

## Article

# An Econometric Analysis of Alcohol Consumption and Its Relationship to Social, Gender, and Economic Factors

David Kerr <sup>1</sup>, Alex Russell <sup>2</sup>, Katherine Taken Smith <sup>3</sup> and Lawrence Murphy Smith <sup>3,\*</sup><sup>1</sup> Belk College of Business, University of North Carolina at Charlotte, Charlotte, NC 28223, USA; dskerr@charlotte.edu<sup>2</sup> Massachusetts General Hospital, Harvard Medical School, Boston, MA 02115, USA; arussell11@mgh.harvard.edu<sup>3</sup> College of Business, Texas A&M University—Corpus Christi, Corpus Christi, TX 78412, USA; katherine.smith@tamucc.edu

\* Correspondence: lawrence.smith@tamucc.edu

## Abstract

Alcohol consumption is associated with significant social and economic challenges for nations worldwide, including alcohol-related healthcare costs and alcohol-related crime. According to the U.S. Center for Disease Control (CDC), even moderate drinking correlates with greater health risks compared with not drinking at all. These health risks include physical harm to a person's heart, brain, liver, and other organs; impaired social functioning; reduced work performance; and increased incidence of alcohol-related violence and injury (e.g., physical and sexual assault and drunk driving-related injuries and death). Although personal health and social problems are correlated with alcohol consumption across genders, women experience disproportionately worse problems associated with alcohol-related crime and family disruption. At the societal level, alcohol use coincides with substantial negative economic problems, including increased healthcare costs, often covered by the government; reduced worker productivity; and higher criminal justice system costs. This paper applies an econometric analysis to evaluate the association between alcohol consumption and key social and economic factors and suggests actions that business firms, government entities, universities, and other organizations can take to reduce alcohol-related harm, such as encouraging sobriety in the workplace, offering alcohol-related counseling services, and not establishing associations with nor accepting payments of any kind from alcohol beverage companies. The findings have implications for business managers, government leaders, policy-makers, and others.

**Keywords:** occupational safety and health; alcohol consumption; economic costs; social costs; human resource policy



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## 1. Introduction

Among major problems affecting countries around the globe are economic and social challenges that coincide with alcohol use. In the workplace of business firms and other organizations, alcohol use by employees is a significant occupational safety and health issue. This paper provides an analysis of the association of alcohol consumption with social, gender, and economic factors; and lists ways that businesses, government agencies, and other organizations can assist people in minimizing health risks correlated with alcohol consumption. According to the U.S. Center for Disease Control (CDC), even moderate drinking is associated with higher health risks. The CDC now recommends that if a

person does not currently drink, they should NOT START FOR ANY REASON (CDC, 2025a, emphasis added). The World Health Organization (WHO) states that any alcohol consumption has a degree of risk. Even low amounts of alcohol consumption correlate with harm (WHO, 2024). “More studies now show that there aren’t health benefits of moderate drinking compared to not drinking” (CDC, 2025a).

While any alcohol consumption is correlated with adverse health problems, the more a person drinks, the worse are the associated problems, both short-term and long-term. Personal health problems range from physical harm to the heart, brain, liver, and other organs to social functionality problems ranging from inability to do their job, drunk driving, learning disabilities, and violence to others such as sexual assault in dating contexts, intimate partner violence, and harm to children. These personal problems for individuals show a correlational relationship with negative economic issues for society at large, ranging from healthcare costs, often paid by government agencies, to lost work productivity, injury to others, and criminal justice system costs associated with alcohol-related crime (cf., Laslett et al., 2025; Lemmer et al., 2022; Kerr et al., 2021; Sacks et al., 2015; Rehm, 2011; Marshall, 2003).

This study will review some of the negative correlations of alcohol use on individuals, as well as correlations with businesses, government entities, and other organizations. In addition, an econometric analysis will be made of the relationship of alcohol consumption to social and economic factors, across countries. Recent applied econometrics studies have examined a number of economic and social issues, such as school absenteeism (Munkin & Zimmer, 2026), substance abuse (Joseph et al., 2025), and the gender wage gap (Mora & Herrera, 2025). This study advances this body of knowledge by examining the association of alcohol use with social and economic variables; specifically, alcohol consumption per capita will be compared to Gross Domestic Product (GDP) per capita, alcohol-related deaths per capita, the crime rate index, and the divorce-to-marriage ratio. This study poses two research questions: (1) Is there a significant relationship between alcohol consumption per capita and the social factors of alcohol-related deaths per capita, marital stability, and crime? (2) Is there a significant relationship between alcohol consumption per capita and economic activity, as measured by GDP per capita? A unique contribution of this study is the provision of recommendations and specific steps that business firms, government entities, and other organizations can take to reduce alcohol-related harm.

## 2. Theoretical Foundations and Prior Research

In this section, we review theoretical foundations for alcohol-related research and some of the findings and recommendations of previous studies related to the associations of alcohol use and other types of substance use with people and society, including economic issues, both in the U.S. and other countries. We also review studies pertaining to employees’ alcohol and other drug (AOD) use in businesses, the importance of identifying employees with hazardous AOD use issues, and providing assistance programs to treat those employees. In addition, we examine the literature related to the contents and benefits of establishing workplace AOD use policies. A summary of selected studies is provided in Table 1.

The theoretical foundations that guide this study include behavioral economics, social learning theory, gender theory, and human capital theory. “Considerable basic and clinical research supports a behavioral economic conceptualization of alcohol and drug dependence” (MacKillop & Murphy, 2007, p. 227). Behavioral economics offers a framework for examining alcohol use disorders. According to MacKillop (2016), behavioral economics, combined with neuroeconomics, mesh perspectives and methodologies from economics, psychology, and cognitive neuroscience, to explain alcohol-related decision processes and

choice behavior. Gender theory helps explain why alcohol use has gender-related different impacts, both physically and psychologically (cf., [Uscola, 2025](#); [Okulicz-Kozaryn, 2010](#); [Wilsnack & Wilsnack, 1997](#)). Human capital costs are examined in studies pertaining to alcohol use disorder (e.g., [Nadkarni et al., 2023](#)) and recovery (e.g., [Bunaciu et al., 2024](#)). These theoretical foundations help explain the physiological and social mechanisms underlying alcohol consumption behavior and the rationale for the social and economic variables included in this study.

