



## Gender Differences in the Life Concerns of Persons Seeking Alcohol Detoxification



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### ABSTRACT

**Background:** This study explored the life concerns of persons seeking alcohol detoxification, a group with multiple life and psychosocial challenges. Gender may be an important contributor to the particular life concerns of persons with alcohol use disorders.

**Methods:** Using a 32-item, previously-validated life concerns survey that captures ten conceptual domains, we interviewed persons entering inpatient alcohol detoxification asking them to rate their level of concern about health and welfare items.

**Results:** Participants ( $n = 189$ ) were 27% female, with a mean age of 43.5 years. Overall, concern about alcohol problems was perceived as the most serious, followed by mental health, cigarette smoking, financial, and relationship problems. Men were significantly more concerned than women about six of the ten domains including money, drug use, transmissible diseases, and physical illness.

**Conclusions:** Recognition of the daily worries of persons seeking inpatient alcohol detoxification persons could allow providers to better tailor their services to the context of their patients' lives. Focusing on pressing life concerns such as mental health, financial, relationship problems, and other drug use may influence detoxification services and aftercare treatment choices.

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### 1. Introduction

Alcohol use disorder (AUD) is pervasive and poses a significant public health concern (Whiteford et al., 2013). Alcohol use results in nearly 88,000 deaths annually, making it the third leading cause of preventable death in the United States (Mokdad, Marks, Stroup, & Gerberding, 2004). The lives of persons with severe AUD are often challenged by economic burden (Navarro, Doran, & Shakeshaft, 2011), mental health disorders, traumatic events, unemployment, violence (O'Meara, Witherspoon, Hapangama, & Hyam, 2011), housing problems, stigma, relational disruptions, infectious disease risks (Claxton, DeLuca, & van Dulmen, 2015), and acute and chronic medical problems associated with heavy drinking (Chartier, Hesselbrock, & Hesselbrock, 2013; National Institute on Alcohol Abuse and Alcoholism, 2000a, 2000b; Pettinati, O'Brien, & Dundon, 2013; Rehm, 2011). The Substance Abuse and Mental Health Services Administration (SAMHSA) reports that in 2013, an estimated 17.3 million Americans met the criteria for AUD in the past year, but only 7.7% sought treatment (Substance Abuse and Mental Health Services Administration, 2014).

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Among persons with AUD interested in long-term abstinence, approximately 30% are admitted as a first step to a medically supervised detoxification facility (Substance Abuse and Mental Health Services Administration, 2014). Inpatient detoxification provides patients with a medically supervised protocol to prevent or mitigate alcohol withdrawal symptoms, begin counseling, and access additional treatment modalities after discharge (Blondell, Smith, Canfield, & Servoss, 2006; Kosten & O'Connor, 2003; Merckx et al., 2014). Aftercare planning is essential to reduce relapse risk, and detoxification program staff may be able to use knowledge of patient-specific life concerns in addition to abstinence to suggest aftercare treatment choices.

Previous work has described the life concerns of other urban populations with multiple life and psychosocial challenges (Carey, Braaten, Jaworski, Durant, & Forsyth, 1999; Carey & Senn, 2013), including opioid users (Stein, Anderson, Thurmond, & Bailey, 2015). Life concerns—subjective worries—are distinct from specific stressful or negative life events such as the death of a friend, divorce, or a hospitalization (Veenstra et al., 2006). Negative life events have been examined in relation to alcohol use in cross-sectional and longitudinal studies of general population samples (Perreira & Sloan, 2001) and gender differences were notable. Among married couples, men reported more negative life events in the areas of work and finance whereas women noted more events related to their social networks (Conger, Lorenz, Elder, Simons, & Ge, 1993).

Among past year drinkers, the impact of life events affected men and women differently with life events affecting the alcohol use of men more profoundly (Dawson, Grant, & Ruan, 2005; Frone, Cooper, & Russell, 1994).

Historically, men have higher rates of alcohol use disorders (AUDs) than women (Nolen-Hoeksema & Hilt, 2006), although the gap in the prevalence of alcohol use disorder has narrowed in the recent past, with the prevalence now two times more common in men (Keyes, Grant, & Hasin, 2008). The burden of morbidity is high across genders (Goldstein, Dawson, Chou, & Grant, 2012), but women are more susceptible than men to certain medical consequences such as liver disease, ulcers, and hypertension (Mann et al., 2005; Stewart et al., 2009). While women may be less likely to enter alcohol treatment, gender is not a consistent predictor of outcome (Green, Polen, Lynch, Dickinson, & Bennett, 2004; Greenfield et al., 2007).

