

2019

Examining the Relationship Between Alcohol Use and Work in the Professional Theater

Michael A. Carollo

Antioch University of New England

Follow this and additional works at: <https://aura.antioch.edu/etds>



Part of the [Clinical Psychology Commons](#)

Recommended Citation

Carollo, Michael A., "Examining the Relationship Between Alcohol Use and Work in the Professional Theater" (2019). *Dissertations & Theses*. 499.

<https://aura.antioch.edu/etds/499>

This Dissertation is brought to you for free and open access by the Student & Alumni Scholarship, including Dissertations & Theses at AURA - Antioch University Repository and Archive. It has been accepted for inclusion in Dissertations & Theses by an authorized administrator of AURA - Antioch University Repository and Archive. For more information, please contact hhale@antioch.edu, wmcgrath@antioch.edu.

Running head: ALCOHOL AND PROFESSIONAL THEATER

Examining the Relationship Between Alcohol Use
and Work in the Professional Theater

by

Michael A. Carollo

B.A., Boston University, 2012
M.S., Antioch University New England, 2017

DISSERTATION

Submitted in partial fulfillment for the degree of
Doctor of Psychology in the Department of Clinical Psychology
at Antioch University New England, 2019

Keene, New Hampshire



Department of Clinical Psychology
DISSERTATION COMMITTEE PAGE

The undersigned have examined the dissertation entitled:

**EXAMINING THE RELATIONSHIP BETWEEN ALCOHOL USE
AND WORK IN THE PROFESSIONAL THEATER**

presented on July 1, 2019

by

Michael A. Carollo

Candidate for the degree of Doctor of Psychology
and hereby certify that it is accepted*.

Dissertation Committee Chairperson:
Theodore Ellenhorn, PhD, ABPP

Dissertation Committee members:
F. Alexander Blount, PsyD
Meg Pilling, PsyD

Accepted by the

Department of Clinical Psychology Chairperson
Vincent Pignatiello, PsyD

7/1/19

*Signatures are on file with the Registrar's Office at Antioch University New England.

Table of Contents

Abstract.....	1
Introduction.....	2
Literature Review.....	4
Overview of the Alcohol-Related Literature	4
Applying the Alcohol-Related Occupational Literature to Professional Theater.....	10
Negative Effects of Problem Drinking	13
Methods.....	14
Research Question	15
Operational Definitions.....	16
Hypothesis.....	19
Participants.....	19
Materials	20
Procedure	21
Analysis.....	23
Results.....	24
Discussion.....	25
References.....	32
Appendices.....	39
Tables.....	45
Figures.....	50

List of Tables

Table 1. Alcohol Use Disorder DSM-V Criteria	45
Table 2. NIAAA Alcohol Consumption Risk Categories.....	46
Table 3. Participant Demographics by Occupational Affiliation Group	47
Table 4. Average PD Measure Scores and Total Participants Meeting PD Criteria.....	48
Table 5. Correlation Matrix of Alcohol Measures and Demographic Variables.....	49

List of Figures

Figure 1. Stacked Bar Chart of Participants Meeting PD Criteria by Occupational Affiliation... 50

Abstract

Objective: The perception of a culture within the professional theatrical community that promotes problem drinking has been discussed anecdotally within the industry. No meaningful research has been conducted within this population. This study presents initial epidemiological survey data on the drinking habits of professional theatrical community (PTC) members as compared to the general public (GP) in order to confirm whether the phenomenon exists for further study. **Methods:** Data are from a convenience sample of 104 members of the PTC and GP who were each provided two previously clinically validated measures of problem drinking, the AUDIT and CAGE questionnaire. Drinking habits were also coded into a risk category using criteria from the NIAAA. The prevalence of problematic drinking (PD), understood as clinical significance on either measure or behaviors that indicated at-risk drinking or above, was compared between the two groups. **Results:** 79% of the PTC sample met criteria for problematic drinking, significantly above the 48% observed in the GP sample. Individually, all three measures of alcohol consumption were found to be significantly elevated within the PTC sample. Over half of PTC participants had an AUDIT or CAGE score that was above the measure's clinically significant threshold and two-thirds of the sample displayed at-risk or above drinking. **Conclusions:** The study empirically confirms the previously anecdotal perception that problem drinking is more prevalent within the PTC than the GP. The findings strongly indicate that future research is necessary to better understand how occupational factors unique to the professional theater contribute to this prevalence so that occupational, clinical and public health prevention and intervention programs can appropriately respond.

Keywords: alcohol, theater, occupations, problem drinking, performers, creatives

This dissertation is available in open access at AURA, <http://aura.antioch.edu/>
Ohio Link ETD Center, <https://etd.ohiolink.edu/etd>.

Examining the Relationship Between Work in the Professional Theater and Alcohol Abuse

A perceived culture of problem drinking within the professional theatrical community has been discussed anecdotally by its members (Doob, Hegegus, McKay, Pennebaker, & Picheta, 2002; Fisher, 2008; Rentz, 2017), within media reports related to the deaths high profile performers (Downes, 2016; Itzkoff, 2016; Sanchez, 2014; Stack, 2017; Teodorczuk, 2017), and within cinematic depictions of the professional theater (Graff, 2003; Rentz, 2017). For instance, noted stage actress Elaine Stritch detailed her alcoholism in her one-woman show, *Elaine Stritch: At Liberty*, saying, “I never put a foot on a stage without a drink...or anyplace else for that matter” (Doob et al., 2002). Throughout her show, Stritch shared how she used alcohol to cope with stage fright and anxiety, as well as the costs that doing so had on her mental and physical wellbeing. She described her intense cravings to drink, the development of diabetes as a result of her drinking, and an intense fear that her professional success was intrinsically tied to her use of alcohol. Furthermore, Stritch detailed how this behavior was true of (and encouraged by) many other professionals within the theater making note of her frequent and long binge drinking episodes with other high-profile theatrical community members, such as Judy Garland, Ben Gazzara, and Noel Coward.

Another well-known account of the intersection between fame and substance abuse is Carrie Fisher’s book and show, *Wishful Drinking* (Fisher, 2008). Fisher’s works are an honest and open account of how the pressures of fame, performance, and a “show-business” family lead to multiple stints in rehab. Fisher, like Stritch, directly contributed the development of her alcohol-use disorder (along with other substance abuse problems) to her performance career. Fisher’s untimely death in December of 2016 resulted in a bevy of news articles discussing the

perceived correlation between abusing substances and a career in performance (Aubusson, 2016; Downes, 2016; Itzkoff, 2016; Stack, 2017).

It is not surprising, therefore, that motion pictures which depict (and often parody) the professional theatrical community will also showcase characters who suffer with alcohol and substance abuse problems. For example, the movie *Camp* (Graff, 2003), is based on the scriptwriter's experience at an exclusive children's theater camp in upstate New York. At the camp, the aspiring young performers are taught by a once famous lyricist-composer who is observed drinking heavily and now only works at the camp due to being "washed up" after years of alcohol use. More recently, in the 2016 movie *Opening Night* (Rentz, 2017), actor Topher Grace plays the beleaguered stage manager of a Broadway production whose job includes managing the various alcohol and drug needs of the cast, crew, and musicians. Notably, both movies are written by professional theatrical community members who were in a position to cinematically depict their understanding of the professional culture within the theater. It is therefore interesting that both movies rely heavily on more than one alcoholic/addicted archetypal "characters" (albeit for comedic effect) and leave the impression that these characters are commonly found within the profession.

The personal accounts shared by high profile theatrical community members, the news articles discussing the perceived connection between performance and addiction, and the previous cinematic depictions of the professional theatrical community's culture of problem drinking are compelling anecdotal indicators that show business might well have a drinking problem. Given this anecdotal perception, it is surprising that no meaningful scholarly research has sought to establish this relationship empirically. This is especially true when one considers the long history of research that has previously examined the impact various individual and

occupational factors can have on employee alcohol use in other occupations (Ames, Grube, & Moore, 2000; Ames & Janes, 1992; Blum & Roman, 2002; Delaney & Ames, 1995; Frone, 1999, 2006, 2013; Hodgins, Williams, & Munro, 2009; Roche et al., 2015; Trice & Sonnenstuhl, 1990). Although the prior alcohol-related occupational research has generally overlooked this seemingly vulnerable population, the prior work does provide a theoretical framework to conceptualize and develop research to empirically examine whether the anecdotal perception is actually evidence of a larger underlying alcohol problem within the professional theatrical community.

Literature Review

Overview of the Alcohol-Related Literature

Initial alcohol related occupational research focused on using epidemiological survey methods to empirically establish a difference in problem drinking prevalence by occupational affiliation. In the most expansive of the studies Mandell et al. (1992), analyzed data from the National Institute of Mental Health's (NIMH) Epidemiological Catchment Area (ECA) program (Eaton, Regier, Locke, & Taube, 1981) in order to better understand the prevalence of disordered alcohol use across American occupations. The ECA sought to estimate the prevalence of mental health disorders within the general US population using a sample of 11,789 individuals who were administered the NIMH Diagnostic Interview Schedule (DIS) and provided open-ended demographic data on their current or most recent occupations. Study coders then attempted to place responses into, "one of the 502 detailed occupation categories of the 1980 census" (Mandell et al., 1992, p. 737) and identified 104 participant occupations or occupational groups (i.e., occupations with a low number of identified participants were grouped together for increased statistical power). Using this information, researchers analyzed the prevalence of

alcohol use disorders within each occupation/occupational group as compared to the NIMH general population rate of 6.48%.

Within 104 identified occupations and occupational groups, the authors found that 10 had an increase in an alcohol-related disorder prevalence that was significant enough to not be explained by chance alone. These occupations included: construction laborers, other construction trade workers, carpenters, equipment movers, transportation occupations, movers and freight/stock hands, farm workers, janitor and cleaners, heavy truck drivers, and auto mechanics. Employees from these occupations were anywhere from 2 to 5 times more likely to suffer with an alcohol-related disorder than the general American population (Mandel et al., 1992).

Although the Mandell et al. (1992) study firmly establishes that certain occupational affiliations are correlated with problematic drinking behaviors, it is limited in its applied utility with regards to the professional theatrical community by both its age and decision to group occupations. Although researchers did identify and include 208 participants who fit the occupational description of “writers, artists, entertainers, [and] athletes” (Mandel et al., 1992, p. 739), the grouping of these disparate career choices means little meaningful information can be ascertained about the professional theatrical community specifically.

In a less expansive, but more significant study, Frone (2006), sought to examine the prevalence of alcohol use and impairment (understood as, suffering with a hangover at work, starting work while still intoxicated from previous drinking, drinking within the two hours of work start time, or drinking while at work) within the general US workforce. A total of 2085 participants were surveyed by random telephone dialing between 2002 and 2003. Participants were asked to describe both their occupations and drinking habits over the prior 12 months. The author found that 15.32% of total participants reported some level of workplace alcohol use or

impairment, with 8.10% reporting during or before work drinking and 9.23% reporting being hungover at work. Within the total sample, 373 participants were identified as part of a broad “arts/entertainment/sports/media” occupational category (Frone, 2006, p. 152). Notably, the author found that being affiliated with this category significantly predicted the endorsement of workplace drinking but did not predict the endorsement of before work drinking or being hungover at work. Other occupational affiliations found to predict some form of work place alcohol impairment included: “food preparation and serving”, “building and ground maintenance”, “sales”, “construction and extraction”, and “transportation and material moving” [sic] (Frone, 2006, p. 153).

