Addictive Behaviors 39 (2014) 379–385

Contents lists available at ScienceDirect

Addictive Behaviors

Alcohol use, military sexual trauma, expectancies, and coping skills in women veterans presenting to primary care

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HIGHLIGHTS

- Chi square analyses revealed a higher percentage of drinkers than non-drinkers reported military sexual trauma.
- Poisson regressions revealed that the depression, positive evaluations, and avoidance coping predicted alcohol use.
- Alcohol use was influenced by the combination of positive evaluations and avoidant coping.

ARTICLE INFO

Keywords:
Women veterans
Alcohol
Coping
Expectancies
Military sexual trauma

ABSTRACT

Background: Little is known regarding alcohol use and its correlates in women veterans. An understanding of these variables is of utility to providers in primary care at Veterans Affairs (VA) hospitals, who are among the first to identify and intervene for problem drinking.
Objective: The objective of this study was to describe and explore the associations between posttraumatic stress disorder symptoms, experience of military sexual trauma (MST), expectancies for alcohol use, and coping skills in predicting drinking behavior.
Design: Each month all women veterans attending appointments in primary care were mailed a letter alerting them to the study. Women then received a call asking them to participate, and many were directly recruited at their primary care appointment. Participants then completed a survey of current alcohol use and related variables in a private room.
Participants: Participants were 93 women veterans seeking care at VA.
Main measures: Measures included the Alcohol Use Disorders Identification Test, a modified version of the VA MST screen, the Davidson Trauma Scale; the Coping Inventory for Stressful Situations, and the Brief Comprehensive Effects of Alcohol Questionnaire.
Key results: Positive expectancies and evaluations emerged as significant correlates of AUDIT scores, while PTSD symptoms were not related to AUDIT scores. A hierarchical regression revealed a significant positive interaction between avoidance coping and positive evaluations. Depression, positive evaluations and avoidance coping were significant independent predictors of AUDIT scores in the final model, but MST was not.
Conclusions: Findings highlight the importance of considering of the function of alcohol use when delivering clinical interventions and the need for further research on the association between MST and drinking in women veterans.

Published by Elsevier Ltd.

1. Introduction

United States veterans, as compared to civilians, have high rates of substance use and mental health problems (Hankin et al., 1999; Kaplan, Huguet, McFarland, & Newsom, 2007). Therefore, the Department of Veterans Affairs (VA) has adopted a model of mental health integration into primary care services out of recognition that many mental health conditions can be treated in primary care settings. Such integration promotes improved detection of mental health problems and improved health care outcomes overall (Zeiss & Karlin, 2008). Within VA, primary care represents one of the first points of screening for alcohol abuse and dependence, and brief screens such as the Alcohol Use Disorders Identification Test (AUDIT) are commonly used (Saunders, Aasland, Babor, De La Fuente, & Grant, 1993). Following from positive screens on the AUDIT, primary care providers may choose to make alcohol use a focus of their

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0306-4603/$ – see front matter. Published by Elsevier Ltd.
http://dx.doi.org/10.1016/j.addbeh.2013.02.006

own treatment or refer veterans on for more intensive treatment (e.g., to a VA Substance Abuse Treatment Program).

These referrals may not be effective, however, as the alcohol use detected by the AUDIT is often accompanied by a co-occurring mental health disorder or other maintaining factor. Furthermore, women veterans are less likely than men to seek substance abuse services, including intensive outpatient programs (Davis, Bush, Kivlahan, Dobie, & Bradley, 2003; Ross, Fortney, Lancaster, & Booth, 1998; Stecker, Han, Curran, & Booth, 2007). From the social–cognitive perspective of alcohol consumption, expectancies for alcohol use interact with coping style and emotional distress to predict alcohol use (Cooper, Russell, & George, 1988), thus an understanding of these factors in relationship to the experience of military sexual trauma (MST) and post-traumatic stress disorder (PTSD) may facilitate early intervention and/or treatment engagement with women veterans.