Gender may also be an important contributor to the particular life concerns of persons with alcohol use disorders who seek inpatient detoxification, and such concerns could, in theory, drive aftercare choices. While the severity of alcohol use is likely to be the immediate and dominant focus of persons seeking detoxification, impairments in mental health and social functioning (Daeppen, Krieg, Burnand, & Yersin, 1998; Morgan, Landron, Lehert, & New European Alcoholism Treatment Study G, 2004; Polen, Green, Perrin, Anderson, & Weisner, 2010) may influence both treatment needs during detox and future service use. For example, women with AUD are more frequently severely depressed than men (Pettinati, Pierce, Wolf, Rukstalis, & O'Brien, 1997) and mental health concerns may guide treatment needs. Similarly, relationship concern may influence treatment. For women, marriage and marital stress are risk factors for alcohol relapse as alcoholic women are more likely to be married to heavy drinking partners than are alcoholic men; among men, marriage lowers relapse risk (Walitzer & Dearing, 2006); marital counseling may be an important part of aftercare. General quality of life in female alcohol misusers is lower than in males with comparable levels of dependency (Peters, Millward, & Foster, 2003), with psychiatric comorbidity and social environment being important contributing factors influencing quality of life (QoL) (Foster, Powell, Marshall, & Peters, 1999).

The spectrum of life concerns has never been comprehensively evaluated in persons entering an inpatient alcohol detoxification program. In this study we describe the relative importance of specific life concerns in this population and hypothesize that there will be gender differences, namely that women will be more concerned with relationship and mental health issues, and men will be more concerned with their use of drugs in addition to alcohol.

## 2. Methods

Between September 2014 and March 2015, consecutive persons seeking alcohol detoxification were approached within the first 24 hours of admission by research staff to Stanley Street Treatment Addiction and Recovery, Inc. (SSTAR) in Fall River, Massachusetts to participate in a research survey. SSTAR's program, one of the largest in Southeastern New England, has 38 beds and is a 24-hour medically supervised treatment facility that provides evaluation and withdrawal management. The average length of stay for alcohol detoxification at SSTAR during the study period was 3.6 days.

Two hundred four patients who were 18 years or older and English-speaking were admitted to SSTAR seeking alcohol detoxification services during the recruitment period and therefore eligible to provide verbal informed consent as approved by the Butler Hospital Institutional Review Board. Fifteen refused participation. The remaining 189 persons completed a face-to-face, 15-minute, structured, standardized interview; no compensation was provided.

### 2.1. Measures

Sample descriptors included age, gender, race or ethnicity, employment (part or full-time vs. unemployed), homelessness (any nights on

street or in a shelter in the prior 90 days), and years of education. Participants were asked if they had attended an outpatient primary care visit in the past year, if they had been hospitalized for mental health issues in the past year, and what treatment services, if any, they have received in the past year. Participants were classified as recent cocaine, benzodiazepine or marijuana users if they reported any use during the past 30 days. Participants also reported frequency and usual quantity of alcohol use during the past 30 days; binge drinking was defined as  $\geq 4$  drinks on a single occasion for females and  $\geq 5$  drinks on a single occasion for males (National Institute on Alcohol Abuse and Alcoholism, 2005).

We asked participants about life concern items previously validated with general urban population (Carey & Senn, 2013) and later used to characterize an opioid dependent population (Stein et al., 2015). We asked each participant, "The following questions are related to concerns you may have about your health and welfare. Please rate how much the following are of concern to you." Responses were scored on a 0, "no concern," 1, "little concern," 2, "some concern" to 3, "serious concern" four-point scale. All scales were constructed as the mean of included items and range from 0 to 3 with a mid-point of 1.5. Scale means are presented to describe the relative degree to which participants perceive these issues as serious concerns. We report Cronbach's alpha as a measure of internal consistency for multi-item scales. Using 32 survey items, we organized life concerns into seven conceptual multi-item domains; serious physical illness (5 items;  $\alpha = .76$ , e.g. high blood pressure), transmitted diseases (3 items;  $\alpha = .87$ , e.g. HIV/AIDS), mental health (8 items;  $\alpha = .79$  e.g. feeling depressed), financial concerns (5 items;  $\alpha = .82$ , e.g. not having enough money for basic needs), health insurance (2 items;  $\alpha = .92$ , e.g., not having health insurance), concerns about community safety (4 items;  $\alpha = .82$ , e.g. violence in my community), and relationship concerns (5 items;  $\alpha = .85$ , e.g. being cut off from my family) (Stein et al., 2015). Three additional single-item domains, concern about their alcohol problem, concern about smoking, and concern about drug use, were retained in subsequent analysis because of their combination of relevance to and high endorsement in this population.

