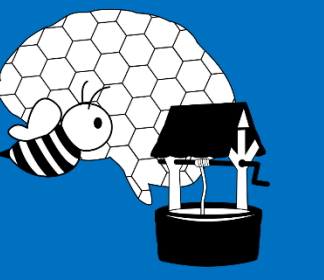


What is the relationship between the experience of trauma and substance use among healthcare workers?



INTRODUCTION

- Healthcare providers (HCPs) are uniquely vulnerable to occupational trauma exposure due to the responsibility of caring for people in diverse settings¹
- A well-established consequence of experiencing trauma is maladaptive coping through substance abuse (SU)²
- Two of the most abused legal substances, tobacco and alcohol, have been linked to detrimental health outcomes^{3, 4}
- To date, few studies have examined the relationship between trauma and SU among HCPs. Thus, the purpose of this study was to examine the following among a sample of HCPs at an academic-medical center:
 - Frequency of current tobacco use and risky alcohol use
 - Frequency and types of traumatic experiences
 - The associations between frequency of trauma experiences and current tobacco use and risky alcohol use while controlling for demographic factors.

METHODS

- A secondary analysis was performed on data collected from 850 HCPs at a large academic medical center in Kentucky
 - Responses to a voluntary 10-minute electronic survey were collected from Nov 2018-Apr 2019
- Multivariate logistic regression analyses were used to assess factors associated with tobacco use and risky alcohol use from among demographic, work-related, and behavioral/lifestyle variables

Demographics

- Age
- Gender
- Marital Status
- Educational Level

Job Role

- Primary Service Focus
- Primary Service Setting
- Primary Population Served
- Work & Discipline Tenure

Trauma Experiences

- A modified list of nine items based on the Life Events Checklist and Traumatic Life Events Questionnaire

Trauma Treatment

- Participants were asked "Have you ever received professional treatment (counseling or medications) for trauma?"

Substance use outcomes

- Current tobacco use:** participants were asked if they had used any tobacco products in the past 30 days
- Risky alcohol use:** participants were asked a combination of questions related to current alcohol consumption

MEASURES

RESULTS

Table 1. Risk for current tobacco and risky alcohol use by number of traumatic experiences

Frequency of Trauma Experiences	Current tobacco use ^a <small>Hosmer-Lemeshow Goodness of fit X²=4.69 (df=8), p=.791</small>				Risky alcohol use ^a <small>Hosmer-Lemeshow Goodness of fit X²=4.33 (df=8), p=.827</small>			
	n	%	OR	95%CI	n	%	OR	95%CI
0 (referent)	18	7.4	1.00	--	23	9.5	1.0	--
1	13	6.6	.87	.41-1.89	19	9.7	1.00	.51-1.94
2 to 3	41	15.4	2.04*	1.10-3.81	30	11.2	1.17	.63-2.18
4 or greater	26	17.9	2.05*	1.02-4.13	27	18.6	2.05*	1.03-4.06

^aAll models controlling for age, gender, marital status, education, and ever receiving trauma treatment
n=sample size; OR= Odds Ratio; CI= Confidence Intervals; *p<.05; **p<.01

