keep for their personal records. The Consent for Participation form provided information on what was being researched, that it was voluntary, how to complete the form and submit it for collection, and contact information should they have questions. They were reminded that their participation was anonymous and that no names were being placed on the screening instrument. All individuals, participating or not, were asked to place their forms into the blank envelope, seal it, and drop it into a sealed ballot box for collection when they were finished.

Once the individual sealed their form in the blank envelope and placed it into the ballot box, the contents were transported back to the researcher's office before being opened. No other individuals had access to the completed surveys at any time throughout the study. Each envelope was randomly opened and its contents reviewed to determine participation or non-participation. Each survey had been encoded with a 3-digit number sequentially prior to being administered, once opened they were stacked in numerical order prior to scoring and encoding for analysis.

RESULTS

Regression analysis excluded the social support variables due to their lack on influence upon the predictability of resiliency to PTSD symptoms (see Table 1). Results indicate that the positive influence of a large base of close friendships and a positive marital relationship holds minimal influence and that stressors are more powerful predictors in determining ones susceptibility to develop PTSD symptomology. The regression analysis of the independent variables: (support) marital status – post deployment and close friend – post deployment; (stressors) months of deployment and combat injuries, showed stressors to be a more powerful indicator of resiliency.

DISCUSSION

Social Support focused on the areas of marital status and close friendships following the soldier's return from deployment. Marital Status under correlational analysis with the IES-R Total Score produced <1% (r = -.002) (see Table 2). Close Friends under correlational analysis with the IES-R Total Score produced only a 2% influence (r = .019) (see Table 3). When correlational analysis was conducted by combining the influences of both marital status and close friends following deployment it failed to produced more than 2% (r = .023) (see Table 6) of the statistical influence over an individuals potential for developing PTSD symptomology.

Correlations were found in the data results between a positive social support system and a lower report of PTSD symptomology, the size of the effect was less than hypothesized. It was speculated that the greater the amount of social support a person has following an extremely stressful event the less likely the person is to develop active symptomology. The results of this study illustrate the potential that social support has to build a person's resilience to combat the effect of stressors. The influence reported (see Table 6) showed only a 2% influence of social support on the individual's resiliency. These results support the findings by Calhoun, P. S., Beckham, J. C., & Bosworth, H. B. (2002) that even when isolating for sociodemographic factors such as age, race, education, and the availability of social support, did not moderate the severity and burden on the individual.

Stressors included the number of months of deployment and combat injuries suffered during the soldier's deployment. Months of Deployment under correlational analysis with the IES-R Total Score produced 9% (r = .091) (see Table 4). Combat Injuries under correlational analysis with the IES-R Total Score produced a 13% influence (r = .133) (see Table 5). When correlational analysis was conducted by combining the influences of both months of deployment

and combat injuries acquired during their deployment, it attributed to more than 19% (r = .193) (see Table 7) of the statistical influence over an individual's potential for developing PTSD symptomology.

The effects of stressors appear to have had a larger impact on the development of PTSD symptomology than originally hypothesized. In fact, the impact was found to have had even more influence than that of social support. Data results accounted for 19% of the correlation (see Table 7). This percentage could potentially be exacerbated by individuals that are predisposed to anxious behaviors. The results would appear to indicate that the results of this study only observed a small portion of the causes that would lead a person to develop active PTSD symptomology. Hembree, E. A., Street, G. P., Riggs, D. S., & Foa, E. B. (2004) reflected in their data that the stressor effects of sustained physical injury and experience of trauma at earlier ages hold consistent with the results found within this study.

It is important to note that potential short comings of this research became apparent during the analysis of the information collected. A different approach to quantify the value of the social supports is needed, i.e., value structure for marital status, changing or quantifying the social relationships from quantity to the number of individuals the participant feels they can openly speak with. Additionally, the study did not include an anxiety screening tool, questioning as to number and duration of previous deployments, current length of military career, level of education, and number of previous martial relationships, or the number or severity of the combat injuries the person sustained.

Areas for future research into the resilience of individuals that do not develop PTSD following a traumatic event should include further elaboration on social support networks, rebound effects and whether resiliency is increased or lessened by subsequent traumatic events.