### 2.2. Analytical methods

We report descriptive statistics to summarize the characteristics of the sample. T-tests for differences in means and  $\chi^2$ -tests for differences in counts were used to test for gender differences on demographics and background variables. For each life concern we report the mean, standard deviation, and the number and percentage of persons scoring 0. The distributions of life concern scales varied, many were distinctly non-normal and several clustered at 0. To test for gender differences in life concerns, we used the nonparametric Wilcoxon rank-sum test for equality of rank-ordered distributions.

## 3. Results

Participants averaged 43.5 ( $\pm 9.9$ ) years of age and 163 (86.7%) were non-Latino Caucasian (Table 1). Mean years of education was 12.4 ( $\pm 2.1$ ), 46 (24.3%) were employed either part- or full-time, and 20 (10.6%) were homeless. One hundred twenty-nine (68.6%) said they had seen a primary care physician within the last year. Fifty-two (27.7%) reported no history of any prior alcohol detox, 82 (43.6%) had been in detoxification within the past year, and 54 (28.7%) had been in detoxification, but not within the past year. During the past month, participants reported consuming alcohol on 26.4 ( $\pm 6.6$ ) days on average; 127 (67.2%) reported daily alcohol use. Mean drinks/drinking day was 17.6 ( $\pm 10.0$ ; median = 15.0), and the mean frequency of binge drinking was 20.5 ( $\pm 11.1$ ) days. One hundred fifty (79.4%) were current cigarette smokers, 68 (36.0%), 35 (18.5%), and 46 (24.3%) participants reported using marijuana, cocaine, and benzodiazepines, respectively, in the past month.

**Table 1**  
Background characteristics by gender (n = 189).

	Cohort (n = 189)	Female (n = 51)	Male (n = 138)	t or $\chi^2$ (p)
Age	43.5 ( $\pm$ 9.9)	43.2 ( $\pm$ 9.4)	43.6 ( $\pm$ 10.1)	−0.31 (.760)
Non-Latino Caucasian	163 (86.7%)	47 (92.2%)	116 (84.1%)	2.18 (.140)
Education	12.4 ( $\pm$ 2.1)	13.1 ( $\pm$ 2.0)	12.1 ( $\pm$ 2.1)	3.09 (.002)
Employed (part- or full-time)	46 (24.3%)	14 (27.5%)	32 (23.2%)	0.37 (.544)
Homeless (yes)	20 (10.6%)	5 (9.8%)	15 (10.9%)	0.04 (.833)
Seen PCP last year (yes)	129 (68.6%)	40 (78.4%)	89 (65.0%)	3.13 (.077)
Detox history				
No prior detox	52 (27.7%)	17 (33.3%)	35 (25.6%)	1.48 (.478)
Recent (last year)	82 (43.6%)	22 (43.1%)	60 (43.8%)	
Less Recent (>1 year)	54 (28.7%)	12 (25.5%)	42 (28.7%)	
Days used alcohol (0–30)	26.4 ( $\pm$ 6.6)	25.7 ( $\pm$ 6.9)	26.6 ( $\pm$ 6.6)	−0.83 (.406)
Drinks/drinking day	17.6 ( $\pm$ 9.9)	17.1 ( $\pm$ 1.4)	17.8 ( $\pm$ 10.1)	−0.42 (.675)
Days binge alcohol use (0–30)	20.5 ( $\pm$ 11.1)	21.0 ( $\pm$ 10.3)	20.4 ( $\pm$ 11.5)	0.35 (.725)
Current cig. smoker (yes)	150 (79.4%)	40 (78.4%)	110 (79.7%)	0.04 (.847)
Recent marijuana use (yes)	68 (36.0%)	18 (35.3%)	50 (36.2%)	0.01 (.905)
Recent cocaine use (yes)	35 (18.5%)	10 (19.6%)	25 (18.1%)	0.05 (.815)
Recent benzodiazepine use (yes)	46 (24.3%)	13 (25.5%)	33 (23.9%)	0.05 (.823)

Compared to males, females had significantly higher mean educational attainment (Table 1) and there was a trend suggesting they were more likely (78.4% vs. 65.0%;  $p = .077$ ) to say they had seen a primary care physician in the last year, but none of the other background characteristics described in Table 1 differed significantly by gender.