This significant epidemiological finding is supportive of the notion that the professional theatrical community may have an issue with problem drinking, despite the study having similar limitations to the Mandell et al. (1992) study. First, the findings were secondary to the primary goal of the research which was to determine overall the prevalence of alcohol use and impairment within the general US workforce. As such the author did not intentionally seek out the inclusion of any specific populations for study which resulted in occupational groups of varying sizes. Furthermore, since the author does not indicate the number of participants included from each of the specific occupations that make up the broad “arts/entertainment/sports/media” category it is unknown whether one or more of the individual occupations drove the significant finding. Finally, Frone (2006) did not describe the specific inclusion criteria that was used to code participants into the “arts/entertainment/sports/media” category (i.e., would a journalist be considered as having a “media” occupation or a museum worker as an “art” occupation?). The broad and unclear inclusion criteria make it is possible that only a very small proportion of the overall sample were members of the professional theatrical

community. Although the significant findings are a positive indicator that the professional theatrical community may have an issue with problem drinking, the limitations of the study make the findings inconclusive.

Studies completed over the past 30 years have sought to expand the epidemiological research in order to develop models which explain the influence occupational factors have on employee alcohol use that are generalizable across professions. In order to develop these models researchers have examined employee alcohol use by factors such as demographics (Bacharach, Bamberger, Sonnenstuhl, & Vashdi, 2008; Blum & Roman, 2002; Frone, 2003, 2006, 2013; Harford, Parker, Grant, & Dawson, 1992; Hemmingsson, Lundberg, Diderichsen, & Allebeck, 1998; Roche et al., 2015), managerial style within the work environment, (Bacharach, Bamberger, & Sonnenstuhl, 2002; Bamberger & Bacharach, 2006; Head, Stansfeld, & Siegrist, 2004; Kouvonen et al., 2008; S. Moore, Grunberg, & Greenberg, 2003), the level of stress within the occupation and/or workplace (Crum, Muntaner, Anthony, & Anthony, 1995; Frone, 1999; Hiro, Kawakami, Tanaka, Nakamura, & The Japan Work Stress and Health Co, 2007; Patterson, Bennett, & Wiitala, 2005; Ragland, Greiner, Yen, & Fisher, 2000; Wang, Liu, Zhan, & Shi, 2010) and the general work place climate/culture (Ames et al., 2000; Ames & Janes, 1992; Bennett & Lehman, 1999; Blum & Roman, 2002; Delaney & Ames, 1995; Frone & Brown, 2010; Head et al., 2004; Hoffmann & Larison, 1999; Kouvonen et al., 2008; Macdonald et al., 1999; Traweger, Kinzl, Traweger-Ravanelli, & Fiala, 2004; Treiber & Davis, 2012; Trice & Sonnenstuhl, 1990). The primary debate throughout the literature has centered on whether it is individual or occupational factors (e.g., work conditions, cultural norms, environmental conditions etc.) that drive the observed phenomenon within employees (Ames & Janes, 1992; Frone, 1999, 2013; Trice & Sonnenstuhl, 1990). Recently, newer multidimensional models have

been developed which account for both individual and occupational factors (Frone, 2013; Roche et al., 2015).

Historically, theorists have questioned whether the heightened prevalence of problem drinking in certain occupations is the consequence of employees with individual risk factors (e.g., being a male or having a lower SES) self-selecting toward certain professions (Frone, 2013). In contrast, Trice & Sonnenstuhl (1990) and Ames and Janes (1992) argued that an occupation's cultural norms, environmental factors, and working conditions can also impact the alcohol use of its employees. In his book reviewing the prior literature, Frone (2013) detailed three conceptual occupational frameworks that theorists have argued influence employee alcohol use:

- The *social control paradigm* suggested that employees who are not fully integrated and/or regulated within the overall organization might drink more. These employees are not properly supervised and have low visibility of work behaviors while on the job (for example a night security position) leading to the opportunity to drink without major occupational or social inhibitors.
- The *culture/availability paradigm* suggests that work environments where drinking is viewed as less "taboo" and alcohol is easily accessible as an inherent part of the work (e.g., drinking and dining with potential clients or bartending/waiting tables) increases both on the job and off the clock drinking.
- The *alienation/stress paradigm* suggests that both the psychosocial and physical demands of the industry (this includes both professions that are overly demanding/stressful and those that are underwhelming, alienating and unfulfilling) will influence the drinking habits of the workers.

Recognizing the importance of developing an integrative multidimensional model, Roche et al., (2015) performed a meta-analysis of prior studies focused on male-dominated professions to re-conceptualize the three paradigms and integrate the impact individual risk factors have. The fact that the meta-analysis focused on male *dominated*, but not male *exclusive* industries allowed the authors to examine the influence both individual factors (including gender) and occupational factors had on employee alcohol use within industries that were already shown to engage in problem drinking. The authors found that seven broad domains of individual and workplace factors mediated alcohol use:

- demographic factors (i.e., gender and age)
- other individual factors (i.e., genetics and family history)
- socioeconomics of both the occupation and the individual
- permissive norms about drinking in the workplace environment
- a high workload with high job stress
- lack of a team environment
- the presence of group drinking to unwind and socialize after work

Although it is argued that these models are generalizable across occupations, the studies underlying them were mainly focused on societally dominant populations (e.g., males and blue-collar industries) and workplaces with typical organizational structure (i.e., a hierarchical “company” structure). Therefore, it is unwise to assume these models function in a similar manner within *all* occupations, especially a nontraditional work environment such as the professional theater. Recognizing this issue, some researchers have instead focused their efforts on understanding the development of problem drinking behaviors within one seemingly vulnerable occupational population or industry (Arezes, 2011; Cunradi, Chen, & Lipton, 2009;

Haddock, Day, Poston, Jahnke, & Jitnarin, 2015; Haddock et al., 2012; Ragland, Greiner, Krause, Holman, & Fisher, 1995; Ragland et al., 2000).

For instance, Haddock et al. (2015) notes a perceived culture of problem drinking amongst professional firefighters (similar to the anecdotal perception found within professional theatrical community), that had also not been empirically examined within the prior literature. In order to confirm this cultural perception of problem drinking, the authors provided a convenience sample (Haddock et al., 2012) and then a national sample (Haddock et al., 2015) of firefighters self-report surveys with questions based on clinically valid measures of problem alcohol use. Using this method, the authors were able to confirm the presence of problem drinking within the professional firefighter community. These findings then allowed the authors to argue for both an increased awareness of problem drinking within the community and the provision of resources by the relevant stakeholders in order to better address and prevent the issue.

In order to consider the question of whether the professional theatrical community is also an occupation that displays elevations in problem drinking behaviors, it is necessary take into account both the broad explanatory models and the research methods of studies that were geared toward specific occupational populations, as neither is sufficient alone. From this combined literature it is possible to both extrapolate the general occupational risk factors found across occupations in order to conceptually examine them in relation to the professional theatrical working environment and to conceptualize the methods needed to empirically confirm the presence of elevated problem drinking within this specific population.

Applying the Alcohol-Related Occupational Literature to Professional Theater

The theater is an occupation where job security is fluid and competitive, moves (or promotions) are inherently lateral (i.e., show to show), and success is thought to be based solely

on an internal “X factor” of talent. Alcohol is widely available both in the theater itself (i.e., a bar in the performance space for theatrical patrons) and within the context of the “standard” show schedule (i.e., 8 p.m. start time, 10:30-11 p.m. end time) with numerous parties, networking/community events, and fundraisers scheduled afterward. Ultimately, these factors combine to create an industry that includes high stress and demand while working (with inherent alienation from the profession when not), the direct availability of alcohol, and a schedule that includes the time necessary to drink it. These factors combine to set up a work environment that appears predisposed to the development of a problem drinking culture.

It is also notable that the occupation of theater is unlike many other professions in that inclusion within the professional community is not necessarily dependent on whether one’s primary income is derived from the industry itself. In 2013 the U.S. Bureau of Labor and Statistics and the National Endowment of the Arts showed actors and actresses have an estimated unemployment rate of 31.8% as compared to 6.6.% for total workers (National Endowment of the Arts, 2014). In considering the industry as a whole (as opposed to just actors/actresses) the career website www.zippia.com used U.S. Census data to conclude that new college graduates aged 22-25 with a degree in the performing arts have the 11th highest unemployment rate amongst all college majors (Kolmar, 2018). Given this level of competition, it is not surprising that many individuals seeking to work within the professional theatrical industry, have “day jobs” to pay their bills, despite considering themselves a member of the professional theatrical industry. For this reason, Townley, Beech, and McKinlay (2009) note the creative industries include a “motley crew” of individuals whose careers do not fit neatly into the current labor and occupational sampling models that are preferential to exactness, boundaries, and structure (p. 939). The authors argue that the fluid nature of creative careers makes researching these

populations particularly difficult (especially for governmental agencies such as the Bureau of Labor and Statistics). Instead, it is better to understand a creative industry, such as the professional theater, using a perspective that also includes individuals who are actively *attempting* to work within the industry (Townley et al., 2009). Interestingly, the classic “day job” of out-of-work performers, the food service industry, has been found to be associated with higher rates of problematic drinking (R. Moore, Duke, Cunradi, & Ames, 2012).

Further consideration must also be given to the diversity of jobs necessary to put on a production of live theater that go beyond the performers observed on the stage. Depending on the size of a production, it can include positions such as directors, set/stage designers, special effects artists, choreographers, musicians, costume designers, lighting and audio designers, stage-hands, movers, technicians, construction workers, carpenters, assistants, painters, and production staff. Notably, some of these jobs intersect with occupations already known to have elevated rates of problematic drinking such as carpenters, construction workers, and movers, and therefore may be at an even greater risk (Frone, 2013).

When one adapts the prior explanatory models in order to conceptualize the complex occupational factors present within the professional theater, it becomes evident how the profession might influence its community members to more readily engage in problem drinking. Unfortunately, the fact that no prior research (including any epidemiological studies) has intentionally sought to include participants from this population means it is currently unknown whether the anecdotal perception of problem drinking is reflective of actual behavior. Therefore, initial industry focused research, similar to the work performed with firefighters by Haddock et al., (2015), is required to establish whether the phenomenon is even present before attempting to fully understand the mechanisms by which it might work. Establishing the validity of this

connection is incredibly important when one considers the multiple negative consequences that have been associated with problematic alcohol use.