Quantifying this additional material may aid in a more comprehensive understanding of the psychological dynamic that leads to some individuals develop PTSD when others do not.

REFERENCES

Baum, A. (1991). Toxins, technology, and natural disasters. In A Monat & R. S. Lazarus (Eds.), *Stress and coping: An anthology* (3rd ed., pp. 97-139). New York: Columbia University Press.

Beckham, J. C., Lytel, B. L., & Feldman, M. E. (1996). Caregiver burden in partners of Vietnam veterans with posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology*, 64, 1068-1071.

Brewin, C. R., Andrews, B., Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology*, 68, 748-766.

Calhoun, P. S., Beckham, J. C., & Bosworth, H. B. (2002). Caregiver burden and psychological distress in partners of veterans with chronic posttraumatic stress disorder. *Journal of Traumatic Stress*, 15, 205-212.

Foa, E. B., Dancu, C. V., Hembree, E. A., Jaycox, L. M., Meadows, E. A., & Street, G. P. (1999). A comparison of exposure therapy, stress inoculation training, and their combination for reducing posttraumatic stress disorder in female assault victims. *Journal of Consulting and Clinical Psychology*, 67, 194-200.

Foa, E. B., Zoellner, L. A., Feeny, N. C., Hembree, E. A., & Alverez-Conrad, J. (2002). Does imaginal exposure exacerbate PTSD symptoms? *Journal of Consulting and Clinical Psychology*, 70, 1022-1028.

Foa, E. B., & Rauch, A. M. (2004). Cognitive changes during prolonged exposure versus prolonged exposure plus cognitive restructuring in female assault survivors with

posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology*, 72, 879-884.

Foa, E. B., & Riggs, D. (1995). Posttraumatic stress disorder following assault: Theoretical considerations and empirical findings. *Current Directions in Psychological Science*, 2, 61-65.

Hembree, E. A., Street, G. P., Riggs, D. S., & Foa, E. B. (2004). Do assault-related variables predict response to cognitive behavioral treatment for PTSD? *Journal of Consulting and Clinical Psychology*, 72, 531-534.

Kilpatrick, D. G., & Best, C. L. (1984). Some cautionary remarks on treating sexual assault victims with implosion. *Behavior Therapy*, 15, 421-423.

Kilpatrick, D. G., Saunders, B. E., Amick-McMullan, A., Best, C. L., Veronen, L. J., & Resnick, H. S. (1989). Victim and crime factors associated with the development of crime-related post-traumatic stress disorder. *Behavior Therapy*, 20, 199-214.

Measurement Excellence and Training Resource Information Center. Critical review of Impact of Event Scale (IES). Monday, September 12, 2005. Available from URL: http://www.measurementexperts.org//instrument/instrument_reviews.asp?detail=80

Piotrkowski, C. S., & Brannen, S. J. (2002). Exposure, threat appraisal, and lost confidence as predictors of PTSD symptoms following September 11, 2001. *American Journal of Orthopsychiatry*, 72, 476-485.

Resnick, P. A. (1993). The psychological impact of rape. *Journal of Interpersonal Violence*, 8, 223-255.

Weiss, D. S., & Marmar, C. R. (1997). Impact of Event Scale – Revised. *Victims' Web*. http://www.swin.edu.au/victims/resources/assessment/ptsd/ies-r.html

TABLE 1

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.375[a]	.141	.133	17.840
2	.457[b]	.209	.193	17.203

a Predictors: (Constant), Combat Injuries
b Predictors: (Constant), Combat Injuries, Months of Deployment

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5325.496	1	5325.496	16.734	.000[a]
	Residual	32461.495	102	318.250		
	Total	37786.990	103			
2	Regression	7895.670	2	3947.835	13.339	.000[b]
	Residual	29891.320	101	295.954		
	Total	37786.990	103			

a Predictors: (Constant), Combat Injuries
b Predictors: (Constant), Combat Injuries, Months of Deployment
c Dependent Variable: IES-R Total Score

Coefficients[a]

