

Baker, Julien S.; Supriya, Rashmi; Tao, Dan; Gao, Yang

## Article

# Alcohol consumption pre and post COVID-19: Implications for health, underlying pathologies, risks and its management

Journal of Risk and Financial Management

## Provided in Cooperation with:

MDPI – Multidisciplinary Digital Publishing Institute, Basel

*Suggested Citation:* Baker, Julien S.; Supriya, Rashmi; Tao, Dan; Gao, Yang (2021) : Alcohol consumption pre and post COVID-19: Implications for health, underlying pathologies, risks and its management, Journal of Risk and Financial Management, ISSN 1911-8074, MDPI, Basel, Vol. 14, Iss. 11, pp. 1-4,  
<https://doi.org/10.3390/jrfm14110533>

This Version is available at:

<https://hdl.handle.net/10419/258636>

## Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

## Terms of use:

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*




*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<https://creativecommons.org/licenses/by/4.0/>

## Editorial

# Alcohol Consumption Pre and Post COVID-19. Implications for Health, Underlying Pathologies, Risks and Its Management

Julien S. Baker , Rashmi Supriya \*, Dan Tao  and Yang Gao 

Centre for Health and Exercise Science Research, Department of Sport, Physical Education and Health,  
Hong Kong Baptist University, Kowloon Tong 999077, Hong Kong; jsbaker@hkbu.edu.hk (J.S.B.);  
emma0514@hkbu.edu.hk (D.T.); gaoyang@hkbu.edu.hk (Y.G.)

\* Correspondence: Rashmisupriya@hkbu.edu.hk



**Citation:** Baker, Julien S., Rashmi Supriya, Dan Tao, and Yang Gao. 2021. Alcohol Consumption Pre and Post COVID-19. Implications for Health, Underlying Pathologies, Risks and Its Management. *Journal of Risk and Financial Management* 14: 533. <https://doi.org/10.3390/jrfm14110533>

Received: 28 October 2021

Accepted: 4 November 2021

Published: 8 November 2021

**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



**Copyright:** © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Research indicates that individuals who experience increased levels of stress often report increased alcohol consumption and consequently misuse. Individuals who have experiences related to financial problems or anxiety and depressive issues often rely on alcohol consumption as a short-term solution for symptom relief. However, this strategy often results in an increase in the severity of alcohol misuse, addiction and dependence. In support of this, previous research has revealed that sections of a Chinese population who were isolated working in quiet locations during the 2003 SARS epidemic used alcohol to deal with isolation, and perceived increases in stress. The increase in alcohol consumption during this period was significantly related to incidences of alcohol abuse and dependence several years post the SARS epidemic (Grossman et al. 2020). The continued increase in the COVID-19 pandemic and government measures to impose isolation, travel restrictions mobility limitations, and decreased socialization have had a powerful impact on individuals' patterns of leisure time. This has also resulted in a decrease in individual access to venues that publicly sell alcohol. This has had implications for increased alcohol consumption in the home environment. Recovery from the impact of the pandemic will remain for long periods. The recovery periods during and following the pandemic may increase the potential for individual engagement in alcohol consumption and misuse to alleviate the continuing problems associated with isolation, anxiety and depression caused by COVID-19 (Hou et al. 2021).

Research has also outlined that during the COVID-19 pandemic, in addition to the increased stress levels recorded, domestic violence increased and was associated with excessive alcohol consumption as a contributory factor (Gama et al. 2020). Alcohol abuse can contribute to individual health profiles, impact negatively on diseases, promote personal injury, and make abusers more susceptible to the physiological and psychological effects of COVID-19. In addition, alcohol abuse can also lead to significant economic and social problems (Moss 2013). During the pandemic, a large proportion of the population did not increase their alcohol consumption. However, for the individuals who did increase consumption, a greater proportion appeared to consume larger quantities. In the USA, alcohol sales increased exponentially by 234%. Quarantine and social isolation have had a huge psychological effect on people's lives, and these effects may be responsible for the increase in alcohol misuse observed in adults (Pollard et al. 2020). Figures from the World Health Organization have indicated that alcohol misuse accounts for more than 5% of global diseases (WHO 2018). In relation to the COVID-19 pandemic, individuals that abuse alcohol or have underlying medical pathologies such as alcohol-related diseased livers and associated comorbidities are at an increased risk of serious illness or premature death.