**Table 1.** Summary of selected studies on alcohol use and substance use.

| Studies on the Economic Costs and Prevalence of Alcohol and Substance Use                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source                                                                                                                                                                                            | Key Findings/Recommendations                                                                                                                                                                                                                                                                                                                                                                    |
| <a href="#">United Nations Office on Drugs and Crime (2020)</a> . World Drug Report 2020. United Nations publication.                                                                             | <ul style="list-style-type: none"> <li>Worldwide, the number of people using drugs has increased by approximately 30 percent in the past 10 years.</li> <li>Only approximately 10 percent of people who need treatment for drug use disorder receive it.</li> </ul>                                                                                                                             |
| <a href="#">U.S. Department of Health and Human Services (2016)</a> . Office of the Surgeon General, Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health.     | <ul style="list-style-type: none"> <li>Despite many years of extensive expenditures to reduce the incidence of substance use disorder, the economic costs and rates of substance use disorder have been increasing.</li> <li>The economic costs of alcohol use disorder are approximately 30 percent greater than the costs of drug use disorder.</li> </ul>                                    |
| <a href="#">Carise (2021)</a> . Economic cost of substance use disorder in the United States.                                                                                                     | <ul style="list-style-type: none"> <li>Based on data from 2021, the annual economic costs of substance abuse (alcohol and drug abuse) in the U.S. were estimated to be \$3.73 trillion.</li> </ul>                                                                                                                                                                                              |
| <a href="#">Center for Behavioral Health Statistics and Quality (2016)</a> . 2015 National survey on drug use and health.                                                                         | <ul style="list-style-type: none"> <li>A national survey estimated that 65.2 million adults in the U.S. had been binge-drinking within the previous 30 days.</li> </ul>                                                                                                                                                                                                                         |
| <a href="#">Ghimire et al. (2025)</a> . Productivity losses from substance use disorder in the U.S. in 2023. <i>American Journal of Preventive Medicine</i> .                                     | <ul style="list-style-type: none"> <li>Based on data from the National Survey on Drug Use and Health, the productivity losses in 2023 due to substance use disorder in the U.S. were estimated to be \$93 billion.</li> </ul>                                                                                                                                                                   |
| <a href="#">National Center for Drug Abuse Statistics (2025)</a> .                                                                                                                                | <ul style="list-style-type: none"> <li>In the United States, over half of people of 12 years of age and older have used illicit drugs at least once, and 17 percent had used illicit drugs in the previous month.</li> <li>The most frequently used illicit drug by Americans is marijuana, followed by cocaine, fentanyl, LSD, and ecstasy.</li> </ul>                                         |
| Studies on the Identification and Treatment of Alcohol and Substance Use                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                 |
| Source                                                                                                                                                                                            | Key Findings/Recommendations                                                                                                                                                                                                                                                                                                                                                                    |
| <a href="#">Spell and Blum (2005)</a> . Adoption of workplace substance use disorder prevention programs: Strategic choice and institutional perspectives. <i>Academy of Management Journal</i> . | <ul style="list-style-type: none"> <li>The methods used most commonly by companies to address workplace substance use disorder are drug testing and employee assistance programs (EAPs).</li> </ul>                                                                                                                                                                                             |
| <a href="#">Ontario Human Rights Commission (2009)</a> . <i>Ontario human rights commission policy on drug and alcohol testing</i> .                                                              | <ul style="list-style-type: none"> <li>The use of pre-employment drug and alcohol testing is not recommended.</li> <li>The random drug testing of employees is not recommended.</li> <li>The random alcohol testing of employees is recommended only for employees in safety-sensitive positions.</li> <li>Correlation and "post incident" drug and alcohol testing are recommended.</li> </ul> |

Table 1. Cont.

| Studies on the Identification and Treatment of Alcohol and Substance Use                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source                                                                                                                                                                                               | Key Findings/Recommendations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| International Employee Assistance Professionals Association. (IEAPA, 2021). FAQ: How many companies have EAPs?                                                                                       | <ul style="list-style-type: none"> <li>In the U.S., nearly all companies with more than 5000 employees have employee assistance programs (EAPs).</li> <li>In the U.S., 75 percent of companies with between 251 and 1000 employees have EAPs.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Moffie et al. (1992). Coping with substance abuse on the job: What the internal auditor should do. <i>Internal Auditor</i> .                                                                         | <ul style="list-style-type: none"> <li>The budget for an EAP should be sufficient to employ at least one full-time assessment and referral specialist for every 3500 to 4200 employees.</li> <li>A system for evaluating the EAP's ongoing benefits should be established and maintained.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                     |
| Cook and Schlenger (2002). Prevention of substance abuse in the workplace: Review of research on the delivery of services. <i>The Journal of Primary Prevention</i> .                                | <ul style="list-style-type: none"> <li>Social stigma related to substance use disorder is likely to inhibit employees who need treatment from participating in an EAP.</li> <li>Web-based treatment programs allow employees to obtain help anonymously and privately.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Smook et al. (2017). Substance abuse and the workplace: A situation analysis. <i>Social Work</i> .                                                                                                   | <ul style="list-style-type: none"> <li>Treatment options beyond EAPs should include awareness and training programs, and communication networks among employers, employees, and outpatient treatment centers.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Studies on Workplace Policies on Alcohol Use and Substance Use                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Source                                                                                                                                                                                               | Key Findings/Recommendations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Alfred et al. (2020). An integrative literature review exploring the impact of alcohol workplace policies. <i>International Journal of Workplace Health Management</i> , Vol. 14 No. 1: 87–110.      | <ul style="list-style-type: none"> <li>The majority of the literature reviewed found significant benefits to employees and employers when workplace alcohol policies are present.</li> <li>The mere presence of a policy is unlikely to be as beneficial as a more holistic, comprehensive program, in which a workplace policy would be one of several other elements at play (referral pathways, employee assistance, etc.)</li> <li>Both knowledge and understanding of organizational policies are essential for them to work.</li> <li>Alcohol workplace policies are more beneficial when they focus on support, rehabilitation, and counseling, rather than discipline and punishment.</li> </ul> |
| Pidd et al. (2016). Do workplace policies work? An examination of the relationship between alcohol and other drug policies and workers' substance use. <i>International Journal of Drug Policy</i> . | <ul style="list-style-type: none"> <li>Comprehensive as well as basic alcohol policies/programs significantly reduce high-risk alcohol consumption.</li> <li>Basic policies on drug use do not significantly decrease drug use; however, comprehensive policies/programs on drug use do significantly reduce employee drug use.</li> </ul>                                                                                                                                                                                                                                                                                                                                                               |

In addition to the theoretical frameworks mentioned above, some past alcohol-related research is built on neurobiological theory, incentive sensitization theory, and behavioral and cognitive theories, which include social learning theory. Under neurobiological theory, prolonged alcohol use appropriates the brain's reward structure, notably the mesolimbic pathway, heightening dopamine, and ultimately producing a "reward deficit" condition. This leads to a pressure to drink to offset a negative emotional condition or withdrawal, instead of for acquiring pleasure (cf., Ferrer-Pérez et al., 2024; Donato & Ray, 2023; Gilpin & Koob, 2008).

According to incentive sensitization theory, addictive drugs, such as alcohol, can actuate a common neural system responsible for ascribing incentive salience to events and stimuli connected to the initiation of that neural system (cf., [Ostafin et al., 2010](#); [Gilpin & Koob, 2008](#); [Robinson & Berridge, 1993](#)). Social learning theory suggests that drinking behavior is acquired via observation and imitation. Further, this theory also affords a viewpoint that can be utilized in prevention programs (cf., [Strickland, 2023](#); [Dollard & Miller, 2013](#); [Maisto et al., 1999](#)).