Negative Effects of Problem Drinking

Engaging in problem drinking places individuals at a greater risk for a host of negative consequences (National Institute on Alcohol Abuse and Alcoholism, 2018a). Medically, heavy alcohol use has a negative effect on almost all organ systems in the human body (Shield, Parry, & Rehm, 2013). Chronic users are more likely to develop physiological disorders such as cirrhosis of the liver, diabetes, heart disease, high blood pressure, gastrointestinal disorders, cancer, neurological disorders, and pancreatitis (National Institute on Alcohol Abuse and Alcoholism, 2018a; Rehm, 2011). If alcohol consumption in a chronic user is stopped abruptly, the individual can develop Alcohol Withdrawal, which is a possibly fatal response marked by delirium and seizures (Schuckit, 2014). Overall, chronic alcohol abuse is believed to lower the user's life expectancy by about 12 years (National Institute on Alcohol Abuse and Alcoholism, 2018b). Individuals who binge drink are at a risk of developing alcohol poisoning, acute liver diseases, neurological disorders, stroke, and short-term withdrawal symptoms such as headaches, gastrointestinal distress, and hand tremors (National Institute on Alcohol Abuse and Alcoholism, 2018b; Patrick & Azar, 2018).

While the direct health effects of both chronic and acute alcohol use are significant, the indirect burdens of problem drinking can be far more consequential (National Institute on Alcohol Abuse and Alcoholism, 2018a; Stimson, 2007). Alcohol's effects on the body can result in an individual engaging in activities he or she would not normally engage in, sometimes at an extreme cost (Rehm & Hingson, 2013). These behaviors can include unprotected sex resulting in developing sexually transmitted diseases or an unintended pregnancy (Wilsnack, Wilsnack, &

Wolfgang Kantor, 2013), driving while intoxicated (and subsequent accidents; National Institute on Alcohol Abuse and Alcoholism, 2010; Smith, Branas, & Miller, 1999) violence toward the self and/or others (Harford, Yi, Chen, & Grant, 2018), and higher rates of sustaining traumatic injuries (Cherpitel, 2013). From the psychosocial perspective, individuals are more likely to develop a mood disorder (Anthenelli, 2010), engage in domestic abuse or violence (Brem, Florimbio, Elmquist, Shorey, & Stuart, 2018), miss work or other significant life engagements (Buvik, Moan, & Halkjelsvik, 2018), use additional illicit substances (Saha et al., 2018), and be arrested and jailed for criminal behavior (White, Gainey, & Triplett, 2015).

The cost of problematic drinking goes beyond the effects on just the individual drinker and includes impacts to family members, friends, workplaces, and society at large (Rehm & Hingson, 2013). The economic cost of alcohol-related misuse in 2010 was approximately \$249.0 billion and resulted in almost 88,000 deaths (Sacks, Gonzales, Bouchery, Tomedi, & Brewer, 2015). Children raised in families with an alcoholic parent are significantly more likely to develop mental health-related disorders themselves (Donovan, 2013). Additionally, females who drink alcohol while pregnant often give birth to children with fetal alcohol spectrum disorders (FASD), which result in such symptoms as low body weight, short stature, and cognitive impairments (May et al., 2018). These negative impacts make it even more important to empirically study whether an occupation with the professional theater is associated with problem drinking.

Methods

The goal of the current empirical study is to explore whether membership within the professional theatrical community is associated with problematic drinking behaviors, given both the perception of the profession's vulnerability and its lack of inclusion within the prior

literature. In order to achieve this objective, the current study utilizes methods used by previous researchers who also examined an occupational population overlooked in the epidemiological literature (Haddock et al., 2015, 2012), and modifies them in order to account for the unique community nature of the professional theatrical industry (Townley et al., 2009).

Similar to the previous studies, a convenience sample of members of the professional theatrical community were given a self-report survey which collected information about participants' drinking habits using two commonly used clinically valid measures of alcohol use. In a departure from previous methods, problematic drinking was understood using a combined definition that included both diagnostic criteria and a risk based model developed for the National Institutes of Alcohol and Alcoholism (Dawson, 2011). This departure allowed the study to account for both the participant's concern regarding drinking's impact to their adaptive functioning along with the actual risk to their health based on the amount and frequency of alcohol consumption, regardless of concern. Although operationalizing problem drinking in this manner allowed for a more inclusive variable, it also meant it was necessary to include a comparative sample of the general population in order to control for the added variable sensitivity. Therefore, the total sample was comprised of two groups which was divided between members of the professional theatrical community and members of the general public. All research activities were approved by Antioch University's Institutional Review Board.

Research Question

The study sought to answer the following primary research question by use of a self-report quantitative survey provided to participants online: do members of the *professional theatrical community* (PTC) exhibit *problematic drinking* (PD) more than the *general public*

(GP)? Exploratory post-hoc analysis is also completed using the following demographic factors:

(a) gender, (b) age, and (c) socio-economic status.

Operational Definitions

From the primary research question two main variables are identified: occupational affiliation and problematic drinking. Occupational affiliation (PTC vs. GP) was the independent variable (IV) while problematic drinking was the dependent variable (DV).

Problematic drinking (PD). Within both the general the substance abuse literature and the occupationally based alcohol related literature there are two primary methods of understanding problem alcohol use and its associated issues: impact to functioning/control and the overall risk to health based on the number of alcoholic beverages consumed (American Psychiatric Association, 2013; Dawson, 2011). Each conceptual method has benefits and drawbacks that must be considered when attempting to operationalize problematic alcohol use for research or clinical purposes.

Understanding PD Through Function and Control. The impact that drinking behaviors have on adaptive functioning and ability to control one's behaviors is the foundation of the clinical criteria for Alcohol Use-Disorder (AUD) set forth within the *Diagnostic and Statistical Manual of Mental Disorders-V* (DSM-V) published by the American Psychiatric Association (2013). The DSM-V defines AUD as a "pattern of alcohol use leading to clinically significant impairment or distress" (American Psychiatric Association, 2013, p. 490). The diagnosis is confirmed by the individual experiencing two out of eleven criteria within the previous year. Examples of criteria include increasing consumption without intending to do so, unsuccessful attempts to scale back consumption, cravings for alcohol, and continuing drinking behaviors despite negative interpersonal consequences (refer to Table 1 for full criteria). Therefore, this understanding of

problematic alcohol use is based on the individual's self-assessment of both the impact drinking has on their functioning and their perceived ability to control/change their consumption. As such, no specific limits or guidelines regarding the actual amount or frequency of the number drinks consumed is provided in the inclusion criteria.

Understanding PD Through Risk. In contrast to diagnostic models, Dawson (2011) describes the extensive use of risk-based models by governmental public health organizations. These models understand problematic drinking solely through the amount and frequency an individual drinks and the subsequent risk to their health. Functional impacts and the individual's perceived ability to change their behavior is not included within the risk analysis. Dawson notes that these models are intended to identify individuals who do not self-assess any functional impact on their lives, but none-the-less are drinking alcohol at rates that may negatively impact their health. Use of this model is argued to be especially important in the assessment of certain populations where problem drinking has been normed as socially acceptable behavior (Patrick & Azar, 2018). Given that the purpose of the current study is to examine whether the professional theatrical community might be a population where drinking is considered a socially acceptable behavior, it is important that the problematic drinking variable also account for health risk based on the number of drinks consumed by participants.

Presently, the National Institute for Alcohol Abuse and Alcoholism (NIAAA) and the Substance Abuse and Mental Health Services Administration (SAMHSA) place individuals into three risk categories based on their consumption patterns: low-risk; at-risk; heavy drinker (National Institute on Alcohol Abuse and Alcoholism, 2016). Male low-risk drinkers have four or less drinks per day and no more than fourteen drinks total per week. Female low risk drinkers have less than three drinks per day and no more than seven drinks total per week. At-risk

drinkers either consume more than the daily or weekly limit but not both. Heavy drinkers consume more than both the daily and weekly limits. Additionally, “binge drinking” is categorized as consuming more than five drinks in a single drinking episode and individuals who engage in this behavior are automatically considered to be an at-risk drinker. Individuals who have more than five binge drinking episodes per month are considered heavy drinkers regardless of whether they also meet the weekly limits (National Institute on Alcohol Abuse and Alcoholism, 2016). See table 2 for entire risk-based criteria.

A Combined PD Variable. In order to account for both a participant’s concern regarding their drinking and the actual risk to their health based on the amount and frequency of their drinking, PD was understood as: the behavioral phenomenon exhibited by individuals who expressed *either* 1) impairment of their adaptive functioning and/or control due to their alcohol use or 2) met the NIAAA alcohol consumption guidelines for at-risk or heavy drinking. In order to measure and quantify PD this study used two previously validated measures of alcohol-use behaviors: the CAGE Questionnaire (Ewing, 1984) and the Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, De la Fuente, & Grant, 1993). The measures were chosen because they provide information on both the actual amount/frequency of participant’s drinking (for NIAAA risk evaluation) and the individual’s assessment of their functioning and ability to control their alcohol use. Additionally, both measures quantified participant responses into a numeric score and provided clinically validated threshold scores. On both tests, higher scores indicated more severe problems. Specific information about the validity and makeup each test is provided in the materials section below.

Occupational affiliation. Study participants were identified as being a part of one of two study groups based on whether or not he/she is a member of the PTC. Given the Townley et al.,

(2009) assessment of the fluid and non-typical nature of working within a creative industry such as the professional theater, along with the existence of many non-professional theatrical productions/organizations, it was necessary to precisely define what it means to be a member of the PTC. Therefore, the professional theatrical community (PTC) was defined as: individuals who currently hold, or are actively seeking, a paid position (e.g., performer, stage manager, technician/crew, production designer, director etc.) within a professional production (i.e., one that is not produced solely for enjoyment of participants involved) of live theater. The general public (GP) was defined as all other individuals who do not work within the PTC as indicated above. Occupational affiliation was measured through a yes/no question as part of the survey.

Hypothesis

It was the hypothesis of this study that the number of individuals who meet the operational definition of problematic drinking will be statistically higher in the PTC sample than in the GP sample.

Participants

Recruitment, and Sampling Procedure. Study participants were recruited through direct email with an invitation to participate and a link to the online form of the survey (see Appendix A). PTC members were targeted by emailing the recruitment materials directly to professional arts organizations, such as Actors Equity Association and Arts Boston, to forward to their members. Additionally, emails were sent to the publicly available contact information of known PTC members asking that they forward the recruitment materials to others who met study parameters.

Sample Size and Participant Demographics. As shown in Table 3 the recruitment procedures resulted in 104 total participants completing the survey online ($N=104$; GP, $n=52$;

PTC, $n=52$). The overall sample included 39 males (GP, $n=13$; PTC, $n=26$), 64 females (GP, $n=38$; PTC, $n=36$), and one individual whose self-identified gender was other, (GP, $n=1$; PTC, $n=0$). The ages of the sample total sample clustered in the 25-34 category ($n=64$, 61.5% of total sample) in both the GP ($n=28$) and the PTC ($n=36$) groups. The overall sample also included 7 participants aged 18-24 (GP, $n=4$; PTC, $n=3$), 16 participants aged 35-44 (GP, $n=8$; PTC, $n=8$), 7 participants aged 45-54 (GP, $n=4$; PTC, $n=3$), 6 participants aged 55-64 (GP, $n=4$; PTC, $n=2$) and 4 participants aged 65+ (GP, $n=4$; PTC, $n=0$). With regards to income 28 participants identified yearly earning between \$0-\$25k (GP, $n=16$; PTC, $n=12$), 26 participants as between \$26k-\$45k (GP, $n=6$; PTC, $n=20$), 19 as between \$46k-\$65k (GP, $n=9$; PTC, $n=10$), 19 as between \$66k-\$99k (GP, $n=13$; PTC, $n=6$) and 12 as 100k+ (GP, $n=8$; PTC, $n=4$). Finally, the ethnic/racial makeup of the total sample was heavily Caucasian ($n=96$) with a few participants who identified as African American/Black ($n=2$), Hispanic or Latino ($n=2$) or multiracial ($n=4$).

