



The impact of military service and traumatic brain injury on the substance use norms of Army Reserve and National Guard Soldiers and their spouses



J.A. Devonish^{a,b}, D.L. Homish^a, B.M. Vest^c, R.C. Daws^a, R.A. Hoopsick^a, G.G. Homish^{a,*}

^a Department of Community Health and Health Behavior, University at Buffalo, The State University of New York, 325 Kimball Tower, Buffalo, NY 14214, United States

^b School of Pharmacy and Pharmaceutical Sciences, University at Buffalo, The State University of New York, 285 Kapoor Hall, Buffalo, NY 14214, United States

^c Department of Family Medicine, University at Buffalo, The State University of New York, 77 Goodell Street Suite 220, Buffalo, NY 14203, United States

ARTICLE INFO

Keywords:

Substance use
Military
Traumatic brain injury
Marriage

ABSTRACT

Introduction: Traumatic brain injury (TBI) and substance use are highly prevalent conditions among military populations. There is a significant body of evidence that suggests greater approval of substance use (i.e., norms) is related to increased substance use. The objective of this work is to understand the impact of TBI and military service on substance use norms of soldiers and their partners. Data are from the baseline assessment of Operation: SAFETY, an ongoing, longitudinal study of US Army Reserve/National Guard (USAR/NG) soldiers and their partners.

Methods: Multiple regression models examined associations between alcohol, tobacco, illicit drug use, and non-medical use of prescription drug (NMUPD) norms within and across partners based on current military status (CMS) and TBI.

Results: Male USAR/NG soldiers disapproved of NMUPD, illicit drug use and tobacco use. There was no relation between military status and alcohol use. Among females, there was no relation between CMS and norms. The NMUPD norms of wives were more likely to be approving if their husbands reported TBI symptoms and had separated from the military. Husbands of soldiers who separated from the military with TBI had greater approval of the use of tobacco, NMUPD, and illicit drugs.

Conclusion: Overall, there is evidence to suggest that, while generally disapproving of substance use, soldiers and partners become more accepting of use if they also experience TBI and separate from the military. Future research should examine the longitudinal influence of TBI on substance use norms and subsequent changes in substance use over time.

1. Introduction

Substance use within the workplace is associated with detrimental effects that reaches beyond impairments in productivity to include negative health consequences (DeFulio et al., 2009; DM, 2008; Hourani et al., 2006; Normand et al., 1994; Phillips et al., 2015). Military workforces are not impervious to problematic substance use and its associated negative effects (Bray & Hourani, 2007; Department of Defense Directives 1010.4, 2014). When compared to the general population, service members have higher rates of substance use (Eisen et al., 2004; Thomas et al., 2010). In fact, substance abuse is one of the most commonly reported health problems among soldiers returning from Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) (Bennett et al., 2013; Bray et al., 2009; Kulesza et al., 2015; Seal et al., 2007). The use of tobacco is higher among service members than in the general population (Bray & Hourani, 2007) and a

long history of alcohol misuse has been chronicled (Bennett et al., 2013; Bray & Hourani, 2007; Bray et al., 1991). Prescription drug misuse is also a concern (Bennett et al., 2013; Bray et al., 1991). High rates of health problems in veterans of OEF/OIF exacerbates potentials for misuse. For instance, traumatic brain injury increases the likelihood of pain management plans involving opioids (Seal et al., 2012). Examination of health related behaviors in active duty personnel found the lifetime, past year, and past month use of illicit and prohibited drugs in those 18–65 years of age to be 28.2%, 1.4%, and 0.3% respectively (Institute of Medicine, 2009). A cross-sectional study in veterans using the Department of Veterans Affairs (VA) healthcare system, found that 7% of OEF/OIF veterans screened positive for cocaine and marijuana use disorders (Hawkins et al., 2010).

Among military personnel, a number of factors may influence substance use. Demographic factors related to an increased likelihood of substance misuse include male gender, age < 25 years, and being

* Corresponding author.

E-mail address: ghomish@buffalo.edu (G.G. Homish).

single (i.e., never married, widowed, or divorced) (Seal et al., 2011). Combat exposure and a history of deployment are associated with increased substance use/misuse, though the specific branch of the military also influences different patterns of substance use (Seal et al., 2011). Following deployment, United States Army Reserve/National Guard (USAR/NG) soldiers report higher rates of mental health problems and treatment needs for new-PTSD, depression, and substance abuse than their active duty counterparts (Jacobson et al., 2008; Milliken et al., 2007; Riddle et al., 2007; Smith et al., 2008).

Substance use norms are another influential factor associated with substance use (Bailey et al., 2016; Measham et al., 1994). In particular, greater approval substance use is related to higher levels of use, while decreasing approval is related to lower levels of use (Andrews et al., 2002; Delucchi et al., 2008; Leonard et al., 2000). For example, in civilians, peer alcohol use is a strong predictor of individual alcohol use (Andrews et al., 2002; Delucchi et al., 2008; Homish & Leonard, 2008a; Leonard et al., 2000). Tobacco use is associated with self-identification as a smoker, tobacco outlets close to home, and perceptions that smoking is more prevalent than actual use (Ilakkuvan et al., 2016; Lipperman-Kreda et al., 2014; McLaughlin, 2010; Schleicher et al., 2016). Parental substance use, childhood perceptions of parental norms, and individual and friends' norms all contribute to an increased likelihood of marijuana and alcohol use (Bailey et al., 2016). Research on prescription drug norms has found individuals to overestimate peers' misuse (Kilmer et al., 2015).