Consumption of alcohol and other substances can range from light to heavy use. In the worst case, a person may develop substance use disorder (SUD). SUD is defined as “a disease that affects a person’s brain and behavior and leads to an inability to control the use of a legal [e.g., alcohol] or illegal drug or medication” ([Mayo Clinic, 2021](#)). Regarding alcohol consumption, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) defines alcohol use disorder (AUD) as “a medical condition characterized by an impaired ability to stop or control alcohol use despite adverse social, occupational, or health consequences. It encompasses the conditions that some people refer to as alcohol abuse, alcohol dependence, alcohol addiction, and the colloquial term, alcoholism” ([NIAAA, 2021](#)). Like the CDC, the NIAAA states that “people who do not drink should not start drinking for any reason” ([NIH, 2024](#)). The WHO has identified a number of negative health associations of alcohol consumption, shown in Table 2. In its SAFER Initiative, the WHO offers a number of recommendations to reduce alcohol consumption and thereby reduce alcohol-related harm; see Table 3.

**Table 2.** Negative associations of alcohol consumption.

|                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • Alcohol beverages contain ethanol, a psychoactive and toxic substance that correlates with dependence.                                                                                                                                                                                                                                                        |
| • The World Health Organization (WHO) states that any alcohol consumption has a degree of risk. Even low or moderate amounts of alcohol correlate with harm                                                                                                                                                                                                     |
| • Alcohol consumption leads to significant harm to others, not just to the person consuming alcohol. A significant part of alcohol-attributable disease burden arises from injuries such as road traffic accidents. In 2023, there were 12,429 deaths in the U.S. attributed to alcohol-impaired driving, which reflects a frequency of one death every 42 min. |
| • Alcohol consumption is a contributor to many acts of violence, such as sexual assault, intimate partner violence, suicide, and homicide.                                                                                                                                                                                                                      |
| • Alcohol consumption is a contributor to many acts of risky sexual behaviors, such as unprotected sex or sex with multiple partners, resulting in sexually transmitted diseases or unplanned pregnancy.                                                                                                                                                        |
| • Alcohol consumption correlates with miscarriage, stillbirth, and fetal alcohol spectrum disorders among pregnant women.                                                                                                                                                                                                                                       |
| • Younger people are disproportionately negatively affected by alcohol consumption, with the highest proportion (13%) of alcohol-attributable deaths in 2019 occurring among people aged between 20 and 39 years.                                                                                                                                               |
| • Worldwide, around 2.6 million deaths were correlated with alcohol consumption in 2019. Of these, 1.6 million deaths were from noncommunicable alcohol-related diseases such as heart diseases, liver diseases, and some types of cancers, and 700,000 deaths were from injuries.                                                                              |
| • An estimated 400 million people, or 7% of the world’s population aged 15 years and older, lived with alcohol use disorders. Of this, 209 million people (3.7% of the adult world population) lived with alcohol dependence.                                                                                                                                   |
| • Alcohol consumption is correlated with more than 200 diseases, injuries and other health conditions.                                                                                                                                                                                                                                                          |
| • Alcohol is an established carcinogen and alcohol consumption increases the risk of several cancers, including breast, liver, head and neck, esophageal and colorectal cancers. Each year, between 20,000 and 25,000 cancer deaths in the U.S. are correlated with alcohol consumption.                                                                        |

Sources: [ASCO \(2025\)](#); [NHTSA \(2025\)](#); [WHO \(2025, 2024\)](#); [Kerr et al. \(2021\)](#); [CDC \(2025a, 2025b\)](#).

**Table 3.** Ways to reduce alcohol-related harm—the SAFER Initiative.

|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| S: Strengthen restrictions on alcohol availability                                               |
| A: Advance and enforce drunk driving counter measures                                            |
| F: Facilitate access to screening, brief interventions and treatment                             |
| E: Enforce bans or comprehensive restrictions on alcohol advertising, sponsorship, and promotion |
| R: Raise prices on alcohol through excise taxes and pricing policies                             |

Adapted from: WHO (2025). The SAFER Initiative: A world free from alcohol related harm. Available online: <https://www.who.int/initiatives/SAFER> (accessed on 1 January 2026).

### 2.1. Gender Differences

Extensive medical and sociological studies have recognized many physical and psychological differences between genders, including reaction to stress, intuition level, sleep requirements, relationship building, preferences regarding work–life balance, and other matters. In the same way, females and males respond differently to alcohol consumption. Females generate lower amounts of alcohol dehydrogenase (ADH), a crucial enzyme released by the liver, which breaks down alcohol (ethanol). Further, relative to males, females carry lower levels of body water and greater levels of body fat, resulting in females having more intense physiological reactions to alcohol. Consequently, females are correlated with more damaging consequences from alcohol consumption than males (CDC, 2025b; White, 2020; Kerr et al., 2021).

Concerning unsocial and criminal behavior, both genders experience acts of violence that are alcohol-related, such as intimate partner violence, sexual assault, homicide, and suicide. In general, females suffer the most, being more physically vulnerable. Alcohol consumption is correlated with many cases of risky sexual behaviors, such as sex with multiple partners, unplanned pregnancy, and unprotected sex associated with sexually transmitted diseases. Alcohol consumption is correlated with stillbirth, miscarriage, and fetal alcohol spectrum disorders among pregnant women. Fetal alcohol spectrum disorders are correlated with learning disabilities, lower IQ, facial abnormalities, and poor coordination (NIAAA, 2025; Kerr et al., 2021). Findings of a 2015 study reported in the American Economic Review found that gender violence may be reduced by enacting policies that limit availability of alcohol (Luca et al., 2015). The American women-led temperance movement of the early 1900s, sometimes framed as a religious movement, was a movement against domestic violence often resulting from alcohol consumption (Wagner, 2022; Bohlmann, 2001; Stecker, 2000).

Research shows that alcohol consumption is correlated with divorce. In a review of 60 prior studies, findings “provide overwhelming support for the notion that alcohol use is maladaptive, and that it is associated with dissatisfaction, negative marital interaction patterns, and higher levels of marital violence” (Marshall, 2003, p. 959). Divorce often leads to single-parent families, which can have egregious effects on children. In a study involving nearly one million children, findings included that children brought up in single-parent homes, compared with two-parent homes, have more than double the likelihood of becoming addicted to alcohol, experiencing serious psychiatric disorders, or attempting or committing suicide (Lassila et al., 2018; Weitoft et al., 2003). Kelleher et al. (2000) found that children living in a single-parent home are twice as likely to experience emotional and behavioral problems compared with children living in two-parent homes. In a U.S. study, children living with single mothers are about five times more likely to live in poverty than children living with married parents (51 percent and 13 percent, respectively) (Lassila et al., 2018; Casey & Maldonado, 2012).

In the United States, the Substance Abuse and Mental Health Services Administration indicates that 9.7 percent of people age 12 and older suffer from alcohol use disorder (SAMHSA, 2025, Table A.32B). There is a gender difference, with men more likely to meet diagnostic criteria for alcohol use disorder than women (Ritchie & Roser, 2024). Although many would benefit from inpatient or outpatient treatment such as counseling and rehabilitation services, only one in ten individuals who need care actually receive it (United Nations Office on Drugs and Crime, 2020).