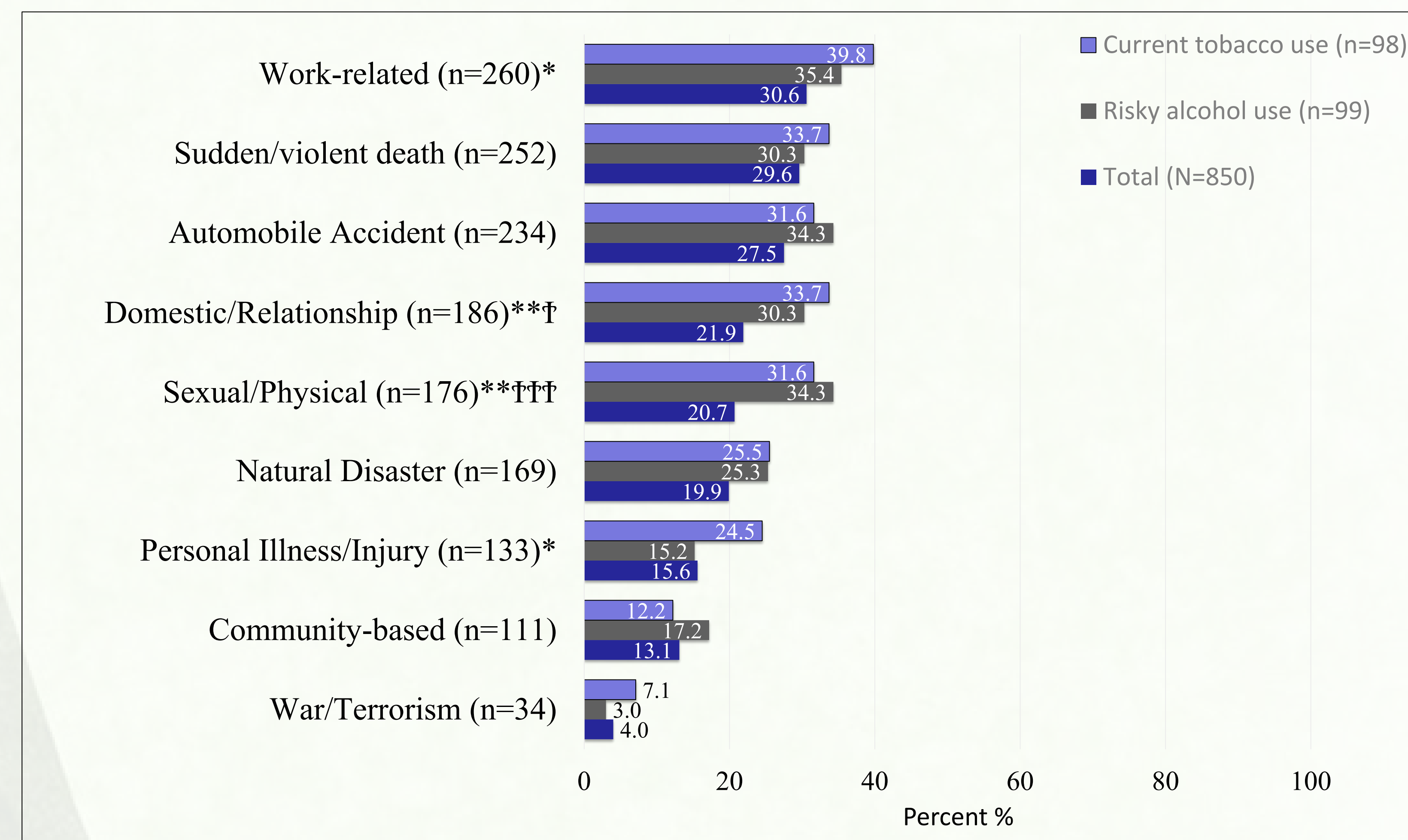


Figure 1. Percentage of current tobacco and risky alcohol use compared to total sample by trauma experience categories

*Differences in proportions of trauma experience categories and tobacco use using chi-square analyses
†p<.05 for current tobacco use; **p<.01 for current tobacco use
†Differences in proportions of trauma experience variables and risky alcohol use using chi-square analysis.
†p<.05 for risky alcohol use; †††p<.01 for risky alcohol use

