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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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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 PTSD and PMI (Maddi, 1999).

However, Erbes et al., (2011) found that hardness was a related but distinct construct from positive and negative emotionality (i.e., “PEM” and “NETM”). Not only is neuroticism associated with PTSD while PEM and conscientiousness appear negatively related to PTSD (Jakić et al., 2012). Therefore, hardness, PEM, and NETM may have different effects on PTSD. Using baseline data drawn from Dr. Leslie Hammer and colleagues’ five-year, Department of Defense-funded, randomized control “Study for Employment Retention of Veterans” (SERVe), the present study investigated the influence of two of the Big Five personality traits (i.e., “Conscientiousness” and “Neuroticism”) on symptoms of PTSD.

Introduction

What is the influence of personality, iso-strain, and Sleep Quality on symptoms of PTSS following Combat Experiences (CEs)?

Do Conscientiousness and Neuroticism predict PTSD consistent with research on the Big Five traits and Tellegen’s (1982) 3-factor model?

Do “iso-strain” (i.e., high job demands, low job control, & low social support at work) and Sleep Quality moderate PTSD after experiencing combat?

How do veteran-relevant control variables such as (1) SES, (2) Time Since Deployment (TSD), and (3) Risk of Homelessness influence PTSS?

Do distributional assumptions (i.e., normal vs. log-normal) about PTSD change the significance of main and simple effects of CEs on PTSS in the presence of Conscientiousness and Neuroticism after controlling for SES, TSD, and Risk of Homelessness?

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, iso-strain, 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, a = .68
• CEs: Combat Experiences Scale, (WRRAI, 2008), 27 items, a = .95
• ISO: Iso-Strain (i.e., job demands, job control, support), (Rugulies et al., 2005), a = .76
• PTSS: Primary Care PTSD Screen (Bleske et al., 2008), 4 items, a = .92

Discussion

Overall, higher Neuroticism was predictive of greater severity of PTSS. Conscientiousness, however, was unrelated to PTSD. 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 PTSD 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 insignificant after adding Neuroticism (Model 3). This supports the influence of NETM in manifestation of PTSD. By contrast, Conscientiousness was unrelated to PTSS. Though consistent with Erbes et al. (2011), in that Conscientiousness did not predict PTSD, this finding differed from past research into Big Five personality traits studied in the context of PTSD that found differential effects of traits on PTSD. Also, consistent with theory and prior research, traits of NETM appeared to play a stronger role than PEM 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, this was a cross-sectional study, no inference of causality can be made. Because personality and PTSD 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 PEM and NETM constructs, which may also explain why Conscientiousness was unrelated to PTSD.

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