## 2.2. Economic Costs of Hazardous Alcohol and Other Drug Use

Based on data from 2006–2010, the U.S. Surgeon General estimated that the economic cost of drug and alcohol misuse in the U.S. is \$442 billion annually, where 56% of that money is related to drinking and 44% to drug use (U.S. Department of Health and Human Services, 2016). Subsequently, Carise (2021) reported that the amount of economic loss due to alcohol- and drug-use disorders in the U.S. had risen to an estimated \$3.73 trillion annually by 2021. The report concludes that if everyone in the U.S. who is addicted to alcohol or illicit drugs were to receive treatment for their addiction, there would be a net economic gain to American society of more than \$534 billion.

The United Nations cites a World Health Organizations report that estimates that 2200 people die each day in Europe due to alcohol-related factors (United Nations, 2024). In the United States, there are 88,000 deaths each year associated with alcohol. Nearly 10 percent of deaths of working-age adults in the U.S. are associated with excessive drinking (Stahre et al., 2014). Even though there have been extensive expenditures and efforts for many years by government and private-sector entities to reduce the incidence of SUD, evidence indicates that the rates and economic costs of SUD have not diminished significantly (U.S. Department of Health and Human Services, 2016). From 2000 to 2014, the total number of deaths from drug overdoses in the U.S. reached nearly 500,000, and the annual rate of deaths increased by approximately 140% (Rudd et al., 2016). The annual deaths from drug overdoses steadily rose from 47,055 in 2014 to over 110,000 in 2023 (CDC, 2025c). On a somewhat positive note, the CDC reported that the number of annual deaths from drug overdoses decreased in 2024 to fewer than 80,000 people (CDC, 2025c).

The father of economics, Adam Smith, observed in 1776 that “sugar, rum, and tobacco are commodities which are nowhere necessities of life, which have become objects of almost universal consumption, and which are therefore extremely proper subjects of taxation” (A. Smith, 1776). At that time, there was little understanding of the negative associations of alcohol, tobacco, and sugar-sweetened beverages. Since Smith’s statement, overwhelming evidence has been accumulated verifying the extremely harmful associations of consumption of alcohol, tobacco, and sugar-sweetened beverages. By increasing taxes on these goods, research shows that consumption decreases, which is associated with reduced healthcare costs, improvements in health, and increased disposable income to buy non-toxic products (Paraje et al., 2023).

A study conducted to assess alcohol-related harm in England and the effectiveness of possible policy solutions reported that alcohol use by people aged 15 to 49 years is the biggest factor associated with early death, poor health, and disability (Burton et al., 2017). The study estimates that in 2015, the total number of working years lost, associated with alcohol use, exceeds the total working years lost from the ten most frequent types of cancer combined. In addition, the study’s authors evaluated the effectiveness of various government policies to reduce alcohol use. Policies that were found to be the most effective in preventing and reducing alcohol use include taxes on alcohol sales to reduce affordability, robust marketing regulations, and regulations that reduce the hours during which alcohol

can be sold (especially late-night hours). Government-sponsored education programs related to alcohol appear to have very limited effectiveness.

A national survey conducted in 2015 reported that there were 65.2 million adults in the U.S. who stated they had been binge-drinking within the previous 30 days. In addition, the survey reported that 24.9 million adults had used illicit drugs within the previous month (Center for Behavioral Health Statistics and Quality, 2016). These findings are consistent with those of a previous study which noted that alcohol use by employees is more prevalent and is likely to be a greater problem for companies than the use of illicit drugs. A recent study by Koh et al. (2026) found a significant decrease in alcohol and other drug use, that is, a protective benefit, associated with individuals involved in spiritual or religious communities.

Significant differences in binge-drinking rates have been observed across occupations. A study by Barnes and Brown (2013) found that one-sixth (16.6 percent) of workers employed in professional and related occupations (e.g., doctors, lawyers, and architects) reported that they had been binge-drinking in the previous 30 days. Binge-drinking rates were 22 percent higher for office and administrative support personnel, along with individuals employed in management, business, and financial occupations. Salespeople had a 32 percent binge-drinking rate (Barnes & Brown, 2013). With similar findings, another study noted that upper and middle managers tend to have relatively high rates of binge (“high-risk”) drinking (Marchand, 2008). These findings highlight the importance of taking occupation into consideration when developing employee assistance programs to prevent and treat hazardous AOD use.

A study conducted one year into the COVID-19 pandemic reveals that nearly 50 percent of employees in the United States reported struggling with some form of alcohol use or other drug use. A subsequent study of non-COVID 19 deaths during the pandemic suggests that alcohol-related liver disease was a likely factor in increased deaths (Blazsek et al., 2024). The use of alcohol and illicit drugs by employees, whether during or outside working hours, is correlated with reduced productivity resulting from decreased alertness, concentration, and performance at work, increased accidents and injury rates, impairment to employee health, employee turnover, absenteeism, late arrivals, early departures, and conflicts and aggression among coworkers (Cook & Schlenger, 2002; Osilla et al., 2010).

Employers can mitigate some of the negative associations of hazardous AOD use among employees through early detection and well-designed employee assistance programs (EAPs) (Galea & Ghodse, 2016). EAPs are helpful for employees to address a variety of problems, with hazardous AOD use being one. Table 4 shows some of the types of counseling and support offered by employee assistance programs (Kerr et al., 2021).

**Table 4.** Types of counseling and support offered by employee assistance programs.

|                                   |
|-----------------------------------|
| 1. Hazardous alcohol and drug use |
| 2. Alcoholism                     |
| 3. Marital difficulties           |
| 4. Emotional problems             |
| 5. Financial problems             |
| 6. Legal problems                 |

Adapted from Kerr et al. (2021).

Many U.S. companies must, under Title 41 of the U.S. Code, publish a drug-free workplace policy and provide employees with information on available employee assistance programs, including alcohol and drug counseling and referrals for rehabilitation services

([Drug-free Workplace Requirements for Federal Contractors, 2023](#)). Identifying and helping employees with SUDs not only benefits the employee and the workplace; society as a whole benefits through reductions in the societal economic burdens of substance addictions.

For detailed information about the economic costs of various substance use disorders, the interested reader is referred to a meta-analysis conducted by [Fardone et al. \(2023\)](#). In that study, the authors synthesized the findings of 12 academic papers published between 2004 and 2021 that examined the economic costs of SUDs in the following areas: societal cost of criminal activity, cost of criminal justice system utilization, cost of healthcare utilization, reduction in productivity, and costs related to other consequences of SUDs (e.g., accidents and other social services).