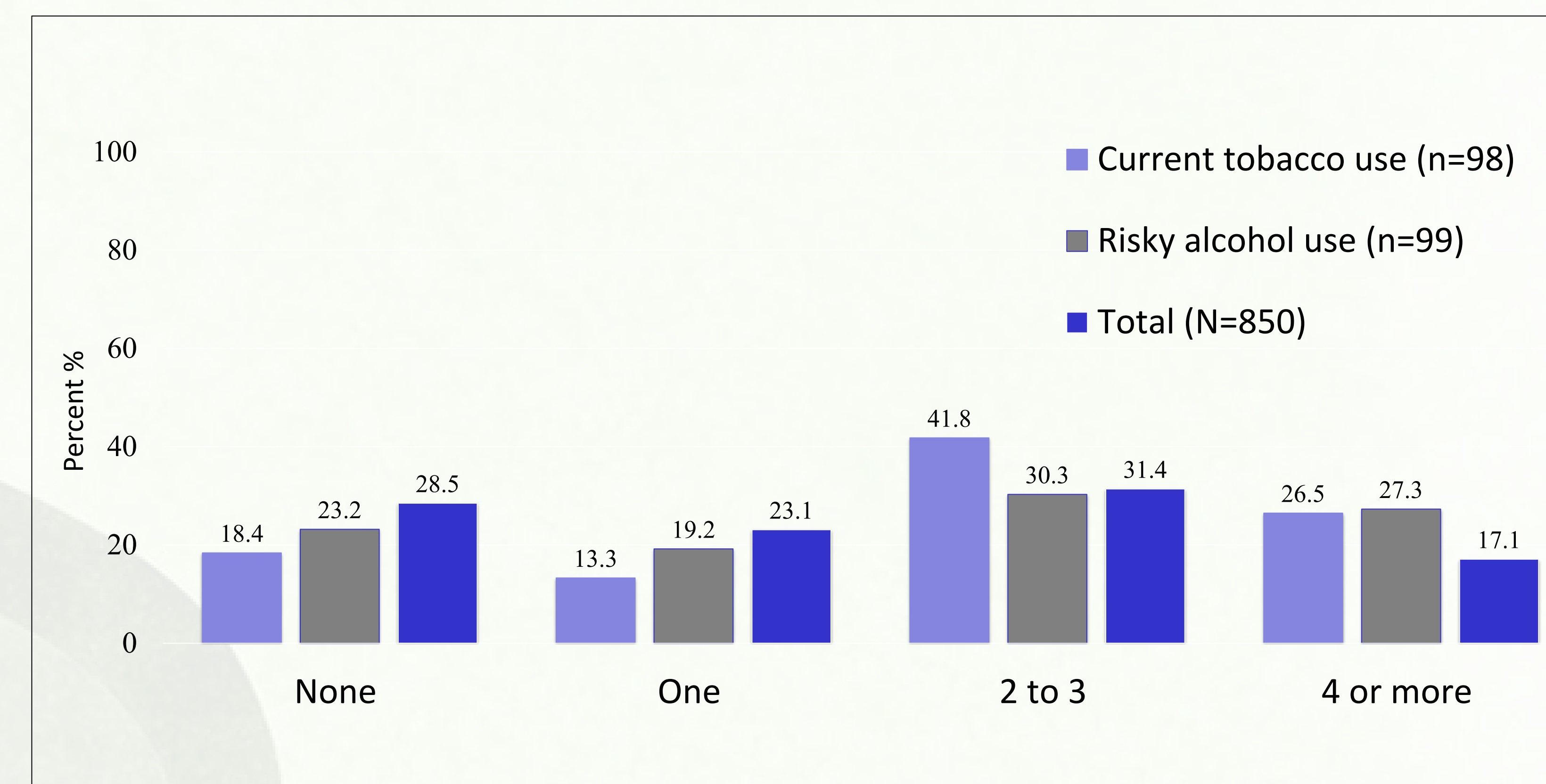


Figure 2. Percentage of current tobacco and risky alcohol use by number of trauma experiences

Sample Description

- Most participants were female (84.6%), less than 36 years of age (56.8%), married/widowed (57.8%), and had a college degree or higher (88.3%)
- On average, participants worked for 2 years or more in their primary service location (71%) and profession (83.4%)
- Those who reported tobacco use were more likely to be cohabiting or divorced/separated, had less than a college education level, be nursing aides/assistants, worked in psychiatry services, and cared for adult populations
- Those who reported risky alcohol use were more likely to be 18-25years, males, cohabiting, social workers/psychologists, and worked less than a year in their current work location and discipline

Trauma Experiences and Substance Use

- Nearly three-fourths of the sample reported at least one traumatic experience (Fig. 1):
 - Most commonly reported: work-related violence (30.6%)
 - Least commonly reported: war/terrorism (4.0%)
- 23.4% of participants had ever received trauma treatment
- Those reporting current tobacco use (11.5%): a significantly greater proportion reported workplace violence, sexual/physical violence, serious personal injury, and domestic violence versus those not reporting current tobacco user
- Those reporting risky alcohol use (11.6%): a significantly greater proportion reported sexual/physical violence and domestic violence and had received prior trauma treatment as compared to those not reporting risky alcohol use

Associations Between Trauma Experience Categories and Substance Use

When controlling for demographic factors and prior trauma treatment:

- There was a significant association between those reporting current tobacco use or a risky alcohol use and a greater number of trauma experiences
- The relationship between those reporting current tobacco use or risky alcohol use was in a dose-response manner (Table 1)

IMPLICATIONS

Implications for Psychiatric-Mental Health Nursing: Examining the associations between trauma experiences and risky substance use among HCPs is crucial to guide the development of both screening tools and interventional treatments for trauma and SU

Implications for Research: Future studies may target interventions to support screening and treatment of trauma and SU among HCPs to improve behavioral health outcomes

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