Materials

Demographic Questionnaire. Participants were asked about their demographic information (i.e., gender, age, income, and race/ethnicity) and were instructed to choose the response that best describes them. This questionnaire also included the yes/no question intended to delineate occupational affiliation. Those who answered yes were included the PTC group while those who answer no were included in the GP group (See Appendix C).

The CAGE Questionnaire. The CAGE questionnaire (Ewing, 1984), is a clinically valid (sensitivity, $d'=0.71$) and reliable (Cronbach α range between 0.80-0.95) measure used by primary care and mental health workers to get a quick assessment of the possible presence of PD (Dhalla & Kopec, 2007;). The CAGE questionnaire addresses alcohol-use through the adaptive

functioning/ behavior control lens and asks about the most diagnostically specific behaviors associated with the DSM-V's Alcohol-Use Disorder criteria.

The questionnaire had participants answer four yes/no questions: "Have you ever felt the need to cut down on your drinking? Have other people ever been annoyed with your drinking? Have you ever felt guilty about drinking? Have you ever felt the need to drink first thing in the morning to steady your nerves or get rid of a hangover?" (Ewing, 1984, p. 1906). An answer of yes on any two questions indicates PD and the possible presence of an alcohol-use disorder.

Alcohol Use Disorders Identification Test (AUDIT). The AUDIT (Saunders et al., 1993) is a 10-question test created by a World Health Organization (WHO) collaboration between six countries intended to screen for alcohol consumption, drinking behavior, and alcohol related problems. It has been proven to be both valid (sensitivity 0.98, specificity 0.94) and reliable (Cronbach α 0.80). Participants chose one of five responses to questions that address the frequency and amount of alcohol they drink, the frequency of any impacts to adaptive functioning, and their perceived ability to control their drinking behaviors. Responses were scored on a 0 to 4 scale with the authors' indicating that 94% of those with a score of 8 or higher will qualify for AUD upon further diagnostic questioning. Additionally, based on the answers to the consumption pattern questions it is possible to ascertain an individual's NIAAA risk category (See Appendix D).

Procedure

Participant Experience. In the recruitment email individuals who were interested in participating were directed by a hyperlink to an online survey website. On the survey website participants encountered the informed consent document (Appendix B) where they were instructed to click "agree" if they wanted to participate. Participants were first presented the two

PD measures and then the demographic questionnaire. After completing the surveys, participants were not provided with information on the outcome of the measures. Participants were thanked for their time and provided hyperlinks to the NIAAA website to find out more information about unhealthy alcohol use and obtaining treatment if he/she/they desired it.

Scoring/Coding. Both the CAGE and the AUDIT questionnaires were first scored using the clinical thresholds set forth by the measures' authors based on total survey score (Ewing, 1984; Saunders et al., 1993). Each question on the CAGE is given a score of 1 for a yes answer and 0 for a no answer (range 0-4). A total score of a 2 or higher is considered clinically significant. The AUDIT is scored by giving each question with five response options (questions 1-8) a score of 0-4 and questions with three response options (questions 9 and 10) a score of 0, 2, or 4 based upon participant response (range 0-40). A total score of 8 or higher is considered clinically significant with higher scores indicating more severe problems.

Finally, each participant was coded with a NIAAA risk category based upon their answers to questions 1-3 of the AUDIT, which are focused on the amount/frequency of consuming alcohol, and their identified gender on the demographic questionnaire. For example, if a participant identified that he typically drinks 3-4 standard drinks (from question 2), 2-4 times a month (from question 1), he would be initially coded as "low risk" for exceeding neither the daily (4 or less drinks) nor weekly (less than 14) limits for his gender (the coding was "initial" due to the subsequent binge drinking question). If he had indicated typically drinking 5-6 standard drinks, 2-4 times per month, the participant would be initially coded as "at-risk" for exceeding the daily but not weekly limit. If he had indicated drinking 7-9 drinks, 2-3 times per week, he would have been coded as a "heavy drinker" as he indicated exceeding both the daily and weekly limits for his gender. Finally, any participant who indicated even occasional binge

drinking behaviors (score of 1 or 2 on question 3) were coded as “at-risk” even if their previous responses had them coded as “low risk” per the guidelines. If a participant indicated frequent binge drinking (score of 3 or 4) on question 3 they were coded as a “heavy drinker” regardless if they were coded as “low-risk” or “at-risk” for the previous 2 questions. For the participant who self-identified as neither male nor female, the NIAA risk criteria for males was used due to its higher quantity limits. Individuals who met the clinical threshold for either the CAGE or AUDIT and/or are coded in the at-risk or heavy drinker category by NIAAA guidelines will be considered to display problematic drinking.

Analysis

Descriptive data are presented on the average total CAGE and AUDIT scores, the number of participants who met the clinical threshold for both measures, and the number of participants within each NIAAA risk category for each of the study groups. This allowed for the computation of the number of participants within each occupational affiliation who met study criteria for PD. In order to examine the study hypothesis, a chi-square test of independence was utilized to determine whether there was a difference in the number of individuals who met criteria for problematic drinking between the occupational affiliations. Furthermore, post-hoc hypothesis testing was conducted to examine the nature of any between group differences for the average total scores on the CAGE and AUDIT, and average group risk score. Finally, a point-biserial and spearman rank order correlation was used to determine the relationship between the average outcomes on the two PD measures with gender (excluding the one participant who identified their gender as “other”), income category and age category. Given the homogeneity of the racial/ethnic make up the total sample, no analysis was run accounting for this variable.

Results

Table 4 presents the individual outcomes on the two clinical alcohol use measures and the NIAAA risk categories by occupational affiliation. These outcomes resulted in 41 PTC (79%, $SD=0.41$) and 25 GP (48%, $SD=0.50$) participants meeting the study criteria for PD. As shown in Figure 1, a chi-square test of independence indicated the relationship between occupational affiliation and problematic drinking was statistically significant, $\chi^2(1) = 10.62, p < .001$ with participants in the professional theatrical community sample being more likely to meet criteria for PD than the general population sample.

Average CAGE scores were found to be significantly higher for the PTC sample ($M=1.67, SD=1.21$) than the GP sample ($M=.90, SD=1.03$), $t(102)=3.48, p < .001$. Of the 52 total PTC participants, 60% met the clinical threshold with a total score of 2 or greater whereas only 32% of the GP sample met this threshold. Similarly, average AUDIT scores were found to be significantly higher in the PTC sample ($M=8.71, SD=5.28$) than the GP sample ($M=5.00, SD=5.09$), $t(102)=3.65, p < .001$. While 55.8% of participants within the PTC sample responded with a clinically significant score of 8 or greater, only 15.4% of GP participants did so. Finally, by assigning each risk category a quantitative value of 0-2, it was shown that the PTC sample's average risk score ($M=1.15, SD=.75$) was significantly higher than the GP sample ($M=.60, SD=.72$) $t(102)=3.86, p < .001$. Within the PTC sample, 11 participants were coded as "low-risk", 22 participants as "at-risk", and 19 participants as "heavy drinkers". Of the GP group, 28 participants were considered "low-risk", 17 "at-risk" and 7 as "heavy drinkers" ($SD=0.72$).

As shown in table 5, the only relevant statistically significant demographic correlation in the total sample included a positive association between average AUDIT score and being male ($r(101)=.228, p=.02$). Gender was not significantly correlated with average AUDIT or CAGE

score when a point-biserial correlation was individually performed in either the PTC or GP group. Within the GP sample there was a positive correlation between income and average AUDIT score ($r_s(49)=.390, p=.005$). While some additional ancillary correlations were found (i.e., a positive association between age and income) no other demographic variables were found to be associated with outcomes on of the clinical alcohol measures in either sample.

Discussion

This initial convenience sample of members of the professional theatrical industry indicates that 79% of community members engage in problematic drinking and that this was significantly higher than the prevalence found in the general population. This finding was consistent across both clinical measures of alcohol use with over half of respondents indicating clinically significant scores on the CAGE and AUDIT. NIAAA risk categories indicated that the vast majority of PTC participants drink at a level that is considered at-risk with over one third of the participants falling in the heavy drinker category. These results are consistent with the anecdotal perception of a culture of problem drinking within the industry discussed by actresses Elaine Stritch (Doob et al., 2002) and Carrie Fisher (2008), within news media (Downes, 2016; Itzkoff, 2016; Mozingo, Karlamangla, & Winton, 2017; Sanchez, 2014; Stack, 2017), and portrayed in cinematic depictions of the professional theater (Graff, 2003; Rentz, 2017).

The outcomes of this study present compelling evidence that this anecdotal perception is indeed true and that there is an association between individuals having an occupational affiliation with the professional theater and displaying problematic drinking behaviors. The study therefore achieves its goal to provide initial empirically based evidence that the perception is reflective of an underlying behavioral phenomenon. The fact that over two-thirds of the PTC sample meet criteria for PD as compared to just under half of the GP sample is striking in its difference.

Furthermore, the PTC sample scored significantly higher than the GP sample on all three measures of problem alcohol use. The PTC participants even responded with an average total AUDIT score ($M=8.71$) that was above the measure's clinical threshold to meet AUD diagnostic criteria 94% of the time (Saunders et al., 1993). The clinically significant average score is noteworthy even as a standalone finding even when not considered in relation to the GP sample.

The study did not find demographic factors to be associated with the observed phenomena, but limited conclusions can be drawn given the overall homogeneity and size of the sample. Importantly, while the blind recruitment ultimately resulted in a lower proportion of male identified participants within the GP sample, the PTC sample was evenly split between males and females. Within this evenly divided PTC sample, gender identification as a male did not statistically correlate with higher scores on the AUDIT or CAGE. This finding suggests the observed elevations were equally present within both genders. Furthermore, additional review of the AUDIT questionnaire by Reinart and Allen (2002), notes that the test is diagnostically more specific (and thus less sensitive) in female identified individuals, and makes a recommendation to lower the clinically significant threshold score for women from 8 to 5. The fact that the PTC sample had an equally divided gender sample, but still scored an average total score above the clinical threshold for such a highly specific test, reinforces the notion that the study appropriately measured an actual behavioral phenomenon that occurs within the population.

