

ALCOHOL CONTROL POLICIES FOR ALCOHOLIC BEVERAGES USE IN TRADITIONAL MEDICINE

Jasper Hoi Chun Luong¹, Zisis Kozlakidis², Hui Wang³, Io Hong Cheong^{3*}

¹Department of Microbiology and Immunology, University of British Columbia, Vancouver, British Columbia, Canada.

²International Agency for Research on Cancer, World Health Organization, Lyon, France.

³State Key Laboratory of Oncogenes and Related Genes, Centre for Single-Cell Omics, School of Public Health, Shanghai Jiao Tong University School of Medicine, Shanghai 200025, China.

Corresponding Author: Io Hong Cheong, Email: cheong.iohong@shsmu.edu.cn

Abstract: Global alcohol control policies emphasize age restrictions and health risks, yet cultural practices like traditional Chinese medicine and African home brewing complicate regulation. China's alcohol industry, valued at \$158 billion, reflects deep cultural roots, with Baijiu symbolizing heritage while raising health and sustainability concerns. Socially, alcohol fosters bonding, though modern trends favor moderation. Sustainability challenges include environmental impacts and resource conservation. Innovations in Baijiu production aim to balance tradition and public health. Policymakers must navigate these complexities to harmonize health, culture, and economic interests.

Keywords: Alcohol policy; Traditional Chinese medicine

1 INTRODUCTION

Global alcohol control policies address various aspects, with a significant focus on setting age limits and highlighting the negative health impacts of alcohol consumption. These policies aim to protect minors and the public from the harms of excessive drinking, emphasizing potential health issues associated with alcohol such as cardiovascular diseases, liver damage, and addiction [1].

In traditional Chinese medicine, a similar challenge is faced where the public perceives the long-standing historical practice to be healthful within certain parameters [2]. Therefore, striking a balance between public health interests and the economic and social impacts is essential. While alcohol is linked to health concerns, specific forms of alcohol consumption, such as those used in traditional Chinese medicine, are considered to have other potential uses in certain contexts.

In Africa, some regions utilize local herbs and plants to produce alcoholic beverages, which are rich in cultural significance and traditional practices. Many studies suggest that home brewing is also common in these areas, with families and communities often engaging in the production of their own spirits. However, the lack of standardization in production processes and quality control makes scientific investigation challenging. Variations in brewing methods, ingredient selection, and environmental factors lead to significant differences in the composition and effects of the resulting alcoholic drinks. This inconsistency poses challenges for researchers aiming to conduct effective studies and assessments, hindering a comprehensive understanding of the potential health benefits or risks associated with these indigenous alcoholic beverages.

Furthermore, the economic significance and social status of alcohol beverages raise sustainability issues [3]. The economic importance and societal status of the alcohol industry are crucial for some communities and countries, but excessive drinking and other health issues can have negative impacts on society, families, and individuals.

2 INDUSTRY SIZE

The alcohol industry in China is substantial. China has one of the largest alcoholic beverage markets globally, worth approximately \$158 billion USD in 2021. It encompasses various alcoholic beverages, including Baijiu, beer, wine, and Western spirits [4].

In addition to Baijiu, the consumption of beer and wine in China has been steadily rising, often reflecting the shifting consumer preferences and the expanding middle-class population, which might lead to concerns about potential overconsumption and its associated health issues [5]. Additionally, while Chinese consumers have displayed an increasing interest in wine, this trend toward wine appreciation and consumption raises concerns about the risks of excessive drinking and its consequences [6].

The alcohol industry in China plays a crucial role in the country's economy, reflecting its deep-rooted cultural traditions and modern market dynamics [7]. With a vast market size encompassing a diverse range of alcoholic beverages, including traditional Chinese liquors like Baijiu and various internationally popular spirits and beers, the industry also includes many traditional Chinese medicine wines that overlap with other alcoholic beverages [8]. This situation is much like in many low- and middle-income countries, where the regulation of alcohol or tobacco often presents sustainability and social concerns that impact the livelihoods of workers and the broader economy [9].

Moreover, the departure of skilled workers from the alcohol industry presents challenges for reemployment and workforce development. One of the major efforts is to explore the possibility of transitioning the workforce into other

industries; however, due to the number of individuals involved and the complexity of the situation, this transition can be quite difficult to achieve [10]. It may also place additional demands on social services as individuals seek support during periods of job transition and economic instability. Consequently, there are discussions about shifting their roles towards the production of traditional Chinese medicine wine. However, the legal status of such products is still not clearly defined, which poses challenges for this transition [11].

3 SOCIAL STATUS

In China, drinking culture is deeply rooted in social customs and traditions, reflecting the country's long history and diverse regional influences. Alcoholic beverages holds a prominent place in Chinese society like many other countries, where it is used to mark celebrations, express hospitality, and strengthen social bonds [12]. Baijiu, the traditional Chinese liquor known for its distinctive flavors and aroma, is often seen as a symbol of Chinese cultural heritage and is a common choice for toasting and festive occasions [13]. The act of sharing a drink, whether during a formal banquet, family gathering, or casual meal, is considered a gesture of friendship and camaraderie, signifying trust and goodwill among participants. Throughout China's history, drinking has played a role in important rituals, ceremonies, and social interactions, underscoring its significance in interpersonal relationships and cultural practices. Toasting, in particular, is a prevalent custom where individuals raise their glasses, offer well wishes, and express respect or gratitude to their companions. The act of clinking glasses is often accompanied by spoken blessings, creating a convivial atmosphere and strengthening bonds between individuals.