Based on the preceding discussion, two research questions are posed:

**R1:** *Is there a significant relationship between alcohol consumption per capita and the social factors of alcohol-related deaths per capita, marital stability, and crime?*

**R2:** *Is there a significant relationship between alcohol consumption per capita and economic activity, as measured by GDP per capita?*

### 3. Methodology, Analysis, and Results

To examine the relationship of alcohol consumption to social and economic factors, we make use of an econometric methodology included in numerous prior studies, which involves ranking the data based on a key variable, in this case, alcohol consumption, and comparing the relationship with other variables based on that ranking, in this case, social and economic variables and crime rates (cf., [Kerr et al., 2025](#); [Ariail et al., 2024](#); [K. T. Smith et al., 2019](#); [Martin et al., 2017](#); [Martin & Smith, 2015](#)). We start with a ranking of countries based on alcohol consumption per capita using the most current data available, which are from 2019 ([Wikipedia, 2024](#)). The additional variables for each country are: alcohol-related deaths per capita, marital stability (measured by the divorce-to-marriage ratio), and economic activity (measured by GDP per capita). The most current data available were used for each variable. GDP per capita is from the year 2025 ([Wikipedia, 2025b](#)). The [World Life Expectancy \(2025\)](#) provided the number of alcohol-related deaths from the year 2025. The most current data available for each country regarding the divorce-to-marriage ratio range from 2005 to 2024 ([Wikipedia, 2025a](#)). Table 5 shows the data for 71 countries, all countries for which complete data were available.

**Table 5.** Social and economic factors, ranked by alcohol consumption by country.

| Rank | Country Name       | Alcohol Consumption per Capita * | GDP per Capita (in USD) ** | Alcohol-Related Deaths per 100K *** | Divorce-to-Marriage Ratio **** |
|------|--------------------|----------------------------------|----------------------------|-------------------------------------|--------------------------------|
| 1    | Romania            | 17.0                             | 18,348                     | 1.46                                | 20.7                           |
| 2    | Georgia            | 14.3                             | 9194                       | 1.03                                | 18.8                           |
| 3    | Dominican Republic | 13.3                             | 10,718                     | 1.20                                | 40.9                           |
| 4    | Latvia             | 13.1                             | 22,444                     | 8.83                                | 50.0                           |
| 5    | Germany            | 12.2                             | 53,528                     | 4.32                                | 38.8                           |
| 6    | Austria            | 12.0                             | 56,042                     | 3.41                                | 32.0                           |
| 7    | Bulgaria           | 11.9                             | 15,068                     | 0.43                                | 41.2                           |
| 8    | Lithuania          | 11.8                             | 27,956                     | 5.40                                | 51.0                           |
| 9    | Ireland            | 11.7                             | 106,106                    | 1.04                                | 15.2                           |
| 10   | Poland             | 11.6                             | 20,876                     | 9.80                                | 40.0                           |

Table 5. Cont.

| Rank | Country Name           | Alcohol Consumption<br>per Capita * | GDP per Capita<br>(in USD) ** | Alcohol-Related<br>Deaths per 100K *** | Divorce-to-<br>Marriage Ratio **** |
|------|------------------------|-------------------------------------|-------------------------------|----------------------------------------|------------------------------------|
| 11   | Luxembourg             | 11.5                                | 128,936                       | 2.81                                   | 52.6                               |
| 12   | Estonia                | 11.3                                | 30,201                        | 7.73                                   | 40.4                               |
| 13   | France                 | 11.3                                | 44,451                        | 3.29                                   | 51.4                               |
| 14   | Slovenia               | 11.0                                | 32,642                        | 13.15                                  | 33.3                               |
| 15   | Belarus                | 10.9                                | 7883                          | 19.82                                  | 60.7                               |
| 16   | Spain                  | 10.9                                | 33,814                        | 0.41                                   | 45.7                               |
| 17   | United<br>Kingdom      | 10.8                                | 49,224                        | 1.76                                   | 40.9                               |
| 18   | Hungary                | 10.6                                | 21,954                        | 3.06                                   | 34.6                               |
| 19   | Portugal               | 10.4                                | 27,718                        | 0.60                                   | 45.7                               |
| 20   | Switzerland            | 10.4                                | 100,831                       | 1.53                                   | 41.7                               |
| 21   | Belgium                | 10.3                                | 55,049                        | 2.78                                   | 42.5                               |
| 22   | Montenegro             | 10.3                                | 11,885                        | 1.10                                   | 26.4                               |
| 23   | Australia              | 10.1                                | 67,129                        | 1.07                                   | 43.5                               |
| 24   | Canada                 | 9.9                                 | 54,517                        | 2.76                                   | 47.7                               |
| 25   | New Zealand            | 9.9                                 | 48,750                        | 0.75                                   | 41.7                               |
| 26   | United States          | 9.6                                 | 80,706                        | 3.50                                   | 45.1                               |
| 27   | Denmark                | 9.4                                 | 68,440                        | 6.10                                   | 46.4                               |
| 28   | Netherlands            | 9.3                                 | 63,803                        | 2.12                                   | 36.8                               |
| 29   | Sweden                 | 9.3                                 | 55,439                        | 2.09                                   | 46.6                               |
| 30   | Finland                | 9.2                                 | 52,762                        | 5.17                                   | 56.8                               |
| 31   | South Africa           | 8.8                                 | 5976                          | 1.93                                   | 17.1                               |
| 32   | Ukraine                | 8.7                                 | 4737                          | 10.06                                  | 70.9                               |
| 33   | Croatia                | 8.5                                 | 21,661                        | 2.92                                   | 24.4                               |
| 34   | Malta                  | 8.5                                 | 41,676                        | 0.37                                   | 12.1                               |
| 35   | Cyprus                 | 8.1                                 | 37,077                        | 0.33                                   | 32.4                               |
| 36   | Iceland                | 8.1                                 | 80,827                        | 3.14                                   | 36.7                               |
| 37   | Italy                  | 8.0                                 | 38,672                        | 0.26                                   | 45.2                               |
| 38   | Mongolia               | 7.9                                 | 5790                          | 18.07                                  | 32.4                               |
| 39   | Thailand               | 7.8                                 | 7182                          | 0.62                                   | 25.5                               |
| 40   | Brazil                 | 7.7                                 | 10,378                        | 3.02                                   | 21.2                               |
| 41   | Mauritius              | 7.5                                 | 11,304                        | 3.15                                   | 17.1                               |
| 42   | Greece                 | 7.1                                 | 23,772                        | 0.33                                   | 38.5                               |
| 43   | Norway                 | 6.8                                 | 87,932                        | 2.35                                   | 44.2                               |
| 44   | Chile                  | 6.7                                 | 17,068                        | 0.88                                   | 21.2                               |
| 45   | Japan                  | 6.7                                 | 33,806                        | 0.24                                   | 35.4                               |
| 46   | Panama                 | 6.6                                 | 18,701                        | 0.72                                   | 27.0                               |
| 47   | Trinidad and<br>Tobago | 6.1                                 | 16,960                        | 1.36                                   | 34.9                               |
| 48   | China                  | 5.7                                 | 12,509                        | 1.05                                   | 44.4                               |
| 49   | Mexico                 | 5.7                                 | 13,826                        | 2.39                                   | 17.3                               |
| 50   | Albania                | 5.1                                 | 8172                          | 0.48                                   | 21.0                               |
| 51   | Colombia               | 4.9                                 | 6948                          | 0.04                                   | 30.4                               |
| 52   | India                  | 4.9                                 | 2487                          | 1.81                                   | 1.0                                |
| 53   | Kazakhstan             | 4.5                                 | 13,000                        | 6.90                                   | 34.3                               |
| 54   | Nicaragua              | 4.2                                 | 2163                          | 5.38                                   | 17.8                               |
| 55   | Jamaica                | 3.6                                 | 6840                          | 0.24                                   | 20.0                               |
| 56   | Costa Rica             | 3.5                                 | 16,942                        | 2.21                                   | 47.2                               |
| 57   | Ecuador                | 3.3                                 | 6610                          | 1.74                                   | 19.6                               |
| 58   | El Salvador            | 3.3                                 | 5391                          | 10.91                                  | 22.9                               |
| 59   | Israel                 | 3.0                                 | 55,488                        | 0.42                                   | 27.7                               |