Although the sample is relatively small compared to other epidemiological studies, the results strongly indicate that further study of this population is necessary. The quantitative nature of the current research means it is not possible draw definitive conclusions about the reasons behind the elevations of PD within this community. Future research is necessary to both replicate these findings in a national cohort sample and to qualitatively explore the unique occupational

factors found within the PTC that might influence alcohol use amongst its members. Despite the associative nature of the current study, it is possible to develop at least three speculative theories about the influence a career in the PTC has on PD when one considers the current findings within the context of the prior alcohol-related literature.

The first speculative explanation is that the current findings are consequence of the same seven individual and professional domains which Roche et al. (2015) argued mediate alcohol consumption in employees, and that these domains function in an identical manner within this population as they do in other populations. Although it is possible that the seven domains are completely driving the observations within this study, it is likely that factors unique to the profession play at least some role. As noted by Townley et al. (2009), the creative industries include “all the characteristics of secondary labor markets, but ...its characterization is distinct” with the authors noting that unlike traditional secondary labor markets, “employment and unemployment can rise simultaneously [and] employment even for the highly skilled is short term” (p. 941). Unlike other industries where the explanatory mechanisms are thought to exert influence through consistent employment within an unhealthy work environment, the volatile nature of the creative labor market could mean the phenomenon primarily exists within the individuals who lack consistent employment. This fact, along with the inherent psychological and personal vulnerability associated with having to publicly present oneself (or the results of one’s creative process) for evaluation by audiences, critics, and the world on repeated basis, likely means the professional theater is an industry that is not completely analogous to the male dominated occupations which the Roche et al, (2015) domains were developed on.

Likewise, it is possible that the individual and cultural factors unique to this community are so unlike other professions that none of the known professional domains drive the observed

effect within this community. Although this explanation must be considered given the inherent creativity of the field, variable work schedule, and the possible enmeshment between the concept of one's professional success and an individual's sense of self-worth (with literal applause to confirm one's "goodness"), other indicators suggest otherwise. As described earlier, the professional theater includes a diverse set of job functions some of which have clear connections to occupations (e.g., construction workers and carpenters) which have also been previously found to display elevations in problem drinking (Frone, 2013; Mandell et al., 1992). Similarly, many PTC members have a "day-job" within the food service industry which has also been found to display issues with alcohol (R. Moore et al., 2012). These intersections with the prior literature make it probable that at least some of these well-researched and rather broad domains have a functional application even within this unique population.

Rather, the third explanation is most likely. In this explanation, some or all of the domains continue to function in a similar manner as in other professions, but they are then potentiated and/or impacted by the unique occupational and cultural factors within the industry. For example, it might be that those PTC members whose job function within the theatrical industry, or whose additional occupation within a secondary industry, is also an at-risk occupation, are at an even greater risk for engaging in problem drinking behaviors. Likewise, it might be that the mental toll associated with having to be constantly finding a job within a labor market that is inherently volatile and rooted in the short-term work interacts with previously known occupational risk factors such as the wide availability of alcohol within most theaters or cultural norms that view excessive alcohol use as acceptable to further potentiate risk. Furthermore, the vulnerable manner in which actors and actresses must use their physical and mental presence live, on repeated basis, with immediate feedback provided through an

audience's reaction, lends itself to enmeshing one's personal sense of goodness with the subjective evaluation of one's talent by others. Given both the difficulty and competitiveness of the field, this enmeshment may lead to anxiety, self-criticism or cynicism and the use of alcohol as a coping mechanism. Finally, it may even be that dynamically based individual psychological factors that also place individuals at risk for problem drinking contribute to members selecting an industry which fulfills a desire for immediate external validation.

Regardless of which explanatory theory is shown to be ultimately driving the observed phenomenon (or even some unknown fourth method), further research is critical to making nuanced conclusions about how a career in the theater can impact alcohol consumption. Future research is particularly important when one considers the implications this knowledge has on developing appropriate professional, clinical, and public health interventions to address the inherent risk that is associated with the profession.

Research that focuses on better understanding the findings of this study will be critical in supporting professional arts organizations and public health initiatives in developing, funding, and implementing, actionable programs intended to reduce overall alcohol-use in the professional theatrical community. While this would likely be a relatively long-term goal, there are numerous existing programs, campaigns, and educational models that have been shown to be effective in reducing alcohol consumption within both a targeted population and in the workplace (See: "Drug Free Work Place Toolkit" [2019]; Blum & Roman, 2002; SAMHSA, 1990). Furthermore, one of the main barriers to the professional theatrical community being appropriately surveyed for alcohol use by public health organizations are the imprecise and broad job code definitions used by the government. Therefore, advocacy work is needed in order

individually include the professional theatrical community within the large governmental surveys of substance abuse.

Furthermore, without this knowledge, mental-health and substance-abuse clinicians are at a disadvantage when conceptualizing and intervening with PTC member clients. For example, given the well-established connection between elevated alcohol-use and the development/presence of other mental health issues, clinicians would be wise to do a full and detailed substance-abuse evaluation with PTC members presenting with (seemingly) primary depression, anxiety or other mental health symptomology. Doing so would be especially important if future research indeed finds permissive alcohol-use norms within the PTC culture, which would increase the likelihood that the client might unintentionally underreport and/or overlook any alcohol-related issues as they compare their drinking behaviors relative to their colleagues within the community.

Finally, having access to this study and subsequent research is critical to the individuals themselves already in the professional theatrical community and those considering entering the field, in order to better inform their decisions making. Hopefully, if individuals learn that the connection between their profession and elevated drinking goes beyond mere anecdote and is instead supported by scholarly and rigorous empirical evidence, they can be appropriately mindful to moderate their habits and avoid the painful consequences others before them have experienced.

At the very end of her one woman show, Ms. Stritch explains that the show was meant to help her recapture the past she had numbed with alcohol, noting that the playwright, “Beckett said it best...[she was] ‘Absent Always’” (Doob et al., 2002). Stritch remarks, that with her full physical and mental presence on the stage, without alcohol, she feels the joy of a child who isn’t

concerned about what others are thinking of her. It is my hope, that by learning the empirical findings of this and future research, the theatrical community will heed Stritch's example.

References

- American Psychiatric Association (Ed.). (2013). *Diagnostic and statistical manual of mental disorders: DSM-5* (5th ed). Washington, D.C: American Psychiatric Association.
- Ames, G., Grube, J., & Moore, R. (2000). Social control and workplace drinking norms: a comparison of two organizational cultures. *Journal of Studies on Alcohol*, *61*(2), 203–219. <https://doi.org/10.15288/jsa.2000.61.203>
- Ames, G., & Janes, C. (1992). Cultural approach to conceptualizing alcohol and the workplace. *Alcohol Health & Research World*, *16*(2), 112–119.
- Anthenelli, R. (2010). Focus on: Comorbid mental health disorders. *Alcohol Research & Health: The Journal of the National Institute on Alcohol Abuse and Alcoholism*, *33*(1–2), 109–117.
- Arezes, P. (2011). Alcohol consumption and risk perception in the Portuguese construction industry. *The Open Occupational Health & Safety Journal*, *3*(1), 10–17. <https://doi.org/10.2174/1876216601103010010>
- Aubusson, K. (2016, December 31). Drugs, death and celebrity: headline-grabbers reveal a much bigger problem. *The Sydney Morning Herald*. Retrieved from <http://www.smh.com.au/national/health/drugs-death-and-celebrity-headlinegrabbers-reveal-a-much-bigger-problem-20161230-gtjrzl.html>
- Bacharach, S. B., Bamberger, P. A., & Sonnenstuhl, W. J. (2002). Driven to Drink: Managerial control, work-related risk factors, and employee problem drinking. *The Academy of Management Journal*, *45*(4), 637–658. <https://doi.org/10.5465/3069302>
- Bacharach, S. B., Bamberger, P. A., Sonnenstuhl, W. J., & Vashdi, D. (2008). Aging and drinking problems among mature adults: The moderating effects of positive alcohol expectancies and workforce disengagement. *Journal of Studies on Alcohol and Drugs*, *69*(1), 151–159. <https://doi.org/10.15288/jsad.2008.69.151>
- Bamberger, P. A., & Bacharach, S. B. (2006). Abusive supervision and subordinate problem drinking: Taking resistance, stress and subordinate personality into account. *Human Relations*, *59*(6), 723–752. <https://doi.org/10.1177/0018726706066852>
- Bennett, J., & Lehman, W. E. K. (1999). Employee exposure to coworker substance use and negative consequences: The moderating effects of work group membership. *Journal of Health and Social Behavior*, *40*(3), 307. <https://doi.org/10.2307/2676354>
- Blum, T. C., & Roman, P. M. (2002). The workplace and alcohol problem prevention. *Alcohol Research & Health*, *26*(1), 49–58.

- Brem, M. J., Florimbio, A. R., Elmquist, J., Shorey, R. C., & Stuart, G. L. (2018). Antisocial traits, distress tolerance, and alcohol problems as predictors of intimate partner violence in men arrested for domestic violence. *Psychology of Violence, 8*(1), 132–139. <https://doi.org/10.1037/vio0000088>
- Buvik, K., Moan, I. S., & Halkjelsvik, T. (2018). Alcohol-related absence and presenteeism: Beyond productivity loss. *International Journal of Drug Policy, 58*, 71–77. <https://doi.org/10.1016/j.drugpo.2018.05.005>
- Cherpitel, C. J. (2013). Focus on: The burden of alcohol use—trauma and emergency outcomes. *Alcohol Research: Current Reviews, 35*(2), 150–154.
- Crum, R. M., Muntaner, C., Anthony, J. C., & Anthony, J. C. (1995). Occupational stress and the risk of alcohol abuse and dependence. *Alcoholism, Clinical and Experimental Research, 19*(3), 647–655. <https://doi.org/10.1111/j.1530-0277.1995.tb01562.x>
- Cunradi, C. B., Chen, M.-J., & Lipton, R. (2009). Association of occupational and substance use factors with burnout among urban transit operators. *Journal of Urban Health, 86*(4), 562–570. <https://doi.org/10.1007/s11524-009-9349-4>
- Dawson, D. A. (2011). Defining risk drinking. *Alcohol Research & Health: The Journal of the National Institute on Alcohol Abuse and Alcoholism, 34*(2), 141–156.
- Delaney, W. P., & Ames, G. M. (1995). Work team attitudes, drinking norms, and workplace drinking. *Journal of Drug Issues, 25*(2), 275–290. <https://doi.org/10.1177/002204269502500205>
- Dhalla, S., & Kopec, J. A. (2007). The CAGE questionnaire for alcohol misuse: a review of reliability and validity studies. *Clinical and Investigative Medicine. Medecine Clinique Et Experimentale, 30*(1), 33–41. <https://doi.org/10.25011/cim.v30i1.447>
- Donovan, J. E. (2013). The burden of alcohol use: focus on children and preadolescents. *Alcohol Research: Current Reviews, 35*(2), 186–192.
- Doob, N., Hegegus, C., McKay, R., Pennebaker, D., & Picheta, A. (2002). *Elaine Stritch At Liberty* [DVD]. Home Box Office (HBO).
- Downes, L. (2016, December 28). Opinion | The honesty of Carrie Fisher. *The New York Times*. Retrieved from <https://www.nytimes.com/2016/12/28/opinion/the-honesty-of-carrie-fisher.html>
- Eaton, W. W., Regier, D. A., Locke, B. Z., & Taube, C. A. (1981). The epidemiologic catchment area program of the National Institute of Mental Health. *Public Health Reports, 96*(4), 319.
- Ewing, J. (1984). Detecting alcoholism: The cage questionnaire. *JAMA, 252*(14), 1905–1907. <https://doi.org/10.1001/jama.1984.03350140051025>