Information concerning substance use norms is much more limited in the military than in civilian populations. However, given the higher rates of alcohol and tobacco use in the military as compared to the general population, it is possible that their underlying norms may differ. When asked about the alcohol consumption of their coworkers, military personnel overestimated the actual amount of alcohol consumed by their coworkers as well as the percentage of their coworkers who engaged in episodes of heavy drinking (Neighbors et al., 2014). The more often that military personnel believed their coworkers drank, the frequency of their own alcohol use also increased (Neighbors et al., 2014; Williams et al., 2009). Soldiers' norms may be subject to change over time as a result of exposure to a number of service conditions or changes in social, environmental, or health related factors that influence their substance use (Jacobson et al., 2008; Milliken et al., 2007; Seal et al., 2012; Smith et al., 2008). One such influence is that of an intimate partner. Partner influences have been observed on each other's physical health, mental health, and risk related behavior (Derrick et al., 2013; Homish & Leonard, 2008b). Previous work with civilians found that one partner's actual use of a given substance (e.g., alcohol, tobacco, illicit drugs, and nonmedical use of prescription drugs (NMUPD)) is predictive of their spouse's use of the same substance (Dollar et al., 2009; Homish & Leonard, 2005a; Homish et al., 2007; Homish et al., 2010; Leonard & Homish, 2005; Smith et al., 2012). Further, there is evidence in civilian populations that a partner's expectations about substance use are related to their own substance use (Homish & Leonard, 2005b; Leonard & Homish, 2008). Given the high proportion of service members who are married, there is a potential for partners to impact each other's health behaviors (Department of Defense, 2012). As such, it is important to understand within (i.e., how one person's behaviors impact his/her own behaviors) and cross-spouse (i.e., how one partner's behaviors impact his/her partner's behaviors) influences among soldiers and partners.

Another factor that may relate to changing substance use norms is separation from the military. Norman et al. (Norman et al., 2014) investigated the predictors of problematic substance use following discharge from the military and found that the majority of soldiers who screened positive for problematic substance use during active duty no longer screened positive during the year after separation from the military; however 42% of the sample continued to have problematic substance use.

Appreciating other factors that negatively impact soldier wellbeing

is also necessary as these factors may precipitate departure from the military or further influence substance use. One such vulnerability factor is stress. Common stressors in the military are related to injuries and deployment (Milliken et al., 2007; Hoge et al., 2008; Hoge et al., 2004; Hoge et al., 2006; Mental Health Advisory Team (MHAT-V), 2008; Grieger et al., 2006). Combat-related traumatic brain injuries (TBI) and their detrimental aftereffects have been a major longstanding concern (Institute of Medicine, 2008). It is possible that health conditions, such as TBI, can impact substance use norms.

1.1. Purpose of the present study

Given the high percentage of married soldiers coupled with a higher prevalence of substance abuse among USAR/NG than active duty soldiers, the primary objective of this study was to explore how TBI and current military status (CMS) relate to the couples' substance use related norms. Importantly, we examined within spouse effects (e.g., his behaviors impacting his norms) and cross spouse (e.g., his behaviors impacting her norms) effects.

2. Methods

The Operation: SAFETY (Soldiers and Families Excelling Through the Years) study protocol was approved by The State University of New York (SUNY) at Buffalo's Institutional Review Board and also vetted by the Army Human Research Protections Office, Office of the Chief, Army Reserve as well as the Adjutant General of the National Guard.

2.1. Recruitment

After coordinating with unit commanders, Operation SAFETY staffs were able to attend unit drills to present a brief project overview to soldiers and distribute study information packets to soldiers to take home to share with their partners. The 10-min briefing detailed study objectives and protocols, what participation would involve, topics covered in the questionnaire, and confidentiality. Soldiers and their partners each received \$60 for baseline and \$70 for each of the yearly follow-ups (\$200 per person/\$400 couple over the study period). Soldiers were told that investigators had obtained a certificate of confidentiality from the US Department of Health and Human Services that prevents disclosure of their information in response to legal orders. Assurances were made that not only would the military not know of their participation, but partners would not learn of each other's responses. To conclude, soldiers were invited to complete a one-page screening form.

Inclusion criteria were as follows: (1) the couple is married or living as if married; (2) one member of the dyad is a current USAR/NG Soldier; (3) the soldier is 18–45 years of age; (4) both partners are able to speak and understand English; (5) both partners are willing and able to participate; and (6) both partners have had at least one alcoholic beverage in the past year. Assessment surveys were scheduled for eligible couples who verbalized their willingness to participate.

Over 15-months, we attended 47 recruitment events at units across New York State. We received 1653 completed screening forms; 922 were ineligible (579 were single, 329 failed ≥ 1 screening items ($M = 1.5$ (SD: 0.09)). Of the 731 eligible, 572 (78%) agreed to participate and 83% of couples ($N = 472$) completed at least part of the survey. Among males, 435 completed the entire survey, while 7 started but did not finish. Female participants completed 440 surveys and 14 additional surveys were partially completed. There were 7 same sex couples. Only surveys where both partners completed the entire survey were included for follow-up ($N = 411$). We examined the differences between those that passed and enrolled vs those who passed and did not enroll after screening. When a civilian partner screened for the study ($n = 11$), these couples were less likely to enroll ($p < 0.001$). No differences existed within the soldiers' screening

Download English Version:

<https://daneshyari.com/en/article/5037763>

Download Persian Version:

<https://daneshyari.com/article/5037763>

[Daneshyari.com](https://daneshyari.com)