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	68.560	10.071		6.808	.000
	Combat Injuries	-21.637	5.289	-.375	-4.091	.000
2	(Constant)	40.729	13.547		3.007	.003
	Combat Injuries	-19.252	5.165	-.334	-3.728	.000
	Months of Deployment	1.723	.585	.264	2.947	.004

a Dependent Variable: IES-R Total Score

Excluded Variables[c]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Close Friends - PostDeployment	-.174[a]	-1.917	.058	-.187	1.000
	Marital Status - PostDeployment	-.078[a]	-.848	.398	-.084	1.000
	Months of Deployment	.264[a]	2.947	.004	.281	.975
2	Close Friends - PostDeployment	-.185[b]	-2.119	.037	-.207	.998
	Marital Status - PostDeployment	-.091[b]	-1.025	.308	-.102	.997

a Predictors in the Model: (Constant), Combat Injuries
b Predictors in the Model: (Constant), Combat Injuries, Months of Deployment
c Dependent Variable: IES-R Total Score

TABLE 2

Marital Status

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.086[a]	.007	-.002	19.176

a. Predictors: (Constant), Marital Status - PostDeployment

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	31.478	4.410		7.138	.000
	Marital Status - PostDeployment	-2.004	2.292	-.086	-.874	.384

a. Dependent Variable: IES-R Total Score

TABLE 3

Close Friends

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.169[a]	.028	.019	18.971

a. Predictors: (Constant), Close Friends - PostDeployment

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	30.711	2.436		12.607	.000
	Close Friends - PostDeployment	-.329	.190	-.169	-1.730	.087

a. Dependent Variable: IES-R Total Score

TABLE 4

Months of Deployment

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.316[a]	.100	.091	18.258

a. Predictors: (Constant), Months of Deployment

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.849E-04	8.499		.000	1.000
	Months of Deployment	2.064	.613	.316	3.369	.001

a. Dependent Variable: IES-R Total Score

TABLE 5

Combat Injury

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.375[a]	.141	.133	17.840

a. Predictors: (Constant), Combat Injuries

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	68.560	10.071		6.808	.000
	Combat Injuries	-21.637	5.289	-.375	-4.091	.000

a. Dependent Variable: IES-R Total Score

TABLE 6

Social Supports – Combined

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.206[a]	.042	.023	18.927

a. Predictors: (Constant), Close Friends - PostDeployment, Marital Status - PostDeployment

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	35.909	4.926		7.290	.000
	Marital Status - PostDeployment	-2.789	2.299	-.120	-1.213	.228
	Close Friends - PostDeployment	-.370	.193	-.190	-1.922	.057

a. Dependent Variable: IES-R Total Score

TABLE 7

Stressors – Combined

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.457[a]	.209	.193	17.203

a. Predictors: (Constant), Months of Deployment, Combat Injuries

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	40.729	13.547		3.007	.003
	Combat Injuries	-19.252	5.165	-.334	-3.728	.000
	Months of Deployment	1.723	.585	.264	2.947	.004

a. Dependent Variable: IES-R Total Score

Appendix A

Consent for Participation in Study: 15 May 2005

I am conducting a research study to fulfill the requirements of the Marshall University Masters Degree program in Psychology. The purpose of my study is to examine the potential impact of social support systems and the development of Posttraumatic Stress Disorder (PTSD). If results show a valid and reliable positive correlation between social support systems and resistance to developing PTSD potential treatment options may arise to help treat others that suffer form PTSD.

You are being asked to complete these brief self-report questionnaires after reviewing this consent form. Your participation in this study is voluntary and you are under no obligation to participate. Additionally, there is no penalty if you do not participate in this study or if you withdraw from the study prior to finishing the study questionnaire. Your responses will remain anonymous and confidentiality will be maintained through out this process. Military leadership will not have access to your questionnaire responses and your responses will in no way affect your performance reviews. You will not be identified by name in any subsequent reports.

Please review this consent form and remove it from the self-report questionnaire, it is your copy to keep. Once you complete the questionnaire, please insert it into the envelope provided to you and sealed it. Then place the sealed envelope into the collection box located in the room. The separation of the two forms is to ensure you remain anonymous and confidential in this study, as well as allowing you to maintain a copy of your rights for having participated in this study. The time needed to complete these questions should be approximately 15 minutes.