- Fisher, C. (2008). *Wishful drinking* (1st Simon & Schuster hardcover ed). New York: Simon & Schuster.
- Frone, M. (1999). Work stress and alcohol use. *Alcohol Research & Health: The Journal of the National Institute on Alcohol Abuse and Alcoholism*, 23(4), 284–291.
- Frone, M. (2003). Predictors of overall and on-the-job substance use among young workers. *Journal of Occupational Health Psychology*, 8(1), 39–54. <http://dx.doi.org/10.1037/1076-8998.8.1.39>
- Frone, M. (2006). Prevalence and distribution of alcohol use and impairment in the workplace: a U.S. national survey. *Journal of Studies on Alcohol*, 67(1), 147–156. <https://doi.org/10.15288/jsa.2006.67.147>
- Frone, M. (2013). *Alcohol and illicit drug use in the workforce and workplace*. Washington, DC: American Psychological Assoc.
- Frone, M., & Brown, A. L. (2010). Workplace substance-use norms as predictors of employee substance use and impairment: A survey of U.S. Workers*. *Journal of Studies on Alcohol and Drugs*, 71(4), 526–534. <https://doi.org/10.15288/jsad.2010.71.526>
- Graff, T. (2003). *Camp* [Motion Picture]. United States: IFC Films.
- Haddock, C. K., Day, R. S., Poston, W. S. C., Jahnke, S. A., & Jitnarin, N. (2015). Alcohol use and caloric intake from alcohol in a national cohort of US career firefighters. *Journal of Studies on Alcohol and Drugs*, 76(3), 360–366. <https://doi.org/10.15288/jsad.2015.76.360>
- Haddock, C. K., Jahnke, S. A., Poston, W. S. C., Jitnarin, N., Kaipust, C. M., Tuley, B., & Hyder, M. L. (2012). Alcohol use among firefighters in the Central United States. *Occupational Medicine*, 62(8), 661–664. <https://doi.org/10.1093/occmed/kqs162>
- Harford, T. C., Parker, D. A., Grant, B. F., & Dawson, D. A. (1992). Alcohol use and dependence among employed men and women in the United States in 1988. *Alcoholism: Clinical and Experimental Research*, 16(2), 146–148. <https://doi.org/10.1111/j.1530-0277.1992.tb01357.x>
- Harford, T. C., Yi, H., Chen, C. M., & Grant, B. F. (2018). Substance use disorders and self- and other-directed violence among adults: Results from the National Survey on Drug Use And Health. *Journal of Affective Disorders*, 225, 365–373. <https://doi.org/10.1016/j.jad.2017.08.021>
- Head, J., Stansfeld, S. A., & Siegrist, J. (2004). The psychosocial work environment and alcohol dependence: a prospective study. *Occupational and Environmental Medicine*, 61(3), 219–224. <https://doi.org/10.1136/oem.2002.005256>
- Hemmingsson, T., Lundberg, I., Diderichsen, F., & Allebeck, P. (1998). Explanations of social class differences in alcoholism among young men. *Social Science & Medicine*, 47(10), 1399–1405. [https://doi.org/10.1016/S0277-9536\(98\)00258-5](https://doi.org/10.1016/S0277-9536(98)00258-5)

- Hiro, H., Kawakami, N., Tanaka, K., Nakamura, K., & The Japan Work Stress and Health Co. (2007). Association between job stressors and heavy drinking: Age differences in male Japanese workers. *Industrial Health*, 45(3), 415–425. <https://doi.org/10.2486/indhealth.45.415>
- Hodgins, D. C., Williams, R., & Munro, G. (2009). Workplace responsibility, stress, alcohol availability and norms as predictors of alcohol consumption-related problems among employed workers. *Substance Use & Misuse*, 44(14), 2062–2069. <https://doi.org/10.3109/10826080902855173>
- Hoffmann, J., & Larison, C. (1999). Drug use, workplace accidents and employee turnover. *Journal of Drug Issues*, 29(2), 341–364. <https://doi.org/10.1177/002204269902900212>
- Itzkoff, D. (2016, December 27). Carrie Fisher, Child of Hollywood and ‘Star Wars’ Royalty, Dies at 60. *The New York Times*. Retrieved from <https://www.nytimes.com/2016/12/27/movies/carrie-fisher-dead-star-wars-princess-leia.html>
- Kolmar, C. (2018, December 22). The 10 toughest majors for finding jobs after college for 2018. Retrieved April 22, 2019, from <https://www.zippia.com/advice/the-toughest-majors-for-finding-jobs-after-college/>
- Kouvonen, A., Kivimaki, M., Elovainio, M., Vaananen, A., De Vogli, R., Heponiemi, T., ... Vahtera, J. (2008). Low organisational justice and heavy drinking: a prospective cohort study. *Occupational and Environmental Medicine*, 65(1), 44–50. <https://doi.org/10.1136/oem.2007.032755>
- Macdonald, S., Wells, S., & Wild, T. C. (1999). Occupational Risk Factors Associated with Alcohol and Drug Problems. *The American Journal of Drug and Alcohol Abuse*, 25(2), 351–369. <https://doi.org/10.1081/ADA-100101865>
- Mandell, W., Eaton, W. W., Anthony, J. C., & Garrison, R. (1992). Alcoholism and occupations: a review and analysis of 104 occupations. *Alcoholism, Clinical and Experimental Research*, 16(4), 734–746.
- May, P. A., Chambers, C. D., Kalberg, W. O., Zellner, J., Feldman, H., Buckley, D., ... Hoyme, H. E. (2018). Prevalence of fetal alcohol spectrum disorders in 4 US communities. *JAMA*, 319(5), 474–482. <https://doi.org/10.1001/jama.2017.21896>
- Moore, R., Duke, M. R., Cunradi, C. B., & Ames, G. (2012). Food service employee alcohol use, hangovers and norms during and after work hours. *Journal of Substance Use*, 17(3), 269–276. <https://doi.org/10.3109/14659891.2011.580414>
- Moore, S., Grunberg, L., & Greenberg, E. (2003). A longitudinal exploration of alcohol use and problems comparing managerial and nonmanagerial men and women. *Addictive Behaviors*, 28(4), 687–703. [https://doi.org/10.1016/S0306-4603\(01\)00271-4](https://doi.org/10.1016/S0306-4603(01)00271-4)

- Mozingo, J., Karlamangla, S., & Winton, R. (2017, June 20). Carrie Fisher opened up about her demons — and knew she wouldn't have a Hollywood ending. *Los Angeles Times*. Retrieved from <http://www.latimes.com/local/lanow/la-me-carrie-fisher-addiction-20170620-story.html>
- National Institute on Alcohol Abuse and Alcoholism. (2010). *Alcohol-related traffic deaths*. Retrieved from <https://www.niaaa.nih.gov/sites/default/files/publications/AlcoholRelatedTrafficDeaths.pdf>
- National Institute on Alcohol Abuse and Alcoholism. (2016). *Rethinking drinking*. National Institute of Health (NIH).
- National Institute on Alcohol Abuse and Alcoholism. (2018a, August). *Alcohol facts and statistics*. Retrieved from <https://pubs.niaaa.nih.gov/publications/AlcoholFacts&Stats/AlcoholFacts&Stats.pdf>
- National Institute on Alcohol Abuse and Alcoholism. (2018b, October). *Alcohol overdose: The dangers of drinking too much*. Retrieved from <https://pubs.niaaa.nih.gov/publications/AlcoholOverdoseFactsheet/overdoseFact.pdf>
- Patrick, M. E., & Azar, B. (2018). High-intensity drinking. *Alcohol Research: Current Reviews*, 39(1), 1–7.
- Patterson, C. R., Bennett, J. B., & Wiitala, W. L. (2005). Healthy and unhealthy stress unwinding: Promoting health in small businesses. *Journal of Business and Psychology*, 20(2), 221–247. <https://doi.org/10.1007/s10869-005-8261-5>
- Ragland, D. R., Greiner, B. A., Krause, N., Holman, B. L., & Fisher, J. M. (1995). Occupational and nonoccupational correlates of alcohol consumption in urban transit operators. *Preventive Medicine*, 24(6), 634–645. <https://doi.org/10.1006/pmed.1995.1099>
- Ragland, D. R., Greiner, B. A., Yen, I. H., & Fisher, J. M. (2000). Occupational stress factors and alcohol-related behavior in urban transit operators. *Alcoholism: Clinical and Experimental Research*, 24(7), 1011–1018. <https://doi.org/10.1111/j.1530-0277.2000.tb04644.x>
- Rehm, J. (2011). The risks associated with alcohol use and alcoholism. *Alcohol Research & Health: The Journal of the National Institute on Alcohol Abuse and Alcoholism*, 34(2), 9.
- Rehm, J., & Hingson, R. (2013). Measuring the burden: Alcohol's evolving impact. *Alcohol Research: Current Reviews*, 35(2), 122–127.
- Reinert, D. F., & Allen, J. P. (2002). The Alcohol Use Disorders Identification Test (AUDIT): A review of recent research. *Alcoholism, Clinical and Experimental Research*, 26(2), 272–279. <https://doi.org/10.1111/j.1530-0277.2002.tb02534.x>

