

ESPACO TEMÁTICO: COVID-19 - CONTRIBUIÇÕES DA SAÚDE COLETIVA

THEMATIC SECTION: COVID-19 - PUBLIC HEALTH CONTRIBUTIONS

Alcohol consumption during the COVID-19 pandemic: a necessary reflection for confronting the situation

Consumo de álcool durante a pandemia da COVID-19: uma reflexão necessária para o enfrentamento da situação

Consumo de alcohol durante la pandemia de la COVID-19: una reflexión necesaria para enfrentar la situación

Leila Posenato Garcia ¹ Zila M. Sanchez ²

doi: 10.1590/0102-311X00124520

Facing the COVID-19 pandemic has so far required implementing non-pharmacological Public Health interventions, especially those aimed at physical distancing ^{1,2}. Affected countries adopted different strategies – from the isolation of cases and contact tracing to lockdown, including the temporary closure of bars, restaurants, nightclubs, among others ³. Due to the restricted operation of such establishments, alcohol consumption, which took place in public spaces, became private, with home becoming the place of choice for this behavior.

It is worth noting that the consumption of alcoholic beverages is linked to more than 230 diseases and illnesses, as a result from the effects of ethanol, which is a psychoactive, reinforcing, carcinogenic, immunosuppressive, toxic to cells and tissues and teratogenic substance. It is one of the main causes of preventable mortality in the world and responsible for 3 million deaths each year 4,5,6. The World Health Organization (WHO) considers that there is no safe limit for alcohol consumption and that health damage increases with the amount consumed 4,7. In particular, excessive consumption weakens the immune system and decreases the body's ability to fight bacterial 8 and viral 9 infectious diseases, such as COVID-19, which can increase the risk of infection during the pandemic.

Nevertheless, at the beginning of the pandemic, fake news circulated that drinking alcohol would provide some protection against COVID-19 or kill the coronavirus. As a result, more than 700 people died in Iran after drinking alcohol of unknown origin and contaminated with methanol ¹⁰. Similar cases have been reported in Costa Rica and the Dominican Republic. To protect the population from this type of misinformation, the WHO released a report warning that alcohol consumption absolutely does not protect against COVID-19; on the contrary, it can harm the immune response ⁵.

Several hypotheses have been raised seeking to discuss the effect of alcohol on mental health during the pandemic ⁷. All of them highlight that alcohol is a substance that depresses the central nervous system, and its consumption is strongly associated with other mental disorders. During isolation, this association is enhanced and can trigger or exacerbate depressive and anxious episodes, as well as increase the risk of suicide. With the increase in regular use and the amount of alcohol consumed, in the long run, there will be increased tolerance and dependence. The potential public health effects of long-term isolation on alcohol consumption and misuse are still unknown,6 but studies conducted in several countries indicated a higher incidence of anxiety, depression and alcohol consumption, in addition to lower mental well-being during isolation in response to the epidemic ^{11,12,13,14}.

 ¹ Instituto de Pesquisa Econômica Aplicada, Brasília, Brasil.
² Escola Paulista de Medicina, Universidade Federal de São Paulo, São Paulo, Brasil.

Correspondence

L. P. Garcia Instituto de Pesquisa Econômica Aplicada. SBS Quadra 1 Bloco J, Brasília, DF 70076-900, Brasil. leila.garcia@ipea.gov.br

Among young people and adolescents, such effects may take a few years to be identified. The consequences for children living with adults who started drinking at home are yet unknown, but the conjecture is that this exacerbated exposure is associated with early initiation, by easy access, perception of social acceptance of consumption 15 and the experience of more episodes of domestic violence 16. It is worth mentioning that, among adolescents, parental styles are associated with the pattern of alcohol consumption and it is assumed that staying at home under parental supervision can lead to decreased consumption, particularly when parents adopt the authoritarian style, that is, offering more monitoring and responsiveness to adolescents' needs 17. On the other hand, we must consider that parents who increased their alcohol consumption at home during quarantine, drinking more frequently or in greater quantity, contribute to changing their children's normative beliefs, who can interpret drinking as routine. In practice, this change in normative beliefs is associated with more harmful patterns of alcohol use in adolescence and should be avoided ^{18,19}. Moreover, we must consider that some parents who increased their alcohol consumption may have understood that it was time to "teach their children to drink", contradicting all scientific knowledge about preventing alcohol use by minors 20.