The Marshall University Institutional Review Board #2 has approved this study. You may contact Dr. Stephen Cooper, IRB#2 Chairperson at (304) 696-4303, if you have any additional questions regarding your rights as a participant.

I will be happy to share results with anyone who is interested. If you have any questions about the study, please call me at (304) 208-0252 or via email at gvharris@chartet.net. You may also contact the Principal Investigator (Dr. Stephen O'Keefe, (304) 746-1937; sokeefe@marshall.edu) to obtain results of the investigation during the Summer 2005 academic semester.

Thanks for your cooperation and assistance with this study.

IRB APPROVAL EXPIRES JUN 7 2006

IRB JUN 8 2005 APPROVED

Sincerely,

Gregory G. Harris – Masters Candidate

Appendix B

Biographical Information

#_____

- **Length of deployment, in months** _____ (fill in the blank)
- **Duration since return to the US, in months** _____ (fill in the blank)
- **Current Age**: _____ (fill in the blank)
- **Gender**: (MALE / FEMALE) (Circle responses)
- **Marital Status**:
  - **Prior to Deployment**:
  - (SINGLE / MARRIED / DIVORCED / WIDOWED / SEPERATED) (Circle responses)
  - **Currently**:
  - (SINGLE / MARRIED / DIVORCED / WIDOWED / SEPERATED) (Circle responses)
- **Did you suffer any combat injuries during your deployment**: (YES / NO) (Circle responses)
- **How many close friends/family members to you regularly spend time with outside of your unit?**
  - **Prior to Deployment**: (i.e., 1, 5, 10) _____ (fill in the blank)
  - **Currently**: (i.e., 1, 5, 10) _____ (fill in the blank)

Appendix C

The Impact of Event Scale - Revised

Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you DURING THE PAST SEVEN DAYS with respect to _____, how much were you distressed or bothered by these difficulties?

	Not at all	A little bit	Moderately	Quite a bit	Extremely
Any reminder brought back feelings about it	0	1	2	3	4
I had trouble staying asleep	0	1	2	3	4
Other things kept making me think about it	0	1	2	3	4
I felt irritable and angry	0	1	2	3	4
I avoided letting myself get upset when I thought about it or was reminded of it	0	1	2	3	4
I thought about it when I didn't mean to	0	1	2	3	4
I felt as if it hadn't happened or wasn't real	0	1	2	3	4
I stayed away from reminders about it	0	1	2	3	4
Pictures about it popped into my mind	0	1	2	3	4
I was jumpy and easily startled	0	1	2	3	4
I tried not to think about it	0	1	2	3	4

I was aware that I still had a lot of feelings about it, but I didn't deal with them	0	1	2	3	4
My feelings about it were kind of numb	0	1	2	3	4
I found myself acting or feeling as though I was back at that time	0	1	2	3	4
I had trouble falling asleep	0	1	2	3	4
I had waves of strong feelings about it	0	1	2	3	4
I tried to remove it from my memory	0	1	2	3	4
I had trouble concentrating	0	1	2	3	4
Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart	0	1	2	3	4
I had dreams about it	0	1	2	3	4
I felt watchful or on-guard	0	1	2	3	4
I tried not to talk about it	0	1	2	3	4

Scoring:

Avoidance Subscale = mean of items 5, 7, 8, 11, 12, 13, 17, 22
Intrusion Subscale = mean of items 1, 2, 3, 6, 9, 14, 16, 20
Hyperarousal Subscale = mean of items 4, 10, 15, 18, 19, 21
Above written by: Ms. Estela Hutchings & Dr. Grant J. Devilly

Appendix D

Instrument removed at the request of the publisher.

