HEALTH RESEARCH ABSTRACT SUBMISSIONS #5

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Title of Research *	The Impact of Post-Traumatic Stress Disorder on Blood Pressure and Heart Rate in a Veteran Population
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Introduction & Purpose *

Post-traumatic stress disorder (PTSD) has an estimated prevalence of 6-8% in the general population and 10-30% in the Veteran population. Increased arousal is a hallmark of PTSD. Proposed physiological responses include increased blood pressure (BP) and heart rate (HR). Current literature is limited describing these physiological changes in PTSD. The purpose of this study was to determine if patients with PTSD have higher resting BP and HR compared to patients without PTSD. The primary objective identified differences in diastolic BP between patients with and without PTSD. Secondary objectives included differences in systolic BP and HR.

Experimental Design *	This was a retrospective, cross-sectional cohort study. We identified all patients consulted to outpatient psychiatry at the Iowa City VA Medical Center between 1/1/2008 and 1/1/2010. Patients were divided into PTSD (n=88) and non-PTSD (n=98) cohorts. The index date was defined as the consult date. All patients were male and younger than 55 years old. All patients in the PTSD group were required to have documented trauma exposure and a sub-group of the non-PTSD group also had trauma exposure. In addition, we reviewed prescribing patterns for PTSD treatment.
Results *	Average diastolic BP was significantly higher in patients with PTSD (87.6 ± 6.3 versus 78.6 ± 7.2 mmHg; $p<0.0001$) compared to those without PTSD. Systolic BP (133.8 versus 122.3 mmHg; $p<0.0001$) and HR (78.9 versus 73.1 bpm; $p<0.0001$) were also significantly higher in the PTSD group. Both PTSD and trauma exposure were independently associated with significantly higher BP in group comparisons ($p<0.05$).
Conclusions *	Patients with PTSD were found to have higher BP and HR compared to those without PTSD. Trauma exposure, independent of PTSD, may also be associated with higher BP. These findings will increase awareness about the cardiovascular implications of PTSD.

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