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Combat Experiences, Personality, Iso-Strain, and Sleep Quality Affect Posttraumatic Stress Among Working Post-9/11 Veterans

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Introduction

- By 2019, 1 million post-9/11 veterans are expected to enter the U.S. workforce (DoD, 2015). Greater workplace resources (e.g., supervisor and coworker support, schedule control) may decrease risk of post-traumatic stress disorder (PTSD) and associated symptoms (PTSS).
- Prior research into the “stressor-stress” link has emphasized such factors as education and SES while neglecting the role of personality (Zapf et al., 1996). For example, “hardiness” (e.g., “dispositional optimism”) among military personnel may buffer against severity of PTSD (Bartone, 1992). Moreover, higher levels of hardness have been associated with lower levels of depression and PTSD (Maddi, 1999).

Methods and Measures

- Sample: Baseline self-reported survey data on 382 veteran participants.
  - 89.3% male, average age of 38.3 (SD = 8.9), 81% Caucasian.
- Procedure: Surveys were distributed electronically (2013-2016). Stepwise regressions were conducted to test the effects of personality traits, PTSS, Sleep Quality and control variables on PTSS as a function of combat experiences.
- Measures:
  - PSQI: Pittsburgh Sleep Quality Index. (Buysse et al., 1989), 4 items, n = 68
  - CEs: Combat Experiences Scale, (WRRAI, 2008), 27 items, n = 95
  - ISO: Iso-Strain (i.e., job demands, job control, support), (Rugulies et al., 2005), n = 76
  - PTSS: Primary Care PTSD Screen (Hsieh et al., 2008), 4 items, n = 92

Results

- A one-way ANOVA (Figure 1) of PTSS by Veteran Employment Status (Active Reservists (N=60), Separated Active Component (N=185), Separated Reserve Component (N=129)) was significant (F(2,180) = 3.36, p < .05).
- In Model 1 (Table 2), all focal variables (i.e., Combat Experiences, Veteran Work Category, Sleep Quality, and Iso-Strain) were entered simultaneously. The effects of Combat Experiences (CEs) (β = .58, p < .05), Iso-strain (ISO) (β = -.11, p < .05) and Sleep Quality (β = .41, p < .01) were all significant with ISO (β = .07, p < .10) and Sleep Quality (β = .08, p < .10) marginally moderating CEs on PTSS.
- In the second step (Model 2/Table 2), all control variables were entered simultaneously. SES (β = .30, p < .05) and TSD (β = .08, p < .05) were significant; while Risk of Homelessness (β = -.07, p < .10) was marginally predictive of PTSS.
- In the third model (Model 3/Table 2), the personality variables were entered simultaneously. While Conscientiousness (β = .05, p < .10) did not predict PTSS, Neuroticism (β = .03, p > .10) was highly significant. Among the remaining predictors, only CEs (β = .36, p < .01), Work Category (β = .08, p < .05) and Sleep Quality (β = .24, p < .01) had main effects on PTSS in the presence of Conscientiousness and Neuroticism — along with SES (β = .09, p < .01). Lastly, in the full model, only ISO (β = -.001, p < .10) reached marginal significance as a moderator of CEs on PTSS.
- Under the assumption of PTSS best fitting a log-normal distribution in the full model, Work Category, ISO, and Sleep Quality did not moderate CEs on PTSS. Whereas, CEs, Veteran Work Category and Sleep Quality had main effects on PTSS.

Discussion

To the best of our knowledge, this study is the first to investigate the influence of personality among a working sample of post-9/11 veterans several years post-reintegration. Overall, higher Neuroticism was predictive of greater severity of PTSS. Conscientiousness, however, was unrelated to PTSS. SES and TSD predicted greater PTSS; whereas, Risk of Homelessness did not.

A test of the multivariate assumption of normality revealed that a log-normal distribution best fit the data. As expected, CEs had a consistent main effect on PTSS across both normal and log-normal distributions. Additionally, in Model 2, a two-way moderating effect (Table 2) of Sleep Quality on PTSS was found. However, Sleep Quality became insignificantly after adding Neuroticism (Model 3). This supports the influence of NEC in manifestation of PTSS. By contrast, Conscientiousness was unrelated to PTSS. Though consistent with Erbes et al. (2011), in that Conscientiousness did not predict PTSS, this finding differed from past research into Big Five personality traits studied in the context of PTSD that found differential effects of traits on PTSS. Also, consistent with theory and prior research, traits of NEC appeared to play a stronger role than PETF traits in predicting PTSD severity.

This study had several limitations. Measures were self-reported and may be subject to social desirability and response bias. Further, as this was a cross-sectional sample, no inference of causality can be made. Because personality and PTSS were measured contemporaneously, the effects of trauma (e.g., CEs) on personality cannot be eliminated. Also, measures of Conscientiousness and Neuroticism do not fully reflect the PETF and NEC constructs, which may also explain why Conscientiousness was unrelated to PTSS.

Future research should utilize longitudinal designs to better establish whether Conscientiousness and Neuroticism predict PTSD prior to surviving combat. Further researchers should investigate whether the constructs of PETF and NEC provide targets to optimize workplace trainings designed to increase supports for reintegrating veterans.