- Rentz, I. (2017). *Opening Night* [Comedy, Musical, DVD]. Retrieved from <http://www.imdb.com/title/tt4156972/>
- Roche, A. M., Lee, N. K., Battams, S., Fischer, J. A., Cameron, J., & McEntee, A. (2015). Alcohol use among workers in male-dominated industries: A systematic review of risk factors. *Safety Science*, 78, 124–141. <https://doi.org/10.1016/j.ssci.2015.04.007>
- Sacks, J. J., Gonzales, K. R., Bouchery, E. E., Tomedi, L. E., & Brewer, R. D. (2015). 2010 national and state costs of excessive alcohol consumption. *American Journal of Preventive Medicine*, 49(5), e73–e79. <https://doi.org/10.1016/j.amepre.2015.05.031>
- Saha, T. D., Grant, B. F., Chou, S. P., Kerridge, B. T., Pickering, R. P., & Ruan, W. J. (2018). Concurrent use of alcohol with other drugs and DSM-5 alcohol use disorder comorbid with other drug use disorders: Sociodemographic characteristics, severity, and psychopathology. *Drug and Alcohol Dependence*, 187, 261–269. <https://doi.org/10.1016/j.drugalcdep.2018.03.006>
- Sanchez, R. (2014, February 28). Coroner: Philip Seymour Hoffman died of acute mixed drug intoxication. Retrieved April 7, 2019, from <https://www.cnn.com/2014/02/28/showbiz/philip-seymour-hoffman-autopsy/index.html>
- Saunders, J. B., Aasland, O. G., Babor, T. F., De la Fuente, J. R., & Grant, M. (1993). Development of the alcohol use disorders identification test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption-II. *Addiction*, 88(6), 791–804. <https://doi.org/10.1111/j.1360-0443.1993.tb02093.x>
- Schuckit, M. A. (2014). Recognition and management of withdrawal delirium (delirium tremens). *New England Journal of Medicine*, 371(22), 2109–2113. <https://doi.org/10.1056/NEJMra1407298>
- Shield, K., Parry, C., & Rehm, J. (2013). Chronic diseases and conditions related to alcohol use. *Alcohol Research: Current Reviews*, 35(2), 155–173.
- Smith, G. S., Branas, C. C., & Miller, T. R. (1999). Fatal nontraffic injuries involving alcohol: A metaanalysis. *Annals of Emergency Medicine*, 33(6), 659–668. [https://doi.org/10.1016/S0196-0644\(99\)80004-3](https://doi.org/10.1016/S0196-0644(99)80004-3)
- Stack, L. (2017, June 19). Carrie Fisher tested positive for drugs before her death, coroner says. *The New York Times*. Retrieved from <https://www.nytimes.com/2017/06/19/arts/carrie-fisher-tested-positive-for-drugs-before-her-death-coroner-says.html>
- Stimson, G. V. (Ed.). (2007). *Drinking in context: patterns, interventions, and partnerships*. New York: Routledge.
- Teodorczuk, T. (2017, December 7). Why drug and alcohol addiction stories on screen and stage are at an all-time high. Retrieved April 7, 2019, from <https://www.marketwatch.com/story/why-drug-and-alcohol-addiction-stories-on-screen-and-stage-are-at-an-all-time-high-2017-12-07>

- Townley, B., Beech, N., & McKinlay, A. (2009). Managing in the creative industries: Managing the motley crew. *Human Relations, 62*(7), 939–962.
<https://doi.org/10.1177/0018726709335542>
- Traweger, C., Kinzl, J. F., Traweger-Ravanelli, B., & Fiala, M. (2004). Psychosocial factors at the workplace—do they affect substance use? Evidence from the Tyrolean workplace study. *Pharmacoepidemiology and Drug Safety, 13*(6), 399–403.
<https://doi.org/10.1002/pds.955>
- Treiber, L. A., & Davis, S. N. (2012). The role of ‘workplace family’ support on worker health, exhaustion and pain. *Community, Work & Family, 15*(1), 1–27.
<https://doi.org/10.1080/13668803.2011.580123>
- Trice, H., & Sonnenstuhl, W. J. (1990). On the construction of drinking norms in work organizations. *Journal of Studies on Alcohol, 51*(3), 201–220.
<https://doi.org/10.15288/jsa.1990.51.201>
- Wang, M., Liu, S., Zhan, Y., & Shi, J. (2010). Daily work–family conflict and alcohol use: Testing the cross-level moderation effects of peer drinking norms and social support. *Journal of Applied Psychology, 95*(2), 377–386. <https://doi.org/10.1037/a0018138>
- White, G. F., Gainey, R. R., & Triplett, R. A. (2015). Alcohol outlets and neighborhood crime: A longitudinal analysis. *Crime & Delinquency, 61*(6), 851–872.
<https://doi.org/10.1177/0011128712466386>
- Wilsnack, S. C., Wilsnack, R. W., & Wolfgang Kantor, L. (2013). Focus on: Women and the costs of alcohol use. *Alcohol Research: Current Reviews, 35*(2), 10.

Appendix A:**Recruitment Email**

Hello, my name is [REDACTED]. I am a graduate student at Antioch University New England in the Clinical Psychology Department. I am performing research supporting my dissertation. I am asking you to complete a survey.

Participation in this research includes taking a survey about your drinking habits. It will take approximately 5 minutes. Please click on the following link to read more about the research and decide if you would like to participate: [link to survey].

Thank you for your time.

[REDACTED]
Candidate for a Doctorate
Antioch University New England
[REDACTED]

Appendix B:**Informed Consent Letter****Research Study about Alcohol Use**

Researchers at Antioch University New England are asking you to fill out a survey about your habits and behaviors drinking alcohol. The Researchers want to know about how much and how often you use alcohol and your thoughts and feelings about drinking. The research will help us better understand alcohol use and what factors affect how much individual's drink.

Due to the sensitive nature of substance abuse you may feel difficult or uncomfortable emotions in response to the survey questions or be concerned others will find out about your drinking behaviors. The researchers have tried to prevent any risk to you.

The information gathered is completely anonymous. Surveys are filled out online so that you do not need to identify yourself by completing the survey in person. The researchers are not asking for names (or other identifying information) and no one can know who filled out a survey. If after filling out the survey you are concerned about your drinking the researchers have included, for all participants, contact information for groups who can help you better understand healthy vs. unhealthy drinking.

Taking part is voluntary.

If you choose not to fill out the survey, there will be no penalty and it will not affect any services or other benefits you already or might receive from Antioch University New England. If you do fill out the survey, you may leave any question blank, but we ask you to answer as many questions as you can.

If you have any questions about the study, you may contact [REDACTED] or via email at [REDACTED]. You may also contact the chair of my dissertation committee, [REDACTED] at [REDACTED] or via email at [REDACTED].

If you have any questions about your rights as a research participant, you may contact Dr. [REDACTED], Chair of the Antioch University New England IRB, at [REDACTED] or [REDACTED], Interim Provost of Antioch University New England, at [REDACTED]

CONSENT

I have read and I understand the provided information and have been given the researchers contact information to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. If you click agree and complete the attached survey it means that you have read (or have had read to you) the information contained in this letter, and would like to be a volunteer in this research study.

[Agree]

Appendix C:
Demographic Questionnaire

Instructions: Please select the answer that best describes you.

Age:

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65+

Gender:

- Male
- Female
- Other

Race/Ethnicity

- Caucasian
- Hispanic or Latino/a
- African American/Black
- Asian/Pacific Islander
- Multiracial
- Other

Income:

- \$0-\$25K
- \$26K- \$45K
- \$46K-65K
- \$65K-\$99K
- \$100K +

Do you currently hold, or are you actively seeking, a paid position within a *professional* (e.g., not solely for pleasure) live theatrical production? Examples positions include (but are not limited to) performer, stage manager, technician/crew, production designer, director etc.

- Yes
- No

Appendix D:**The Alcohol Use Disorder Identification Test**

Instructions: Please complete the following questions about your drinking habits over the past year.

Questions	Scoring system				
	0	1	2	3	4
How often do you have a drink containing alcohol?	Never	Monthly or less	2 - 4 times per month	2 - 3 times per week	4+ times per week
How many units of alcohol do you drink on a typical day when you are drinking?	1 - 2	3 - 4	5 - 6	7 - 9	10+
How often have you had 6 or more units if female, or 8 or more if male, on a single occasion in the last year?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often during the last year have you failed to do what was normally expected from you because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often during the last year have you needed an alcoholic drink in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often during the last year have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
How often during the last year have you been unable to remember what happened the night before because you had been drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
Have you or somebody else been injured as a result of your drinking?	No		Yes, but not in the last year		Yes, during the last year
Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested that you cut down?	No		Yes, but not in the last year		Yes, during the last year

Appendix E:

Audit Permission

Instruments Catalog: Search Results

5/25/19, 10:32 AM


[Instruments Home](#) | [Library Home](#) | [ADA I Home](#)

Search Results: SCREENING AND ASSESSMENT INSTRUMENTS

Full

1. ★ Alcohol Use Disorders Identification Test (AUDIT)

Year: 1992**Developers:**

Babor, Thomas F.; de la Fuente, J.R.; Saunders, J.; Grant, Marcus; World Health Organization

Description:

The AUDIT was developed by Tom Babor and others for the World Health Organization to identify persons whose alcohol consumption has become hazardous or harmful to their health. It 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. All of the questions are scored using a 5-point Likert scale. The AUDIT takes under 2 minutes to administer.

The AUDIT screening procedure in clinical settings is linked to a decision process that includes brief intervention with heavy drinkers, or referral to specialized treatment for patients who show evidence of more serious alcohol involvement. Populations appropriate for a screening program using the AUDIT include primary care, emergency room, surgery, and psychiatric patients; DWI offenders, criminals in court, jail and prison; enlisted men in the Armed Forces; workers encountered in employee assistance programs and industrial settings; and college students.

Another feature of the AUDIT is the optional Clinical Screening Procedure, which consists of two questions about traumatic injury, five items on clinical examination, and a blood test (the serum GGT). The Clinical Screening Procedure does not refer directly to problems with alcohol and may be particularly relevant for defensive patients in situations where alcohol-specific questions cannot be asked with confidence.

The AUDIT is currently being used in a variety of research projects and epidemiological studies. Research guidelines incorporated into the AUDIT manual suggest further research using this instrument.

Instrument Use & Availability

Copyright 1992 Thomas Babor and the World Health Organization. The core questionnaire can be reproduced without permission. The AUDIT has been translated into numerous languages, including Japanese, French, Norwegian, Rumanian, Slavic, Spanish, Arabic, and Swahili. The manual (link below) includes detailed administration guidelines, scoring instructions, and a copy of the scale.

Download the instrument:

http://whqlibdoc.who.int/hq/2001/WHO_MSD_MSB_01.6a.pdf (WHO)

For more information, contact:

World Health Organization
Division of Mental Health & Prevention of Substance Abuse
CH-1211
Geneva 27, Switzerland
Publications@who.int

Permanent URL for this page:

http://bit.ly/AUDIT_ada_i_inst

Instrument Details:

Source Reference:	Babor TF ; de la Fuente JR ; Saunders J ; Grant M. AUDIT: The Alcohol Use Disorders Identification Test. Guidelines for use in primary health care. Geneva : World Health Organization, 1992.
	Saunders JB ; Aasland OG ; Babor TF ; de la Fuente JR ; Grant M. Development of the Alcohol Use Disorders Screening Test (AUDIT). WHO collaborative project on early detection of persons with harmful alcohol consumption. II. <i>Addiction</i> 1993;88:791-804.
Population studied:	Adults; African Americans; Hispanics; Offenders; College students; DUI/DWI drivers
Instrument Type:	Screening; Self-administered questionnaire
Recommended By:	NIAAA; WHO; TIP 16; TIP 42; METRIC
Administration/Scoring:	This instrument should be administered by trained health professionals or paraprofessionals. There is a detailed user's manual (see Availability section, above) and a videotape training module that explains proper administration procedures, scoring, interpretation, and clinical management. The Clinical Screening Procedure is meant to be used by medically trained professionals and it takes 10 minutes to complete when incorporated into other aspects of a medical evaluation. Norms are available for this instrument, and it has also been normed on the subgroups of heavy drinkers and alcoholics.