In Table 2, life domains are sorted from most to least concern based on means. In this cohort, alcohol problems were of most concern ( $M = 2.86$ ), followed by mental health ( $M = 1.65$ ), cigarette smoking ( $M = 1.59$ ), money problems ( $M = 1.7$ ), and relationship problems ( $M = 1.48$ ). All other domains had mean concern ratings < 1.0 on a scale ranging from 0 to 3. Concerns about community safety and transmitted disease were the domains of least concern in this cohort.

Males expressed significantly ( $p = .003$ ) more concern about money problems than females (Table 2). Males also had significantly ( $p = .005$ ) higher mean concern about drug problems, serious physical illness ( $p = .007$ ), health insurance ( $p = .006$ ), transmitted disease ( $p = .05$ ), and community safety ( $p = .03$ ). Males and females did not differ significantly with respect to mean concern about alcohol problems, mental health, cigarette smoking, or relationship problems (Table 2).

#### 4. Discussion

We have described ten life domains that concern alcohol dependent persons at the time they enter an inpatient detoxification program. Beyond the continued use of alcohol, study participants reported, being most concerned about mental health issues, cigarette use, and financial and relationship problems. In this cohort with alcohol use disorder, men reported greater concern than women in over half the domains assessed.

This is the first study classifying life concerns of persons with AUDs. Unlike alcohol severity measures which evaluate drinking consequences,

or quality of life measures which focus on physical and mental health function and limitations, the current life concerns measure assesses an individual's perceptions of ongoing or impending life difficulties. Life concerns are a multidimensional construct that captures subjective worries meaningful to this population and which may influence or interact with alcohol use behaviors. Life concerns could also affect completion of detoxification as well as decision-making about and engagement with aftercare plans. Notably, men and women had similar demographic characteristics and recent drinking profiles in this sample, suggesting that these factors did not contribute to gender differences in life concerns. Indeed, given the literature suggesting that similar quantities of alcohol tend to have more deleterious effects on women (certainly physical effects (National Institute on Alcohol Abuse and Alcoholism, 2000b)), it was surprising that men reported higher concerns across domains, including physical health. Men and women reported similarly high level of concern about their alcohol use, as expected.

AUD patients have often reported high levels of depressive symptoms at the onset of treatment (Foulds et al., 2015; Pettinati et al., 2013), and mental health is a featured concern of our study participants as well. Our findings are compatible with the National Comorbidity Survey, which reported that individuals with lifetime alcohol use disorder have a high probability of being diagnosed with another co-occurring psychiatric disorder (Kessler et al., 1997). The National Epidemiological Survey on Alcohol and Related Conditions also reported the presence of mood and anxiety disorders, as well as other psychiatric diagnoses, in a national sample of persons with AUD (Glass, Williams, & Bucholz, 2014). Women with AUD report greater severity of childhood trauma, but similar lifetime exposure to traumatic events compared with men (Johnson, Heffner, Blom, & Anthenelli, 2010).

Nearly four in five of our participants were current smokers, and smoking was one of the highest rated life concerns reported. Approximately

**Table 2**  
Mean ( $\pm$ SD) life concerns by gender.

Life concern	Reporting no concern (n = 189), n (%)	Mean ( $\pm$ SD)			z (p) <sup>a</sup>
		Cohort (n = 189)	Female (n = 51)	Male (n = 138)	
Alcohol problems (NA)	3 (1.6%)	2.86 ( $\pm$ 0.49)	2.84 ( $\pm$ 0.54)	2.86 ( $\pm$ 0.47)	0.34 (.973)
Mental health (.79) <sup>b</sup>	4 (2.1%)	1.65 ( $\pm$ 0.72)	1.68 ( $\pm$ 0.79)	1.64 ( $\pm$ 0.70)	0.52 (.605)
Cigarette smoking (NA)	61 (32.3%)	1.59 ( $\pm$ 1.27)	1.35 ( $\pm$ 1.35)	1.67 ( $\pm$ 1.23)	−1.48 (.140)
Money problems (.82) <sup>b</sup>	29 (15.3%)	1.57 ( $\pm$ 1.03)	1.20 ( $\pm$ 1.05)	1.71 ( $\pm$ 0.99)	−3.01 (.003)
Rel. problems (.85) <sup>b</sup>	25 (13.2%)	1.48 ( $\pm$ 1.00)	1.41 ( $\pm$ 0.98)	1.51 ( $\pm$ 1.01)	−0.61 (.542)
Drug problems (NA)	112 (59.3%)	0.97 ( $\pm$ 1.29)	0.57 ( $\pm$ 1.12)	1.12 ( $\pm$ 1.12)	−2.76 (.005)
Serious phys. illness (.76) <sup>b</sup>	55 (29.1%)	0.70 ( $\pm$ 0.76)	0.43 ( $\pm$ 0.47)	0.80 ( $\pm$ 0.82)	−2.72 (.007)
Health insurance (.92) <sup>b</sup>	126 (66.7%)	0.68 ( $\pm$ 1.10)	0.34 ( $\pm$ 0.85)	0.81 ( $\pm$ 1.16)	−2.77 (.006)
Transmitted disease (.87) <sup>b</sup>	139 (73.5%)	0.39 ( $\pm$ 0.81)	0.20 ( $\pm$ 0.55)	0.46 ( $\pm$ 0.87)	−1.98 (.050)
Community safety (.82) <sup>b</sup>	130 (68.8%)	0.33 ( $\pm$ 0.66)	0.17 ( $\pm$ 0.42)	0.39 ( $\pm$ 0.42)	−2.18 (.030)

