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Finding “Home” After War: Social Functioning in Returning OEF/OIF Veterans with Traumatic Brain Injury

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Introduction

Why Studying Social Constructs in the Veteran Population Is Important

Many veterans have spent most or all of their adult lives in the military. Returning home, they face challenges beyond the transition from military to civilian life:

- **Physical changes** – Exposure to blasts may mean traumatic brain injury (TBI), which may have a ripple effect on veterans’ physical, mental, and social health via chronic headaches, sleep disturbances, fatigue, memory and concentration problems, personality changes, etc.
- **Psychological changes** – Veterans may return with concealable scars of war (e.g., depression, PTSD) that skew the way they perceive and react to their environment, which may affect the way others perceive and react to the veteran. Loved ones may feel the veteran is “different” from how he/she used to be.

- **Social changes** – Some veterans begin university-level education for the first time, after being out of school for years, and find that they do not “fit in” with traditional college students. Other veterans have become estranged from family members or spouses, and may have missed important life events or lost opportunities to bond with their young children. Others struggle to adapt their military skills to the civilian workforce.

Primary Goals

- Examine veterans’ deployment experiences and psychopathology to learn which factors predict better adjustment to life after the military (operationalized as “social functioning”).
- Determine what role, if any, TBI may play in the veterans’ process of readjusting to civilian life.

Method

Participants (N = 142)

- **Age:** 21–57 ($M = 30.48$, $SD = 7.58$)
- **Sex:** Male
- **Race:** American Indian / Alaskan Native (0.70%), Asian (0.70%), African (2.11%), Caucasian (95.77%), “Other” (0.70%)
- **Ethnicity:** Hispanic/Latino (2.82%), not Hispanic/Latino (97.18%)
- **Maximum education:** some HS (2.92%), HS grad (43.80%), some college (36.50%), college grad (13.87%), graduate degree (2.92%)
- **TBI status:** with TBI (75.35%), no TBI (24.64%)
- **Branch of military:** Air Force (2.11%), Army (78.87%), Marines (14.79%), Navy (4.23%)
- **Duration of deployment:** 3–38 months ($M = 16.04$, $SD = 7.21$)
- **Time since deployment:** 2–91 months ($M = 33.42$, $SD = 20.21$)

Method (continued)

Procedure

- As part of a larger longitudinal study, veterans recruited from the polytrauma clinic of the Iowa City VA completed self-report questionnaires, clinical interviews, medical exams, and MRI scans.
- For our bivariate analyses, data from the baseline timepoint were used to calculate and report Pearson’s correlations. Wilcoxon rank-sum tests were used to compare continuous outcomes between the TBI and the non-TBI groups.
- All variables that were associated with social functioning in the bivariate analyses were considered in a linear regression model predicting social functioning. The final model was chosen using a stepwise algorithm, in which the inclusion/exclusion criterion was the corrected Akaike information criterion (AICc). The model reported minimizes AICc.

Select Measures

Deployment Risk & Resilience Inventory (DRRI)

- (King, King, & Vogt, 2003)
- This measure of deployment-related experiences comprises 14 subscales. Sample items from the relevant subscales are presented below:
 - **Social Support During Deployment**
 - I felt a sense of camaraderie between myself and other soldiers in my unit.
 - Members of my unit understood me.
 - My commanding officer(s) were interested in what I thought and how I felt about things.
 - **Social Support After Deployment**
 - I have problems that I can’t discuss with family or friends. (R)

- People at home just don’t understand what I have been through while in the Armed Forces. (R)
- My supervisor understands when I need time off to take care of personal matters.

Combat Experiences

- While deployed, I or members of my unit received “friendly” incoming fire from small arms, artillery, rockets, mortars, or bombs.
- I was part of a land or naval artillery unit that fired on the enemy.
- I was wounded or injured in combat.

Post-Deployment Life Concerns

- Since returning home, I experienced the death of someone close to me.
- Since returning home, I have been unemployed and seeking employment for at least three months.
- Since returning home, I have gone through a divorce or been left by a partner or significant other.

Hamilton Rating Scale for Depression (HAM-D)

- (Hamilton, 1960)
- Clinicians use this 28-item measure to assess a participant’s depressive symptoms, such as:
 - Depressed mood
 - Somatic symptoms
 - Feelings of guilt
 - Appetite
 - Insomnia / hypersomnia
 - Weight loss or gain

Method (continued)

Social Functioning Exam (SFE)

(Starr, Robinson, & Price, 1983)

- This 28-item measure taps multiple domains of social functioning, such as close relationships, living environment, and spirituality. Lower scores equal better social functioning. Examples below:
 - Who are you closest to? How close are you? Is he/she affectionate? Is he/she considerate of your feelings?
 - Do you (did you) enjoy your job?
 - Do you belong to any formal groups, organizations, church? How often do you attend? How important are these groups to you? What kinds of things do you do there?

Results

Table 1. Means, Standard Deviations, and Correlations

	1	2	3	4	5	6
1. SS During	--					
2. SS After	.45***	--				
3. Combat Exp	.07†	.08†	--			
4. Life Concerns	-.17	-.24	.30	--		
5. Depression	-.30	-.51***	.28	.43***	--	
6. Social Function	-.31***	-.51***	.09†	.30	.52	--
<i>M</i>	40.22	55.12	8.56	3.26	16.95	0.17
<i>SD</i>	11.80	8.78	3.71	2.34	8.49	0.14

Note. SS = Social support.

† denotes ns; *** denotes $p < .0001$. For all others, $p = .0002-.04$

Select Findings

- **Depression ratings and social support after deployment** significantly predicted **social functioning** ($R^2=0.37$, $F(2,138) = 40.13$, $p < 0.0001$).
- **Having more social support after deployment** predicted **better social functioning** ($F(1,138) = 12.82$, $p = 0.0005$).
- **Having lower depression ratings** predicted **better social functioning** ($F(1,138) = 27.87$, $p < 0.0001$).
- **Having a TBI showed no effect on social functioning.**
- **Lower depression ratings** were also associated with **fewer post-deployment concerns and greater social support after deployment.**

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Discussion

Conclusions

- Belonging to cohesive units with good leadership may mean better social support during deployment, and thus, better social functioning after discharge.
- Contrary to expectations, having a TBI was not associated with poorer social functioning, despite the notion that brain trauma can result in significant impairments in personality and social behavior.
- Findings did not yield associations between the intensity of combat experiences and social functioning after returning home.

Limitations

- Our sample was racially homogeneous (over 95% Caucasian), and only males were retained for the analyses. Predictors of better social functioning may differ in female veterans and in veterans of other racial and cultural backgrounds.
- The number of veterans without TBI in this sample was relatively small ($N = 35$) compared to the number of veterans with TBI ($N = 107$), so analyses attempting to differentiate between TBI status were inconclusive.

Select References

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