Table 5. Cont.

| Rank | Country Name | Alcohol Consumption per Capita * | GDP per Capita (in USD) ** | Alcohol-Related Deaths per 100K *** | Divorce-to-Marriage Ratio **** |
|------|--------------|----------------------------------|----------------------------|-------------------------------------|--------------------------------|
| 60   | Uzbekistan   | 2.6                              | 2549                       | 0.36                                | 14.1                           |
| 61   | Azerbaijan   | 2.0                              | 7012                       | 2.28                                | 15.5                           |
| 62   | Singapore    | 1.9                              | 86,616                     | 0.12                                | 27.9                           |
| 63   | Turkey       | 1.8                              | 12,814                     | 0.21                                | 25.0                           |
| 64   | Guatemala    | 1.6                              | 5763                       | 13.98                               | 31.6                           |
| 65   | Lebanon      | 1.5                              | 4757                       | 0.27                                | 16.8                           |
| 66   | Qatar        | 1.1                              | 71,499                     | 0.25                                | 33.3                           |
| 67   | Malaysia     | 0.8                              | 11,377                     | 0.58                                | 25.0                           |
| 68   | Algeria      | 0.6                              | 5364                       | 0.20                                | 15.8                           |
| 69   | Jordan       | 0.3                              | 4442                       | 0.15                                | 26.9                           |
| 70   | Kuwait       | 0.1                              | 33,832                     | 0.24                                | 42.3                           |
| 71   | Saudi Arabia | 0.1                              | 32,094                     | 0.35                                | 37.5                           |
|      | Mean         | 7.5                              | 31,950                     | 3.11                                | 33.5                           |

Sources: \* Wikipedia (2024). \*\* Wikipedia (2025b). \*\*\* World Life Expectancy (2025). \*\*\*\* Wikipedia (2025a).

From our sample of 71 countries, we compare the top-ranked 24 countries, approximately the top tercile, based on alcohol consumption per capita to the bottom-ranked 24 countries based on alcohol consumption per capita. As shown in Table 6, the top 24 countries, ranked by alcohol consumption, have mean alcohol-related deaths per 100,000 population of 4.12, compared with a mean value of alcohol-related deaths per 100,000 population of 2.19 for the bottom-ranked 24 countries. This is a significant difference. The divorce-to-marriage ratio for the top 24 countries has a mean of 39.8, compared with 25.6 for the bottom 24 countries. This difference is significant. The top 24 countries have a mean GDP per capita of 41,938 USD, compared with a mean 17,854 USD GDP per capita of the bottom 24 countries. This difference is significant. In summary, higher alcohol consumption is associated with a higher rate of alcohol-related deaths, a higher divorce-to-marriage ratio, and higher GDP per capita.

Table 6. T-test results: social and economic factors.

|                                 | Alcohol Consumption per Capita | Mean             | t-Statistic | Sig. (1-Tailed) |
|---------------------------------|--------------------------------|------------------|-------------|-----------------|
| Alcohol-Related Deaths per 100K | Top 24<br>Bottom 24            | 4.12<br>2.19     | 1.59        | 0.06            |
| Divorce-to-Marriage Ratio       | Top 24<br>Bottom 24            | 39.8<br>25.6     | 4.48        | 0.00            |
| GDP per Capita (in USD)         | Top 24<br>Bottom 24            | 41,938<br>17,854 | 3.00        | 0.00            |

According to Lee (2025), “In modern econometric analysis, statistical inference plays a pivotal role in validating hypotheses, understanding relationships, and predicting economic trends. One of the most widely used statistical tools is the t-statistic, often abbreviated as t-stats.” For the sample and analysis used (*t*-tests), causal relationships are not proposed, only associations; and there is no evidence of problems of endogeneity, omitted variable bias, or multicollinearity. The t-statistic was developed in the early 1900s by William Sealy Gosset, who wrote under the pseudonym “Student” (cf., Barsalou, 2025; Raju, 2005; Gosset, 1908). Subsequently, the t-statistic has been widely discussed and applied, notably to

evaluate whether empirical observations are statistically significant. The t-statistic can be expressed as

$$t = \frac{\bar{x} - \mu}{\frac{s}{\sqrt{n}}} \quad (1)$$

where:

$\bar{x}$  = sample mean

$\mu$  = population mean

$s$  = sample standard deviation

$n$  = sample size

$\frac{s}{\sqrt{n}}$  = standard error of the mean

For the relationship of alcohol consumption to criminal activity, relatively limited data are available. A recent report from [Our World in Data \(2025\)](#) provides the percentage share of crimes that were alcohol-related for several countries from the year 2015. This data set is the most recent data set available regarding alcohol-related crime. Complete data are available for 18 countries. These are shown in Table 7. The mean percentage of alcohol-related crimes for the higher-alcohol-consumption countries is 19.4 percent, compared with a mean of 8.3 percent for the lower-alcohol-consumption countries. This difference is significant. As would be expected, countries with higher alcohol consumption are associated with higher alcohol-related crime.

**Table 7.** Relationship of alcohol consumption to percent of crimes associated with alcohol.

|    | Country        | Alcohol Consumption<br>per Capita ** | Percent of<br>Crimes *** |
|----|----------------|--------------------------------------|--------------------------|
| 1  | Georgia        | 14.3                                 | 0.7                      |
| 2  | Latvia         | 13.1                                 | 10.1                     |
| 3  | Lithuania      | 11.8                                 | 26.0                     |
| 4  | Ireland        | 11.7                                 | 14.6                     |
| 5  | Estonia        | 11.3                                 | 15.8                     |
| 6  | Belarus        | 10.9                                 | 18.2                     |
| 7  | United Kingdom | 10.8                                 | 55.7                     |
| 8  | Hungary        | 10.6                                 | 3.5                      |
| 9  | New Zealand    | 9.9                                  | 30.0                     |
| 10 | United States  | 9.6                                  | 16.5                     |
| 11 | Finland        | 9.2                                  | 0.8                      |
| 12 | Ukraine        | 8.7                                  | 15.7                     |
| 13 | Croatia        | 8.5                                  | 9.2                      |
| 14 | Mongolia       | 7.9                                  | 22.6                     |
| 15 | Norway         | 6.8                                  | 0.4                      |
| 16 | Chile          | 6.7                                  | 4.6                      |
| 17 | Azerbaijan     | 2.0                                  | 2.3                      |
| 18 | Iran           | 0.7                                  | 2.3                      |
|    | Overall Mean   | 9.1                                  | 13.8                     |
|    | Top 9 Mean     | 11.6                                 | 19.4                     |
|    | Bottom 9 Mean  | 6.7                                  | 8.3                      |
|    | Difference     | 4.9                                  | 11.1                     |

<sup>a</sup> Note:  $t = 1.81$ , significant,  $p \leq 0.10$ . Sources: \*\* [Wikipedia \(2024\)](#). \*\*\* [Our World in Data \(2025\)](#).