The search for alcohol use in stressful situations occurs, mistakenly, by its depressor effect of the central nervous system, which, at first, seems to relax those who consumed it. On the other hand, this same pharmacological effect is responsible for several types of accidents. Falls, burns and shocks, as well as traffic accidents, can cause injuries that sometimes require emergency care 21. In the context of the pandemic, injury accidents that require care, in addition to overloading services, can increase the risk of COVID-19 transmission in the health services themselves.

Another negative effect of alcohol consumption, enhanced by physical distancing, is domestic and family violence, whose main victims are women and children 22,23. In Brazil, between March 1st-16th and 17th-25th 2020, the number of complaints registered by the Disque 100 and Ligue 180 hotlines increased 18% ²⁴. Several states also registered an increase in the number of femicides. In São Paulo, this number, in March 2020, was 46.2% higher than the same month in the previous year, while in Mato Grosso, femicides quintupled 25. Men are the main perpetrators of domestic and family violence against women, which is exacerbated by alcohol consumption. Survivors, in turn, tend to increase alcohol use to cope with the situation of violence ²⁶.

Moreover, evidence shows that the risk of alcohol dependence is higher as people are more exposed to natural disasters. A longitudinal study in the United States found that both the number of hurricanes and of stressful events that occurred in the following week were direct predictors of the alcohol doses consumed by the people exposed in the following year ²⁷. Similar behavior was found after exposure to a terrorist attack ²⁸, reinforcing evidence that trauma or post-traumatic stress increases alcohol use disorder 29.

Some studies point to intensified alcohol use in grieving situations 30. Thus, as COVID-19 emerges as one of the main causes of death, there is additional concern about alcohol consumption patterns during isolation and in the coming years. Considering that the pandemic is an experience of potential impending death and because it resembles the experience of natural traumatic episodes, we can suppose that later alcohol consumption patterns will increase, with implications for associated mortality and morbidity.

At the moment, there has been an increase in alcohol consumption at home, apparently due to isolation, against the evidence on the associated damage. In China, 32% of regular alcohol users reported increased use, and 19% reported a relapse to alcohol abuse during the pandemic 31. In the United Kingdom, nearly a fifth of survey participants who reported drinking alcohol daily increased the amount consumed during lockdown 32. In Germany, 34.7% of respondents to an online survey reported that they started drinking more or much more alcohol after lockdown started ³³. In Brazil, the situation is similar. An online survey with 44,062 participants revealed that 18% of the population aged 18 years or older reported increased alcohol use during the pandemic 34. A survey commissioned by the Brazilian Beverages Association (Abrabe) 35. in 2019, revealed that 61% of alcohol consumption took place in bars, restaurants, nightclubs and various events. With the closure of these establishments and the ban of mass gatherings, consumption began to take place predominantly in the domestic environment, also encouraged by online events, such as happy hours and parties, which spurred a sales increase of beverages in supermarkets.

Going to the supermarket is a situation of potential exposure to coronavirus and the risk of contagion can be increased when the person is under the influence of alcohol. The reduced perception of risk resulting from its pharmacological effect 36 may result in decreased adherence to preventive measures among users, including the interruption of isolation to purchase and consume alcoholic beverages, non-adherence to hygiene measures and the incorrect use of masks.

In Brazil, regulation of sale of alcoholic beverages in supermarkets is almost non-existent. Such locations allow displaying drinks in areas of high visibility, including near the cashiers, carrying out promotion sales and selling packages with multiple units, without quantity limit, nor restriction of day of the week or time. Moreover, there is ease of purchase on websites and applications, including cool beverages, without contact with the buyer, as in Australia 37. In these situations, the actual control of the buyer's age is absent. This scenario exposes the need to reinforce the control of sales to minors, both on the Internet and at physical points of sale. The availability of beverages in supermarkets and for home delivery facilitates consumption, which is hardly in line with the recommendations of WHO's SAFER strategy 38 on reducing the availability of alcoholic beverages, introduced in Brazil in 2019.