Validity/Reliability:	Reliability studies have been done on the AUDIT using measures of test-retest and internal consistency. Validity studies have also been done, using measures of content, criterion (predictive, concurrent, "postdictive") and construct.
------------------------------	---

Supporting References:

- Cortes-Tomas MT, et al. Different versions of the Alcohol Use Disorders Identification Test (AUDIT) as screening instruments for underage binge drinking. *Drug Alcohol Depend* 2016;158:52-9. doi: 10.1016/j.drugalcdep.2015.10.033
- Celio MA, Vetter-O'Hagen CS, Lisman SA, et al. Integrating field methodology and web-based data collection to assess the reliability of the Alcohol Use Disorders Identification Test (AUDIT). *Drug Alcohol Depend* 2011;119(1-2):142-4.
- Olthuis JV, Zamboanga BL, Ham LS, Van Tyne K. The utility of a gender-specific definition of binge drinking on the AUDIT. *J Am Coll Health* 2011;59(4):239-45
- Murphy P, Garavan H. Cognitive predictors of problem drinking and AUDIT scores among college students. *Drug Alcohol Depend* 2011;115(1-2):94-100.
- Rist F, Glockner-Risk A, Demmel R. The Alcohol Use Disorders Identification Test revisited: Establishing its structure using nonlinear factor analysis and identifying subgroups of respondents using latent class factor analysis. *Drug and Alcohol Dependence* 2009;100(1-2):71-82.
- Aalto M, Alho H, Halme JT, Seppa K. AUDIT and its abbreviated versions in detecting heavy and binge drinking in a general population survey. *Drug and Alcohol Dependence* 2009;103(1-2):25-9.
- Fairlie, Anne M; Sindelar, Holly A; Eaton, Cheryl A; Spirito, Anthony. Utility of the AUDIT for screening adolescents for problematic alcohol use in the emergency department. *International Journal of Adolescent Medicine and Health* 2006;18(1):115-122.

Other Resources:

- ADAI Library Search: Alcohol Use Disorders Identification Test (AUDIT)
- NIAAA's Assessing Alcohol Problems
- PubMed search: Alcohol Use Disorders Identification Test

Full Powered by DB/Text *WebPublisher*, from 

Table 1

Alcohol Use Disorder DSM-V Criteria

Alcohol is often taken in larger amounts or over a longer period than was intended.	
There is a persistent desire or unsuccessful efforts to cut down or control alcohol use.	The presence of at least 2 of these symptoms indicates an Alcohol Use Disorder (AUD)
A great deal of time is spent in activities necessary to obtain alcohol, use alcohol, or recover from its effects.	
Craving, or a strong or urge to use alcohol.	
Recurrent alcohol use resulting in a failure to fulfill major role obligations at work, school, or home.	The severity of the AUD is defined as: Mild: The presence of 2 to 3 symptoms. Moderate: The presence of 4 to 5 symptoms. Severe: The presence of 6 or more symptoms.
Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbating by effects of alcohol.	
Important social, occupational, or recreational activities are given up or reduced because of alcohol use.	
Recurrent alcohol use in situations in which it physically hazardous.	
Alcohol use is continued despite knowledge of recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol	
Tolerance, as defined by either the following: a) A need for markedly increased amounts of alcohol to achieve intoxication or desired effect b) markedly diminished effect with continued use of the same amount of alcohol	
Withdrawal, as manifested by either of the following: a) The characteristic withdrawal syndrome for alcohol (refer to criteria A and B of the criteria set for alcohol withdrawal) b) Alcohol (or a closely related substance, such as a benzodiazepine) is taken to relieve or avoid withdrawal symptoms.	

Note. Adapted from the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM-V; American Psychiatric Association, 2013)

Table 2

NIAAA Alcohol Consumption Risk Categories

Daily and Weekly Limits	
Men	Women
4 drinks per day	3 drinks per day
14 drinks per week	7 drinks per week
Risk Category	
Consuming less than both the daily and weekly limits	Low-Risk
Consuming more than either the daily or weekly limits but not both	At-Risk
Consuming more than both the daily and weekly limits	Heavy Drinking (Highest Risk)
Binge Drinking (Men and Women)	
Having 5 or more drinks in one episode (drinking continuously without stopping)	At-Risk
5 or more binge drinking events per month	Heavy Drinking (Highest Risk)

Note. Adapted from the National Institute for Alcohol Abuse and Alcoholism (NIAAA) and the Substance Abuse and Mental Health Services Administration (SAMHSA) guidelines on alcohol use (NIAAA, 2016). A “drink” refers to 1 standard drink which the equivalent of 1.5oz of “hard liquor,” 12oz glass/bottle of beer, or a 5oz glass of wine.

Table 3

Participant Demographics by Occupational Affiliation

	Occupational Affiliation					
	Professional Theatrical Community (PTC)			General Population (GP)		
	<i>n</i> =52	<i>M</i>	(<i>SD</i>)	<i>n</i> =52	<i>M</i>	(<i>SD</i>)
<u>Gender</u>		0.50	(0.50)		0.77	(0.47)
Male	26	.50		13	.25	
Female	26	.50		38	.73	
Other	0	.00		1	.02	
<u>Age</u>		2.33	(1.38)		2.77	(1.33)
18-24	3	.06		4	.08	
25-34	36	.69		28	.53	
35-44	8	.15		8	.15	
45-54	3	.06		4	.08	
55-64	2	.04		4	.08	
65+	0	.00		4	.08	
<u>Yearly Income</u>		2.42	(1.19)		2.83	(1.49)
\$0-\$25K	12	.23		16	.31	
\$26K-\$45K	20	.38		6	.12	
\$46K-\$65K	10	.19		9	.17	
\$65K-\$99K	6	.15		13	.25	
\$100K+	4	.08		8	.15	
<u>Race/Ethnicity</u>		1.23	(0.83)		1.19	(0.87)
Caucasian	47	.90		49	.94	
African American	1	.02		1	.02	
Hispanic/Latino/a	2	.04		0	.00	
Multiracial	2	.04		2	.04	
Asian/Pacific Islander	0	.00		0	.00	
Other	0	.00		0	.00	

Table 4

Average PD Measure Scores and Total Participants Meeting PD Criteria

PD Measure	Professional Theatrical Community N=52			General Population N=52		
	<i>n</i>	<i>M</i>	(<i>SD</i>)	<i>n</i>	<i>M</i>	(<i>SD</i>)
Mean CAGE Score (Range: 0-4)**		1.67	(1.00)		0.90	(1.22)
Clinically Significant (Total \geq 2)	31	.60		17	.33	
Mean AUDIT Score (Range: 0-28)**		8.71	(5.28)		5.0	(5.10)
Clinically Significant (Total \geq 8)	20	.56		8	.15	
NIAAA Risk Category (Range:0-2)**		1.15	(0.75)		0.60	(0.72)
Low Risk	11	.21		28	.53	
At-Risk	22	.42		17	.32	
Heavy Drinker	19	.36		7	.14	
Proportion Who Met Study Criteria for PD**	41	.79		25	.48	

*Note.*** Significant at $p < .001$

Table 5

Correlation Matrix of Average CAGE & AUDIT Scores and Demographic Variables

Total Sample					
	AUDIT	CAGE	Gender (male)	Age	Income
AUDIT	x	.651*	.228*	-.085	.107
CAGE	.651*	x	.140	-.096	.081
Gender (male)	.140	.228*	x	x	x
Age	-.085	-.096	x	x	.431*
Income	.107	.081	x	.431*	x
Professional Theatrical Community (PTC)					
AUDIT	x	.592*	.158	-.105	-.031
CAGE	.592*	x	.080	-.078	.046
Gender (male)	.158	.080	x	x	x
Age	-.105	-.078	x	x	.298*
Income	-.031	.046	x	.298*	x
General Population (GP)					
AUDIT	x	.576*	.158	.051	.390*
CAGE	.576*	x	.045	-.057	.215
Gender (male)	.158	.045	x	x	x
Age	.051	-.057	x	x	.502*
Income	.191	.390*	x	.502*	x

Note. Point biserial correlation of gender excluded 1 subject in GP sample who indicated gender as “other”; * Significant at $p < .05$ level.

Figure 1

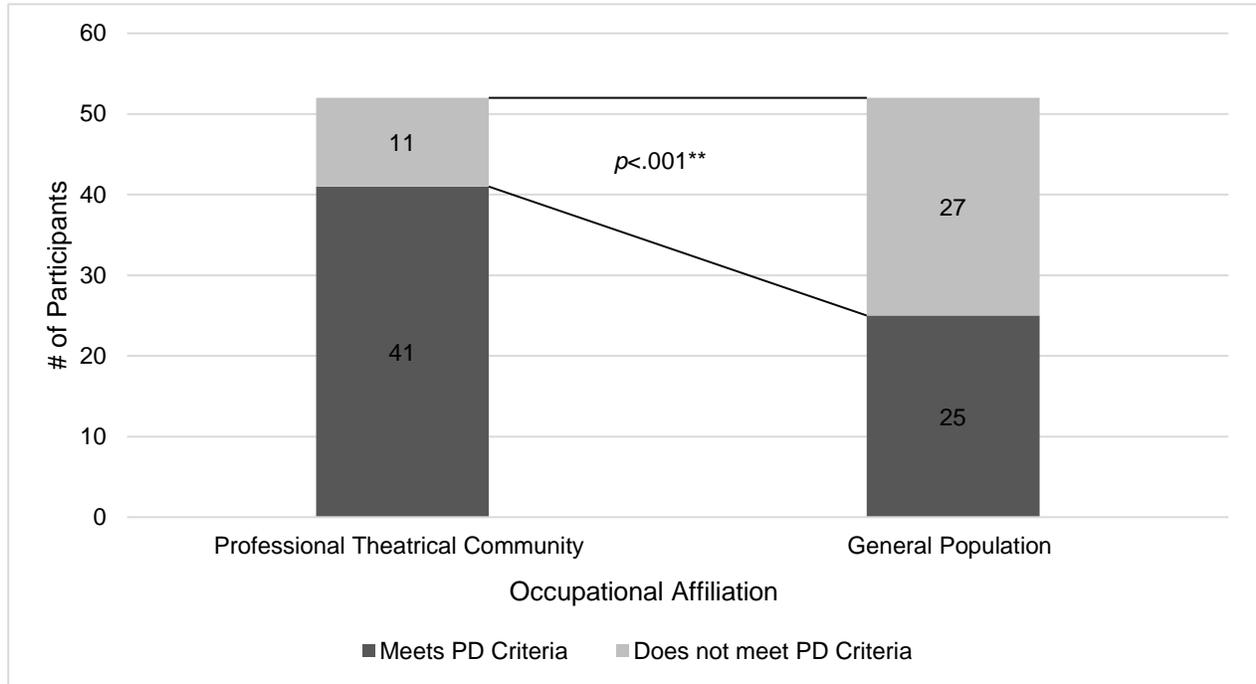
Stacked Bar Chart of Participants Meeting PD Criteria by Occupational Affiliation

Figure 1. A chi-square test of independence shows the proportion of participants in the PTC sample meeting PD criteria is significantly higher than the GP sample, $\chi^2 (1) = 10.62, p < .001^{**}$.