



Is There an Association Between PTSD & Dementia?

From Systematic Review to Retrospective Study



Salah Qureshi, MD; Paul Schulz, MD; Jeff Pyne, MD;

Kathy Magruder, PhD, MPH; Timothy Kimbrell, MD; Teresa Hudson, PharmD; Mark Kunik, MD, MPH

South Central MIRECC; Michael E. DeBakey VAMC;

Baylor College of Medicine; Houston Center for Quality of Care & Utilization Studies, Houston, TX

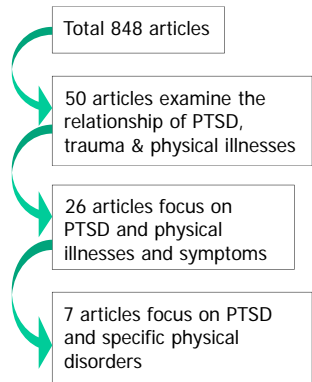
Background

The relationship of PTSD and psychological trauma to cognitive impairment has received little attention. Previous data suggest hypothalamic-pituitary-adrenal axis dysfunction and abnormal CSF concentrations of serotonin, norepinephrine, substance P and interleukins in individuals with PTSD. Some investigators have found reduced hippocampal volume.

As the veteran population ages, the prevalence of dementia will increase. It is important to know what effects trauma and PTSD have on development of dementia in these patients.

As a first step, to explore this relationship, we conducted a systematic review.

Systematic Review



| Diseases | Positive Studies | Negative Studies |
|--------------------|------------------|------------------|
| Arthritis | 3 | 1 |
| Asthma | 2 | 1 |
| Cervical dysplasia | 1 | |
| DM | 2 | 2 |
| Eczema | 1 | |
| Endometriosis | 1 | |
| Epilepsy | 1 | |
| Glomerulonephritis | 1 | |
| HD/CHD | 3 | 2 |
| Heart Attack | 1 | 1 |
| HTN | 2 | 1 |
| Psoriasis | 1 | |
| Stroke | 1 | 1 |
| Thyroid | 1 | 3 |
| Ulcer | 2 | |

The next step in this research agenda is to undertake a retrospective study

- Retrospective, prospective case-control study using the VA administrative databases of the South Central United States (VISN 16)
- A **cohort group** of subjects 65 years or older from January 1, 1997, through December 31, 1998, who
 - Have at least 2 VA visits
 - Have PTSD diagnosis, **or**
 - Are Purple Heart recipients (a proxy for trauma) with or without PTSD
- A 1-to-1 **control group** matched by age, gender, race and education, without PTSD or Purple Heart
- Controlling variables
 - Height
 - Blood pressure
 - Cholesterol
 - HBA1c
 - Weight
 - Smoking
 - Glucose
- Dependent variables (Sept. 30, 2008)
 - Dementia**
 - HTN
 - CAD
 - DM
 - CVA
 - Arthritis
 - GI Ulcers
 - Mood disorders
 - Alcohol/drug dependence
 - AchEIs / Memantine (an alternative means to define dementia)

Hypothesis

- Chronic PTSD is independently associated with dementia, even after controlling for trauma and other confounding factors.

Impact

- Aggressive screening and treatment of PTSD
- Early screening of cognitive impairment
- Control of other risk factors for dementia