Meaningful results from Tables 5–7 can be summarized. Alcohol consumption is significantly associated with social and economic factors. Higher rates of alcohol consumption are associated with higher rates of alcohol-related death. This loss of lives negatively affects the economy and the social fabric of society. Higher rates of alcohol consumption are associated with higher divorce-to-marriage rates. Marital instability coincides with negative outcomes on individuals, in particular on women and children, and on society

overall. Higher rates of alcohol consumption are associated with higher GDP per capita. More financial resources facilitate higher levels of alcohol consumption and its related deleterious outcomes. Higher rates of alcohol consumption are associated with higher levels of alcohol-related crime. Crime impairs economic activity, social well-being, and individual health, safety and peace of mind.

## 4. Recommendations for Employers

### 4.1. Identification and Treatment of Hazardous Alcohol and Other Drug Use

According to the Substance Abuse and Mental Health Services Administration, approximately 10 percent of full-time employees in the United States are reliant on one or more substances (US-Rx Care, 2024). The National Safety Council has underscored the importance of employers implementing policies and programs related to the prevention and treatment of alcohol and drug abuse (NSC, 2025). The results of our study highlight the association of alcohol consumption with increased crime and higher divorce rates. In this section of the paper, we discuss several tools and strategies employers can use to identify and assist employees dealing with hazardous alcohol and other drug use.

**Drug Testing.** The two most common ways in which companies attempt to address hazardous alcohol and other drug use in the workplace are (1) drug testing and (2) employee assistance programs (EAPs) (Spell & Blum, 2005). Three approaches to drug testing are commonly used: the screening of job applicants prior to employment; the testing of employees “post incident”, such as following an accident or exhibiting signs of impairment; and the random selection of employees for drug testing. Depending on the company’s policy, employees failing a drug test may either be fired or referred to an EAP.

Employers should consider adhering to guidelines issued by the Ontario Human Rights Commission (OHRC) to ensure that their alcohol and drug policies respect employees’ rights and improve workplace safety. To avoid human rights violations and discrimination claims and due to limitations in the ability to accurately measure impairment levels, the OHRC recommends against the following practices:

**(1) Pre-employment alcohol or illicit-drug testing.** Regarding pre-employment alcohol testing, the Commission offers this explanation for recommending against its use: “[P]re-employment alcohol testing does not appear to predict an employee’s ability to perform the essential requirements of a safety-sensitive position. All it can do is assess impairment before the person is actually on the job. It is therefore difficult to see how an employer could justify pre-employment alcohol testing.” Regarding pre-employment illicit-drug testing, the Commission’s argument against its use is based on the inability of drug tests to accurately measure impairment.

**(2) Random alcohol or illicit-drug testing of current employees.** Although the random alcohol testing of employees is generally not recommended, the Commission does recommend using breathalyzers to perform the random alcohol testing of employees employed in “safety-sensitive positions,” given that breathalyzers are minimally intrusive and can accurately measure both consumption and actual impairment. Furthermore, the Commission recommends alcohol testing in situations involving reports of unsafe behavior and on-the-job accidents. Regarding the use of tests for illicit drugs, again, the Commission’s position is that drug tests cannot accurately measure impairment; therefore those tests are not justifiable (Frone, 2004; Ontario Human Rights Commission, 2009).

**Employee Assistance Programs.** Employee assistance programs primarily involve short-term counseling and support and typically are offered as part of an employee’s benefits package provided by the employer. The U.S. Department of Labor notes that the most common issues managed by EAPs include hazardous alcohol and other drug use, financial difficulties, relationship challenges, and emotional or legal concerns (Stoltzfus,

2009). Most large companies in the U.S. have EAPs. According to data reported in 2021 by the International Employee Assistance Professional Association, “In the US, over 97 percent of companies with more than 5000 employees have EAPs. 80% of companies with 1001–5000 employees have EAPs. 75 percent of companies with 251–1000 employees have EAPs” (IEAPA, 2021).

For an EAP to operate effectively, it must be provided with a sufficient budget. For instance, EAP budgets should be large enough to allow for one full-time substance abuse assessment specialist for every 3500 to 4200 employees. Further recommendations for operating an EAP successfully include involvement and support from senior management, including periodic evaluation of program outcomes and cost–benefit analysis (Moffie et al., 1992). Unfortunately, the stigma associated with hazardous AOD use can inhibit employees from participating in treatment programs, including EAPs. Therefore, Web-based EAPs and related programs are recommended since these programs allow employees to obtain treatment anonymously with a high degree of privacy and can be accessed remotely and at the employee’s convenience (Cook & Schlenger, 2002).

In addition to a Web-based EAP, organizations should consider implementing one or more of the following to assist employees with hazardous AOD use (Kerr et al., 2021; Mangione et al., 1999; Osilla et al., 2010; Smook et al., 2017):

- **Establish Relationships with Treatment Centers:** Coordinate with outpatient treatment centers to ensure employees know where they can find help and the types of treatments available.
- **Provide Education and Training:** Enact hazardous AOD use awareness and training programs to help employees and management recognize and respond to issues. In addition, organizations should provide education regarding the negative association between drinking (both light drinking and excessive drinking) and work performance.
- **Cultivate a Supportive Culture in the Workplace:** Promote a stigma-free environment that emphasizes employee mental health and physical well-being and encourages employees to reach out for help without fear of reprisal.
- **Offer Brief Interventions:** These interventions typically last between 5 and 60 min and are intended primarily for at-risk employees. One goal of interventions includes raising awareness of the problems associated with alcohol use and thereby preventing more serious alcohol problems from developing. Other goals are to provide AOD-related practical advice, education, and skill building.
- **Formalize Alcohol Use Policies:** Establish and communicate clear, concise workplace policies regarding alcohol use to ensure awareness and increase compliance, including policies about situations when drinking is not allowed as well as when light drinking is permitted (e.g., during lunch or dinner with coworkers or while traveling on work-related business).

In the next section, we will discuss the importance and benefits of establishing company policies regarding alcohol consumption in the workplace. We also provide recommendations related to such policies.