Alcohol use has been linked to symptoms of PTSD, alcohol expectancies, and coping skills. Regarding PTSD, higher levels of PTSD symptoms have frequently been linked to increased alcohol misuse in a variety of populations (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Kulka et al., 1990), including women veterans (Banerjea, Pogach, Smelson, & Sambamoorthi, 2009; Nunnink et al., 2010). Military sexual trauma (MST), which may or may not result in PTSD, is also prevalent in women veterans and is associated with substance use and mental health problems (Hankin et al., 1999; Kimerling, Gima, Smith, Street, & Frayne, 2007). Alcohol expectancies are defined as an individual's beliefs regarding the effects of drinking (Fromme, Stroot, & Kaplan, 1993; Leigh & Stacy, 1993), and they give insight into the functionality of alcohol use. Expectancies can be either positive (e.g., "drinking allows me to relax around others") or negative (e.g., "when I drink, I often say things that I regret later"). Alcohol expectancies have been found to reliably discriminate heavy from light drinkers (Southwick, Steele, Marlatt, & Lindell, 1981), problem from non-problem drinkers (Brown, Goldman, & Christiansen, 1985), and to longitudinally predict transition from non-problem to problem drinking status among adolescents (Christiansen, Smith, Roehling, & Goldman, 1989). Finally, coping skills have been hypothesized as a contributor to drinking behavior, as reliance on drinking as a coping strategy may be associated with avoidant coping (Moos, Brennan, Fondacaro, & Moos, 1990). In college students, avoidant coping was related to alcohol use through the mediation of positive expectancies (Hasking, Lyvers, & Carlopio, 2011).

Given the VA's recent integration of mental health into primary care settings, and the growing number of women veterans seeking care at the VA, we examined the relationships among alcohol use, PTSD symptoms, self-reported diagnosis of depression, coping strategies, and alcohol expectancies in a sample of women veterans. We also investigated the relationship between these variables and the experience of MST. We then explored whether differences are present in coping skills, alcohol expectancies and PTSD symptoms between drinkers and non-drinkers. Finally, we sought to identify which of these constructs were predictive of current alcohol use.

2. Method

2.1. Recruitment

Procedures were approved by the local VA Institutional Review Board. Women veterans attending appointments at a medium size New England VA hospital between January 2010 and May 2012 were invited to participate in the study. While the study was advertised broadly throughout the hospital, the primary method of recruitment was through primary care visits, as that provided access to the largest and most diverse sample of women veterans enrolled in the facility. Each month all women veterans attending appointments in primary care were mailed a letter alerting them to the study. Women then received a call asking them to participate, and many were directly recruited at their primary care appointment. Approximately 420 women were approached: 22% agreed to participate, 20% declined and 42% never answered or returned calls. We did not collect data on women who declined to participate, precluding any demographic comparisons between those who consented to participate and those who did not.

The study involved approximately 10 min of informed consent. Any woman veteran who was capable of giving informed consent, was non-psychotic, and not under the influence of substances was eligible to participate. Capacity to consent was determined by directly asking the veteran whether she understood the consent form and what the survey entailed. The consent form was read aloud to each participant. No participants in the study were openly intoxicated or experiencing psychotic symptoms. Due to the sensitive nature of the data collected, the voluntary nature of the research was emphasized to all participants, and information security procedures were explained clearly. Results of study measures were not documented in the electronic medical record. No incentive was offered for participation.

3. Measures

3.1. Demographics

Participants provided demographic information such as their age, gender, medical service use and military service history. The sample was stratified according to women who indicated they had consumed alcohol within the last month and those who had abstained from alcohol use in the last month. Usage of other substances such as tobacco and illicit drugs were also collected.

3.2. Risky-drinking behaviors

The AUDIT was completed to assess for problem drinking behavior (Saunders et al., 1993). The AUDIT is a 10-item screening questionnaire with 3 questions on the amount and frequency of drinking, 3 questions on alcohol dependence, and 4 on problems caused by alcohol. A score of 8 on the AUDIT is typically interpreted as indicative of a problem with alcohol, and the measure has a reported median reliability coefficient of .83, and adequate construct and criterion related validity (Reinert & Allen, 2007). In this sample, Cronbach's alpha was 0.85.

A modified version of the Daily Drinking Questionnaire (DDQ; Collins, Parks, & Marlatt, 1985) was used to assess typical, peak and heavy drinking over the past 30 days. Heavy drinking days was defined as the consumption of 4 or more drinks for women. Participants reported the hours spent drinking during a typical and peak drinking episode in the past 30 days, along with their weight in order to estimate typical and peak blood alcohol content (pBAC).

3.3. Experience of military sexual trauma (MST)

Because of the high rate of MST in the women veteran population, participants responded to questions regarding their experiences of harassment and assault in the military. Questions were taken from the VA MST screen, and adapted to include behavioral descriptors corresponding to those used in the National Women's Study (Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993). Women answered two questions about experiences of assault and harassment separately. A positive answer on either question was considered to meet the criteria for having experienced MST.

3.4. Posttraumatic stress symptoms

The Davidson Trauma Scale (DTS; Davidson et al., 1997) assessed current PTSD symptoms. The DTS is a 17 item self-report scale in which respondents report on the frequency and severity of symptoms during the past week using a 4 point scale. As the measure is valid only when accompanied by the experience of a traumatic event,