At the other end, authorities in several parts of the world have temporarily banned the sale of alcoholic beverages, under justifications that include the need to reduce the use of intensive care beds for trauma and release these vacancies for treating COVID-19 patients, maintain social order and protect women and children from domestic violence. Examples are: South Africa, the city of Nuuk (capital of Greenland), the city of Bangkok (capital of Thailand), the Department of Aisne (Northern France), and the state of Pennsylvania (United States). In Latin America, Bolivia, Panama, and some states in Mexico have also banned selling alcoholic beverages, while other countries have greatly limited purchases to stock up at home, such as Colombia. The Mexican government ³⁹ endorsed the WHO's position for restrictions on access to alcohol 40.

Some municipalities in Brazil, as well as the states of Piauí and Paraná, have enacted temporary prohibition aimed at reinforcing isolation measures. Although they can be considered radical, such measures reinforce the message that alcohol consumption is not essential to the population and that the licensing system for selling alcoholic beverages should be revised, so that the State undertake greater responsibility for protecting people from the harm associated with domestic consumption, both in the context of the pandemic and in the future 41,42.

Including confronting alcohol consumption as part of the response to COVID-19 is justified because the behavior is a risk factor for the infection itself, whether by a biological mechanism 43, or by the ability to gather crowds in leisure events 44 and increase hospital demand due to trauma resulting from alcohol intoxication. Given this context, it is urgent that governments and civil entities in the health area adopt strategies to guide the population on the harm associated with alcohol consumption, disseminating WHO's position. Moreover, the regulation on the use and marketing of alcoholic beverages should be reinforced, in line with the interests of Public Health and the SAFER strategy. Such actions should be complemented by the maintenance and strengthening of support services for users of alcohol and other drugs.

Contributors

L. P. Garcia and Z. M. Sanchez participated in the design of the article, the literature review, the writing, and the final review. The authors agree with the version submitted for publication and assume responsibility for the integrity of the article.

Additional informations

ORCID: Leila Posenato Garcia (0000-0003-1146-2641); Zila M. Sanchez (0000-0002-7427-7956).

Acknowledgments

To Dr. Maristela G. Monteiro, who, with her vast knowledge of alcohol and public policies, provided rich contributions to the elaboration of this article.

References

- Garcia LP, Duarte E. Intervenções não farmacológicas para o enfrentamento à epidemia da COVID-19 no Brasil. Epidemiol Serv Saúde 2020; 29:e2020222.
- Qualls N, Levitt A, Kanade N, Wright-Jegede N, Dopson S, Biggerstaff M, et al. Community mitigation guidelines to prevent pandemic influenza - United States, 2017. MMWR Recomm Rep 2017; 66:1-34.
- Petersen É, Wasserman S, Lee SS, Go U, Holmes AH, Abri SA, et al. COVID-19: we urgently need to start developing an exit strategy. Int J Infect Dis 2020: 96:233-9.
- World Health Organization. Global status report on alcohol and health 2018. https://www.who.int/substance_abuse/publications/global_alcohol_report/en/ (accessed on 28/Apr/2020).
- World Health Organization. Alcohol and COVID: what do you need to know? http:// www.euro.who.int/__data/assets/pdf_ file/0010/437608/Alcohol-and-COVID-19what-you-need-to-know.pdf?ua=1 (accessed on 05/May/2020).
- Clay JM, Parker MO. Alcohol use and misuse during the COVID-19 pandemic: a potential public health crisis? Lancet Public Health 2020; 5:e259.
- Rehm J, Kilian C, Ferreira-Borges C, Jernigan D, Monteiro M, Parry CDH, et al. Alcohol use in times of the COVID 19: implications for monitoring and policy. Drug Alcohol Rev 2020; 39:301-4.
- 8. Gamble L, Mason CM, Nelson S. The effects of alcohol on immunity and bacterial infection in the lung. Med Mal Infect 2006; 36:72-7.