Societal impacts of long-term lockdowns and associated isolation stressors during the pandemic contribute to these problems in compromised individuals and have huge implications and relevance for issues related to public health (Clay and Parker 2020). Rehm et al. (2020) suggested that there are two different scenarios related to how the

COVID-19 pandemic may affect alcohol consumers. The first scenario, in an attempt to limit alcohol consumption, includes limits on alcohol availability, financial constraints on alcohol purchases, and governmental limitations that would help reduce the levels of alcohol consumed. The second scenario relates to the negative effects of increased stress and anxiety for individuals who resort to alcohol misuse to alleviate pandemic effects. Alcohol abuse is a very serious and increasing public health concern. There are about 65,000 US deaths with approximately 4% of fatalities and 5% of diseases and associated injuries worldwide that can be attributed directly to alcohol abuse (NIAAA 2021). Drinking populations can be categorized into sub sections. These sections include drinkers with severe alcohol misuse problems and individuals who exceed recommended guidelines but fail to reach the severity of severe alcohol misuse. For example, in America 25% of adults and somewhere between 7% and 20% of adult primary care patients exceed recommended drinking guidelines (NIAAA 2021). Excessive alcohol abuse is related to an increase in the prevalence of several serious medical conditions. These include but are not limited to certain cancers, cardiovascular disease, the related comorbidities of cirrhosis and pancreatitis, and gastrointestinal disorders. In addition to this, excessive alcohol misuse has also been associated with an increased risk of gastrointestinal related hospitalizations, postoperative complications, and poorer self-management of chronic diseases, such as diabetes, and hypertension. A study by Kuitunen-Paul and Roerecke (2018) reported that even consuming alcohol at moderate levels can increase all-cause mortality and contribute to the risk of cardiovascular related diseases while reducing life expectancy.

Further guidelines have reported that excessive alcohol consumption results in increased blood pressure and risks of stroke. The guidelines suggest that even moderate drinking (two drinks per day or less) increase the risk of stroke by about 15% (NIAAA 2021). While there is evidence for problems associated with alcohol abuse and misuse, there is little research assessing the effects of alcohol consumption on individuals with underlying medical conditions. The consumption of alcohol, particularly drinking large amounts, is a contributory factor for many alcohol related health issues. Alcohol consumption is also a contributor to the increased prevalence of global related diseases (Sterling et al. 2020). In fact, alcohol abuse has been cited to be one of the underlying causes for the increase in alcohol related medical conditions and a contributory factor to many more illnesses. Social isolation and related stress issues caused by the COVID-19 pandemic have contributed to the increases in alcohol consumption. Individuals with underlying related comorbidities are at greater risk of death and serious illness than healthy sections of the population who abuse alcohol. Further to this, alcohol misuse is related to both unintentional and intentional injuries (NIAAA 2021). Information about the disease risks of alcohol abuse has helped inform policy makers in the promotion of sensible alcohol consumption guidelines. However, the guidelines during the recent pandemic have been compromised in relation to the recorded increases in alcohol consumption over the COVID-19 period (Steffen et al. 2021). Further to this, and in addition to the increased disease risks that can potentially harm alcohol abusers, severe alcohol consumption can also have an impact on the health status of drinkers while causing social harm to the drinker's family and friends (Moss 2013). The results of studies indicating social harm and medical damage to individuals during the pandemic need to be considered urgently. The findings highlight the need for the urgent development of effective prevention strategies to reduce the burden, suffering, and costs, linked with greater alcohol consumption particularly pre and post the COVID-19 pandemic. Individuals with related comorbidities need to be extra vigilant in relation to their alcohol use. Alcohol accelerates the disease process, and in compromised individuals and patient populations, alcohol abuse will be a contributory factor to their premature demise and or serious illness.

Not only health but economies suffer as much from alcohol abuse as its detrimental effects on health, affecting not only families, but communities, institutions, and individuals of all ages. Young people who drink too much are impeding their development, while impacting on the country's ability to face economic challenges in the future. In families

with alcohol-dependent members, health care costs are twice as high as in families without alcohol abusers, and up to half of all emergency room visits are due to alcoholism (Burke 1988). In response to COVID19, drinking practices have changed considerably. People drink at home instead of in bars and restaurants. While bar and restaurant sales have fallen, off-premises sales, such as ecommerce and retail stores, have grown significantly. US online sales, for instance, increased by 234%. There is a heavy toll on society, the economy, and individuals resulting from harmful alcohol consumption. According to the projection for the next 30 years, illnesses and injuries caused by consuming more than 1.5 drinks per day for men and 1 drink per day for women will cause life expectancy to be 0.9 years shorter in OECD countries. Health expenditures will be responsible for approximately 2.4% of GDP, while participation and productivity among the workforce will be reduced by 1.6% (OECD 2021). OECD countries report that drinking more than 1/1.5 drinks per day increases the likelihood of a number of diseases and adds USD 61 per capita to annual health care costs, adjusted for purchasing power parity. Over the course of the analysis, the total cost of treating these diseases is USD purchasing power parity 138 billion per year across all the OECD countries included in recent analysis. The current health expenditure in Australia is equivalent to this amount, while the current health expenditure in Belgium is more than double that amount (OECD 2021).