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Appendix E

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VITAE

Gregory Glenn Harris
Milton, West Virginia

Education:

Master of Arts
Clinical Psychology
Marshall University Graduate College
August 2005

Bachelor of Arts
Psychology
West Virginia University
December 1992

Marshall University Educational Experience:

Spring 1997
Psychology 526 – Abnormal Psychology

Summer A 1997
Psychology 554 – Tests and Measurements (recertified Summer 2005)

Fall 1997
Psychology 521 – Statistical Methods

Fall 1998
Psychology 623 – Experimental Design

Fall 2003
Psychology 533 – Current Models of Psychotherapy
Psychology 608 – Differential Diagnosis and Treatment Planning
Psychology 610 – Assessment of Adults
Psychology 620 – Assessment of Adults Practicum

Spring 2004
Psychology 605 – Ethics, Legal and Professional Issues Psychology
Psychology 611 – Assessment of Children
Psychology 621 – Assessment of Children Practicum
Psychology 634 – Group Therapy

Summer B 2004
Psychology 630 – Adult Diagnosis and Therapy

Fall 2004
Psychology 633 – Individual Psychotherapy
Psychology 672 – Cognitive Psychology
Psychology 616 – Typical and Atypical Child Development

Spring 2005
Psychology 671 – Clinical Practicum
Psychology 685 – Independent Study: PTSD
Psychology 686 – Independent Study: Resilience

Summer B 2005
Psychology 680 – Clinical Internship
Psychology 681 - Thesis

Professional Experience:

January 2005 – August 2005; Clinical Practicum and Internship (Graduate Student),
Conducted over 500 total direct contact hours with patients in two different therapeutic settings. 250 direct contact hours conducted at Marshall University Clinic in Dunbar, WV and 250 direct hours conducted at Mildred-Margaret Bateman Hospital in Huntington, WV. Contact hours included individual therapy, group therapy, psychological testing, interagency contacts, treatment planning, psychological intakes (including mental status exams), and behavioral treatment plans.

April 2002 to January 2003; Harris Consulting – Owner (*Case Manager*),
Conducted case management operations for West Virginia Workers Compensation claim. Oversaw claims concerning temporary and permanent disability claims. Conducted background evaluations concerning claimant's injury and work history, researched alternate job potentials for claimants enabling them to return to gainful employment within their areas of expertise. Liaison with claimant's employers and physicians to ensure timely and helpful assistance in returning eligible claimant's back to work.

September 1997 – June 1998; Autism Training Center, *(Assistant Trainer),*
Compile and interpret behavioral data relating to individual patient performance. Provide training and counseling to families on how to address patient's disability and behavioral issues. Develop strategies to assist patients and families to better function with disability in society. Facilitate liaison contacts between families, schools, and health care providers.

August 1996 – September 1997; Shawnee Hills Outpatient *(Case Manager),*
Instructed West Virginia State Driving while Under the Influence 18-hour classroom curriculum, with average caseload of 50 to 75 patients. Conduct individual treatment assessments; determine level and intensity of treatment, as well as, the level and severity of patient disability. Maintain regular reviews evaluating patient performance during treatment. Participant in community outreach program focusing on bringing mental health care to city projects.

September 1994 – August 1996; Shawnee Hills Rehabilitation Unit *(Therapist / Counselor),*
Facilitate structured therapy sessions in both group and individual settings. Conduct individual treatment assessments and develop treatment strategies specific to patient needs. Develop therapeutic interventions to address critical patient issues.

January – May 1992; Chestnut Ridge Hospital *(Extern),*
Attend treatment meetings and interventions with clinical staff. Administrate neuropsychological tests to inpatient and outpatient community. Facilitate scoring, recording, and coding of research data.

March – May 1992; Chestnut Ridge Hospital *(Research Assistant),*
Duties: Provide collection and processing of research data in the co-authorship study on the effectiveness of measuring malingering in neuropsychological tests.

Military Experience:

United States Army Reserve – Intelligence Analysist – October 1999 to Present.
Operation Enduring Freedom – January 2003 – July 2003
Operation Iraqi Freedom – February 2003 – July 2003

Research/Publications:

Arnett, P.A., Franzen, M., & Harris, G. (1992). Performance of substance abusers with memory deficits on measures of malingering. Twelfth Annual Meeting of National Academy of Neuropsychology, Pittsburgh, PA.