- Szabo G, Aloman C, Polyak SJ, Weinman SA, Wands J, Zakhari S. Hepatitis C infection and alcohol use: a dangerous mix for the liver and antiviral immunity. Alcohol Clin Exp Res 2006; 30:709-19.
- 10. Shokoohi M, Nasiri N, Sharifi H, Baral S, Stranges S. A syndemic of COVID-19 and methanol poisoning in Iran: time for Iran to consider alcohol use as a public health challenge? Alcohol 2020; 87:25-7.
- Ahmed MZ, Ahmed O, Aibao Z, Hanbin S, Siyu L, Ahmad A. Epidemic of COVID-19 in China and associated psychological problems. Asian J Psychiatr 2020; 51:102092.
- Haider II, Tiwana F, Tahir SM. Impact of the COVID-19 pandemic on adult mental health. Pak J Med Sci 2020; 36(COVID19-S4):S90-4.
- Verma S, Mishra A. Depression, anxiety, and stress and socio-demographic correlates among general Indian public during COVID-19. Int J Soc Psychiatry 2020; 66:756-62.
- 14. Smith L, Jacob L, Yakkundi A, McDermott D, Armstrong NC, Barnett Y, et al. Correlates of symptoms of anxiety and depression and mental wellbeing associated with COVID-19: a cross-sectional study of UK-based respondents. Psychiatry Res 2020; 291:113138.
- 15. McCutcheon VV, Agrawal A, Kuo SI, Su J, Dick DM, Meyers JL, et al. Associations of parental alcohol use disorders and parental separation with offspring initiation of alcohol, cigarette and cannabis use and sexual debut in high-risk families. Addiction 2018; 113:336-45.

- 16. Sharman SJ, Coomber K, Mayshak R, Curtis A, Hyder S, Walker A, et al. Situational characteristics uniquely associated with children's exposure to intimate partner violence. I Interpers Violence 2019; (Online ahead of print).
- 17. Valente JY, Cogo-Moreira H, Sanchez ZM. Gradient of association between parenting styles and patterns of drug use in adolescence: a latent class analysis. Drug Alcohol Depend 2017; 180:272-8.
- 18. Sanchez ZM, Valente JY, Fidalgo TM, Leal AP, Medeiros PFP, Cogo-Moreira H. The role of normative beliefs in the mediation of a schoolbased drug prevention program: a secondary analysis of the #Tamojunto cluster-randomized trial. PLoS One 2019; 14:e0208072.
- 19. Conegundes L, Valente JY, Cogo-Moreira H, Martins CB, Andreoni S, Sanchez ZM. Transition from nonuse to use of alcohol or binge drinking among adolescents: secondary analysis of a randomized controlled trial. Addict Behav 2020; 102:106159.
- 20. Gilligan C, Thompson K, Bourke J, Kypri K, Stockwell T. "Everybody else is doing it": norm perceptions among parents of adolescents. J Stud Alcohol Drugs 2014; 75:908-18.
- 21. Kaysen D, Dillworth TM, Simpson T, Waldrop A, Larimer ME, Resick PA. Domestic violence and alcohol use: trauma-related symptoms and motives for drinking. Addict Behav 2007; 32:1272-83.
- 22. van Gelder N, Peterman A, Potts A, O'Donnell M, Thompson K, Shah N, et al. COVID-19: reducing the risk of infection might increase the risk of intimate partner violence. EClinicalMedicine 2020; 21:100348.
- 23. World Health Organization. COVID-19 and violence against women: what the health sector/system can do? https://apps.who.int/iris/ bitstream/handle/10665/331699/WHO-SRH-20.04-eng.pdf?ua=1 (accessed on 15/ May/2020).
- 24. Ministério da Mulher, da Família e dos Direitos Humanos. Coronavírus: sobe o número de ligações para canal de denúncia de violência doméstica na quarentena. https://www.gov.br/ mdh/pt-br/assuntos/noticias/2020-2/marco/ coronavirus-sobe-o-numero-de-ligacoes-paracanal-de-denuncia-de-violencia-domestica-naquarentena (accessed on 28/Mar/2020).
- 25. Fórum Brasileiro de Segurança Pública. Violência doméstica durante pandemia de Covid-19. http://forumseguranca.org.br/publicacoes_ posts/violencia-domestica-durante-pandemiade-covid-19/ (accessed on 04/May/2020).
- 26. World Health Organization. Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence. https:// www.who.int/reproductivehealth/publica tions/violence/9789241564625/en/ (accessed on 04/May/2020).
- 27. Cerdá M, Tracy M, Galea S. A prospective population based study of changes in alcohol use and binge drinking after a mass traumatic event. Drug Alcohol Depend 2011; 115:1-8.