In summary, we hope that the content of this paper will stimulate debate and raise awareness of the increased alcohol abuse problems during and post the COVID-19 pandemic. The content provided here outlines the detrimental effects of alcohol abuse and suggests reasons for increases in consumption during the pandemic. The paper also comments on the risk factors and economic costs associated with alcohol abuse in healthy individuals and individuals with underlying comorbidities. In addition, the paper also discusses the effects of excessive alcohol consumption on psychological parameters and implications for social harm and societal disengagement. We hope that the contents of this paper will provide information that will invigorate local governmental and global health organizations to produce intervention strategies, and innovative new policies and policy amendments (especially online selling, ecommerce, and retail stores) to alleviate this risk and associated economic burdens.

**Author Contributions:** J.S.B. wrote the paper, J.S.B. and R.S. designed the study. D.T. and Y.G. contributed to discussion and editing. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Data Availability Statement:** Not applicable.

**Acknowledgments:** This paper was prepared from the presentation on idea presented in the symposium “Transnational and Transdisciplinary Lessons of COVID-19 From the Perspective of Risk and Management”.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

- Burke, Terrence R. 1988. The Economic Impact of Alcohol Abuse and Alcoholism. *Public Health Reports* 103: 564–68. [PubMed]
- Clay, James M., and Matthew O. Parker. 2020. Alcohol use and misuse during the COVID-19 pandemic: A potential public health crisis? *The Lancet Public Health* 5: e259. [CrossRef]
- Gama, Ana, Ana Rita Pedroa, Maria João Leote de Carvalho, Ana Esteves Guerreiro, Vera Duarte, Jorge Quintas, Andreia Matias, Ines Keygnaert, and Sónia Dias. 2020. Domestic Violence during the COVID-19 Pandemic in Portugal. *Portuguese Journal of Public Health* 38: 32–40. [CrossRef]
- Grossman, Elyse R., Sara E. Benjamin-Neelon, and Susan Sonnenschein. 2020. Alcohol Consumption during the COVID-19 Pandemic: A Cross-Sectional Survey of US Adults. *International Journal of Environmental Research and Public Health* 17: 9189. [CrossRef] [PubMed]

- Hou, Wai Kai, Tatia Mei-chun Lee, Li Liang, Tsz W. Li, Huinan Liu, Horace Tong, Menachem Ben-Ezra, and Robin Goodwin. 2021. Psychiatric symptoms and behavioral adjustment during the COVID-19 pandemic: Evidence from two population-representative cohorts. *Translational Psychiatry* 11: 174. [CrossRef] [PubMed]
- Kuitunen-Paul, Sören, and Michael Roerecke. 2018. Alcohol Use Disorders Identification Test (AUDIT) and mortality risk: A systematic review and meta-analysis. *Journal of Epidemiology and Community Health* 72: 856–63. [CrossRef] [PubMed]
- Moss, Howard B. 2013. The Impact of Alcohol on Society: A Brief Overview. *Social Work in Public Health* 28: 175–77. [CrossRef] [PubMed]
- NIAAA National Institute on Alcohol Abuse and Alcoholism. 2021. Available online: <https://www.niaaa.nih.gov/publications/brochures-and-fact-sheets/alcohol-facts-and-statistics> (accessed on 25 September 2021).
- OECD. 2021. *Preventing Harmful Alcohol Use*. OECD Health Policy Studies. Paris: OECD, ISBN 9789264594043.
- Pollard, Michael S., Joan S. Tucker, and Harold D. Green Jr. 2020. Changes in Adult Alcohol Use and Consequences During the COVID-19 Pandemic in the US. *JAMA Network Open* 3: e2022942. [CrossRef] [PubMed]
- Rehm, Jürgen, Carolin Kilian, Carina Ferreira-Borges, David Jernigan, Maristela Monteiro, Charles D. H. Parry, Zila M. Sanchez, and Jakob Manthey. 2020. Alcohol use in times of the COVID-19: Implications for monitoring and policy. *Drug and Alcohol Review* 39: 301–4. [CrossRef] [PubMed]
- Steffen, Julius, Jenny Schlichtiger, Bruno C. Huber, and Stefan Brunner. 2021. Altered alcohol consumption during COVID-19 pandemic lockdown. *Journal of Nutrition* 20: 44. [CrossRef] [PubMed]
- Sterling, Stacy A., Vanessa A. Palzes, Yun Lu, Andrea H. Kline-Simon, Sujaya Parthasarathy, Thekla Ross, Joseph Elson, Constance Weisner, Clara Maxim, and Felicia W. Chi. 2020. Associations Between Medical Conditions and Alcohol Consumption Levels in an Adult Primary Care Population. *JAMA Network Open* 3: e204687. [CrossRef] [PubMed]
- World Health Organisation Alcohol. 2018. Available online: <https://www.who.int/news-room/fact-sheets/detail/alcohol> (accessed on 25 September 2021).