<sup>a</sup> Nonparametric Wilcoxon rank-sum z-statistic testing the equality of rank-ordered distributions.

<sup>b</sup> Cronbach's  $\alpha$ .

6.2 million American adults have both an AUD and nicotine dependence (Falk, Yi, & Hiller-Sturmhofel, 2006). People with AUD are three times more likely to be smokers than those in the general population (Grant, Hasin, Chou, Stinson, & Dawson, 2004). With smoking rates far exceeding the general population, smokers with alcohol use disorder experience high rates of tobacco-related health consequences (Marrero et al., 2005; Mukamal, 2006; Negri, La Vecchia, Franceschi, & Tavani, 1993; Pelucchi, Gallus, Garavello, Bosetti, & La Vecchia, 2006). Given that cigarette smoking was identified as one of the more concerning life domains, this patient population may be receptive to cessation interventions that begin during this brief supervised period. In a meta-analysis of smoking cessation interventions during addiction treatments were correlated with an improved likelihood of long-term tobacco abstinence.

Economic concerns, such as not having a steady income and not having enough money for basic needs, would be expected given the high rates of unemployment reported by study participants: 76% compared to a state average of 5.5–7.1% for the same time period (Labor and Workforce Development, 2014). Problematic substance use, including alcohol use disorder, is consistently more prevalent among the unemployed (Compton, Gfroerer, Conway, & Finger, 2014; Mullahy & Sindelar, 1996). Although it is unclear whether those with AUD are more likely to become unemployed, or whether those who are unemployed are more likely to develop alcohol use disorder, emerging evidence supports the latter (Mossakowski, 2008; Popovici & French, 2013). Alcohol is a common mechanism used for coping with stress (Mauro, Canham, Martins, & Spira, 2015). Studies have shown that problematic drinking patterns were more prevalent in individuals who experienced work related stress (Liu, Keyes, & Li, 2014). Women in poverty who experience severe, chronic life stressors are particularly vulnerable to psychological distress and problem drinking (Mulia, Schmidt, Bond, Jacobs, & Korcha, 2008). Life stressors have been shown to increase the risk of relapse in individuals with comorbid AUD and personality disorders (Reyes, Pagano, & Ronis, 2009).

The most notable finding here was that men in this sample reported significantly greater concern than women on over half of the domains listed. We speculate that it may be that particular concerns of men—drug problems, physical health—are coloring concerns across a variety of domains. Men may also perceive life concerns differently from women. Finally, it's possible that the men may have fewer resources for dealing with life concerns. Men may have fewer social supports, lower religiosity, or fewer coping skills than women (Levin, Taylor, & Chatters, 1994; Martin, Ellingsen, Tzilos, & Rohsenow, 2015), behavioral buffers that may permit women to gauge their concerns as less severe.

Our study had several limitations. We recruited from a single detox program, enrolling a sample that was primarily non-Hispanic white, possibly limiting generalizability. Second, some concerns had a predominance of “no concern” responses, making clinical relevance more difficult to interpret. Treating these concerns dichotomously rather than as continuous distributions does not substantively change the findings. Third, we did not ask participants to report on their perceived treatment needs, which could be explored in relation to health concerns in future studies. Fourth, we did not assess whether reported concerns was associated with the particular care received by participants following detoxification. Finally, we did not have objective data (e.g. from health records) regarding participants' mental or physical health diagnoses, personal finances, or social support.

## 5. Conclusions

Awareness of life concerns not only provides a clearer picture of the lives of these patients for detoxification staff, but also could guide treatment planning. For instance, financial concerns may steer individuals away from residential treatment because of the risk of losing employment or income. Mental health concerns may need to be prioritized to

ensure adherence to primary care or other alcohol treatment plans. Assessment of life concerns should take place during detoxification to assist in the tailoring of aftercare services to the context of patients' lives.

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