- 28. Hasin DS, Keyes KM, Hatzenbuehler ML, Aharonovich EA, Alderson D. Alcohol consumption and posttraumatic stress after exposure to terrorism: effects of proximity, loss, and psychiatric history. Am J Public Health 2007; 97:2268-75
- 29. Gilpin NW, Weiner JL. Neurobiology of comorbid post-traumatic stress disorder and alcohol-use disorder. Genes Brain Behav 2017; 16:15-43.
- 30. Drabwell L, Eng J, Stevenson F, King M, Osborn D, Pitman A. Perceptions of the use of alcohol and drugs after sudden bereavement by unnatural causes: analysis of online qualitative data. Int J Environ Res Public Health 2020; 17:677.
- 31. Sun Y, Li Y, Bao Y, Meng S, Sun Y, Schumann G. et al. Brief report: increased addictive internet and substance use behavior during the CO-VID-19 pandemic in China. Am J Addict 2020; 29:268-70.
- 32. The Lancet Gastroenterology & Hepatology. Drinking alone: COVID-19, lockdown, and alcohol-related harm. Lancet Gastroenterol Hepatol 2020; 5:625.
- 33. Koopmann A, Georgiadou E, Kiefer F, Hillemacher T. Did the general population in Germany drink more alcohol during the COVID-19 pandemic lockdown? Alcohol Alcohol 2020; (Online ahead of print).
- 34. Fundação Oswaldo Cruz. Resultados da ConVid: pesquisa de comportamentos. https:// convid.fiocruz.br/index.php?pag=bebiba_al coolica (accessed on 24/Jun/2020).
- 35. Bouças C. Faturamento do setor de bebidas alcoólicas cai 52%. Valor Econômico 2020; 6 apr. https://valor.globo.com/empresas/noti cia/2020/04/06/faturamento-do-setor-de-be bidas-alcoolicas-cai-52percent-com-covid-19. ghtml.
- 36. Gan G, Guevara A, Marxen M, Neumann M, Jünger E, Kobiella A, et al. Alcohol-induced impairment of inhibitory control is linked to attenuated brain responses in right fronto-temporal cortex. Biol Psychiatry 2014; 76:698-707.
- 37. Colbert S, Wilkinson C, Thornton L, Richmond R. COVID-19 and alcohol in Australia: industry changes and public health impacts. Drug Alcohol Rev 2020; (Epub ahead of print).
- 38. Monteiro MG. A iniciativa SAFER da Organização Mundial da Saúde e os desafios no Brasil para a redução do consumo nocivo de bebidas alcoólicas. Epidemiol Serv Saúde 2020; 29:e2020000.
- 39. Comisión Nacional contra las Adicciones. Consumo de bebidas alcohólicas durante la Jornada Nacional de Sana Distancia por COVID-19. https://www.gob.mx/salud/conadic/prensa/ consumo-de-bebidas-alcoholicas-durantela-jornada-nacional-de-sana-distancia-porcovid-19-241056 (accessed on 12/May/2020).

- 40. World Health Organization. Alcohol does not protect against COVID-19: access should be restricted during lockdown. http://www.euro. who.int/en/health-topics/disease-prevention/alcohol-use/news/news/2020/04/alcohol-does-not-protect-against-covid-19-access-should-be-restricted-during-lockdown/_rec ache?fbclid=IwAR2lkIQcxfDdziOa7esAbXO-caLv66wvhmP4JxoDwXQd5z14X02jAmHZulg (accessed on 12/May/2020).
- 41. Hobin E, Smith B. Is another public health crisis brewing beneath the COVID-19 pandemic? Can J Public Health 2020; 111:392-6.
- 42. Reynolds J, Wilkinson C. Accessibility of 'essential' alcohol in the time of COVID-19: casting light on the blind spots of licensing? Drug Alcohol Rev 2020; 39:305-8.
- 43. Testino G. Are patients with alcohol use disorders at increased risk for Covid-19 infection? Alcohol Alcohol 2020; 55:344-6.
- 44. Tutenges S, Bøhling F. Designing drunkenness: how pubs, bars and nightclubs increase alcohol sales. Int J Drug Policy 2019; 70:15-21.