#### 4.2. Workplace Policies on Alcohol Use

Prior research has consistently shown that alcohol workplace policies benefit both employees and organizations by limiting the availability of alcohol on company premises and thereby mitigating on-the-job drinking and preventing hazardous circumstances. Furthermore, heavy drinkers tend to be dissuaded from applying for employment at organizations that have strict alcohol policies, and current employees who are heavy drinkers are more likely to change jobs when strict alcohol policies are established and communicated.

Both basic written alcohol policies and comprehensive programs that address referrals, treatment, and education have been shown to benefit heavy drinkers by significantly reducing alcohol consumption. However, comprehensive programs tend to be beneficial than basic written policies alone in reducing on-site injuries and encouraging employees to obtain treatment for alcohol misuse when needed (Alfred et al., 2020; Pidd et al., 2016).

In addition, it is important to note that policies must be stated clearly in terms that are understandable to employees (e.g., avoiding “legalese”) and should emphasize treatment options rather than punishment and disciplinary actions. Policies that overemphasize punishment are more likely to face resistance by both employees and managers. Female managers/supervisors, in particular, tend to resist enforcement of such policies (Ames & Bennett, 2011; Bell et al., 1996).

#### 4.3. Other Recommendations

According to the U.S. Center for Disease Control (CDC), even moderate drinking raises health risks compared with not drinking at all (cf., CDC, 2025a). Given the negative associations of alcohol consumption with individuals’ health and workplace performance, as well as alcohol’s association with crimes such as drunk driving, sexual assault in dating contexts, and violence toward intimate others; business firms, government entities, universities, social clubs, and other organizations should logically take steps so as not to facilitate alcohol use, such as the best practices shown in Table 8. Facilitating alcohol use, let alone encouraging its use, is counterproductive to health and safety. Negative associations of drinking far outweigh any possible positives.

**Table 8.** Best practices to discourage alcohol consumption in the workplace.

|                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • Encourage sobriety in the workplace; encourage employees not to risk their or others’ health and safety.                                                                                               |
| • Sponsor regular alcohol-awareness events that show crime statistics, and health and safety risks associated with alcohol consumption.                                                                  |
| • Offer counseling services/support for employees with alcohol use disorder, for recovery and maintaining sobriety.                                                                                      |
| • Do not serve alcoholic beverages at organization events; instead, offer nonalcoholic beverages e.g., tea, fruit drinks, and sparkling water.                                                           |
| • Do not associate your organization’s name with alcohol companies/beverages (e.g., the “official” beer of your organization, in return for payments of any kind from alcohol companies).                |
| • If your organization is associated with alcohol companies/beverages, end that association as soon as possible. Try making associations with other types of companies (food products, sportswear, etc.) |

Among the best practices not to facilitate alcohol use is sponsoring alcohol-awareness events that highlight the health and safety risks associated with alcohol consumption. Another is not serving alcoholic beverages at organization events; instead, offer tea, fruit drinks, and sparkling water. Some people might say that if alcohol is not served, then why serve other unhealthy items, such as high-sugar beverages and desserts. This question may or may not be disingenuous. The simple answer is that while high-sugar beverages and desserts are unhealthy, they are not connected to drunk driving, sexual assault in dating contexts, violence to intimate others, and other alcohol-related negative behaviors.

## 5. Summary and Conclusions

Alcohol consumption is associated with some of the biggest social and economic problems facing nations around the world, notably alcohol-related healthcare costs and alcohol-related crime. This paper examines the relationship of alcohol consumption to social and economic factors. Findings are as follows.

Regarding our first research question (R1) we found the following:

1. Alcohol consumption is positively associated with alcohol-related death.
2. Alcohol consumption is positively associated with marital instability, as measured by the divorce-to-marriage ratio.
3. Alcohol consumption is positively associated with alcohol-related crime.

Regarding our second research question (R2) we found the following:

4. Alcohol consumption is positively associated with economic activity (per capita GDP); in other words, greater affordability of alcohol is associated with higher consumption and its associated negative consequences.

Negative associations of alcohol consumption include both short-term and long-term problems for individuals, ranging from physical harm to a person's heart, brain, liver, and other organs to social functionality problems ranging from inability to do their job, drunk driving, learning disabilities, and violence toward others such as sexual assault in dating contexts, intimate partner violence, and harm to children (cf., CDC, 2025a; Laslett et al., 2025; Kerr et al., 2021). While both genders experience negative associations correlated with alcohol consumption, females experience worse associations, attributed to higher vulnerability to alcohol-related crime (e.g., intimate partner violence, sexual assault in dating contexts, etc.) and suffer more from alcohol-related divorce (e.g., poverty). Consequently, this study provides steps and recommendations that businesses, government agencies, universities, and other organizations can take to mitigate the detrimental associations of alcohol consumption, such as encouraging sobriety in the workplace, offering alcohol-related counseling services, and not establishing associations with nor accepting payments of any kind from alcohol beverage companies.

Increased alcohol consumption rates display a statistical association with higher rates of alcohol-related deaths. These deaths are detrimental to economic activity but also to society overall. Increased consumption is associated with higher rates of marital instability, which has negative repercussions on society overall, particularly negative to women and children, increasing likelihood of children living in poverty, children dropping out of school, and children being involved in crime. Increased alcohol consumption rates are associated with higher levels of GDP per capita. Greater financial resources make it possible to increase alcohol consumption along with associated problems. Increased rates of alcohol consumption are correlated with higher rates of alcohol-related crime. Crime hampers economic activity, decreases the well-being of society overall, and reduces individual health and safety.

Higher levels of alcohol consumption are associated with negative economic measures for society at large, ranging from higher healthcare costs, often covered by government agencies, to decreased worker productivity and higher criminal justice system costs associated with injury to others (such as from drunk driving, domestic violence, etc.). The findings of this study will be of interest to health professionals, business managers, government leaders, and others. No one should encourage alcohol use—no business firm, no government agency, no university, no social club, and no organization of any type. The negative factors associated with drinking outweigh any possible positives. According to the Center for Disease Control, even moderate drinking increases health risks compared

with not drinking at all; thus, the CDC recommends that people who do not currently drink do not start drinking for any reason (CDC, 2025a).

## 6. Limitations and Future Research

This study was limited by the variables examined: alcohol-related deaths, marital instability (divorce/marriage ratio), alcohol-related crime, and economic activity (per capita GDP). Future studies could examine other variables. Another limitation of this study was the number of countries examined due to lack of complete data for the variables examined. This study was limited by the methodology used for analysis, which was selected to fit the limited data available and the defined goals of the study. Future studies might have access to additional data, provided subsequent to the current study, and employ more advanced methodologies. The current study could be viewed as exploratory in nature, on which future studies might build. The analysis on alcohol-related crimes was limited due to the small number of countries that had data for this variable. Future studies might have access to other information sources that provide additional data. Consequently, more countries could be included in a future analysis. Further, this study was limited to the past research literature examined. Future studies could expand the current study by reviewing the findings of subsequent research regarding alcohol consumption.

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