While the traditional aspects of Chinese drinking culture remain deeply ingrained, there has been a shift towards a more modern and health-conscious approach to alcohol consumption in recent years [14]. With an increasing emphasis on moderation, responsible drinking, and awareness of the potential health impacts of excessive alcohol consumption, there is a growing recognition of the importance of quality over quantity. More individuals are choosing to savor artisanal beverages, explore diverse flavors, and appreciate the craftsmanship that goes into creating traditional and contemporary alcoholic drinks [15]. As China continues to evolve and modernize, its drinking culture adapts to changing societal trends and values, blending traditional customs with contemporary practices. While the essence of Chinese drinking culture lies in fostering connections, sharing moments of joy, and honoring relationships, the evolving landscape reflects a balance between heritage and innovation, tradition and adaptation in the vibrant tapestry of China's rich drinking culture.

In China, the social norm surrounding alcoholic beverages use for health benefits is deeply rooted in traditional beliefs and cultural practices [16]. Alcoholic beverages, particularly Baijiu, has been historically associated with medicinal uses in traditional Chinese medicine. Within Chinese culture, Baijiu is often viewed not only as a beverage for celebration but also as a source of health and vitality when consumed in moderation [17].

The cultural practice of using alcoholic beverages for health purposes has shifted more towards drinking traditional Chinese medicinal wine. Although the scientific evidence supporting this practice remains uncertain, there is a necessity to understand this trend and address it with a scientific approach [18]. Moreover, there is a longstanding belief in the Chinese culture that certain types of traditional Chinese medicine alcohol may offer cardiovascular benefits. This belief has led to the popular notion that moderate consumption of such wine can be beneficial.

Overall, the social norm of alcoholic beverages use in China reflects a blend of traditional beliefs, cultural practices, and an appreciation for the potential medicinal properties of alcoholic beverages when consumed in moderation [19]. While there is a recognition of the potential health benefits of certain types of alcohol, it is essential to balance these beliefs with responsible consumption practices to ensure overall well-being. However, the lack of modern scientific evidence makes it difficult for policy maker to control.

4 SUSTAINABILITY

Global alcohol control policies play a crucial role in shaping public health outcomes and social well-being. Taxation on alcohol serves as a key revenue source for many governments worldwide, providing funds for public services, healthcare, education, and infrastructure development [20]. By implementing effective alcohol control policies, governments can regulate the production, distribution, and consumption of alcohol beverage to mitigate associated harms such as alcohol-related diseases, accidents, and social issues, thereby reducing healthcare costs and societal burdens. Additionally, levying taxes on alcohol products can deter excessive drinking and promote responsible consumption, leading to improved public health outcomes and increased productivity. The balance between implementing alcohol control measures for public health goals and ensuring a sustainable source of tax income is crucial for governments to maintain a healthy population and a stable economy.

In the context of alcohol control policies in China, there are sustainability issues that may not always be addressed adequately [21]. These issues relate to the environmental impacts of alcohol production, the conservation of resources, and the social implications of alcohol consumption that extend beyond health concerns. The production of alcohol, especially at an industrial scale, can have significant environmental implications such as water depletion, pollution, and greenhouse gas emissions. Without robust regulations and enforcement mechanisms in place, the environmental sustainability of the alcohol industry may be compromised. Another aspect of sustainability that may be overlooked in alcohol control policies is the conservation of resources. The production of alcohol beverages, especially certain types like Baijiu that require specific ingredients and traditional methods, can put pressure on natural resources and

agricultural practices. Preserving biodiversity, promoting sustainable farming practices, and ensuring responsible sourcing of ingredients are essential components of a holistic sustainability approach that may not always be explicitly addressed in alcohol control policies [22].

Furthermore, the social impacts of alcohol consumption, such as alcohol-related harm, social inequalities, and community well-being, play a role in the sustainability of alcohol control policies. Neglecting the social dimensions of alcohol consumption and its broader impact on society can impede the effectiveness of control measures and hinder the long-term sustainability of the alcohol industry. Addressing sustainability issues in alcohol control policies requires a comprehensive approach that considers environmental, social, and economic factors. By integrating sustainability considerations into alcohol control frameworks, policymakers can promote a more holistic and responsible approach to alcohol production and consumption that ensures the long-term well-being of both individuals and the environment.

5 INNOVATION

The Chinese Baijiu industry is beginning to explore innovation, considering alternatives that aim to reduce the potential harm associated with alcohol consumption. This transition involves the optimization and innovation of raw materials and processes, as well as investigating optimal types and the compounds they contain, with the goal of addressing or mitigating the adverse health effects.

While the evidence for a comprehensive assessment of these products remains limited, there is a prevalent sentiment within the industry that this transition signifies a harmonious equilibrium between tradition, culture, and public health.

6 CONCLUSION

In conclusion, the text delves into the intricate dynamics of alcohol control policies, shedding light on both the health implications and potential benefits associated with baijiu consumption. It underscores the substantial presence of the alcoholic beverage industry in China, showcasing the popularity of beverages like Baijiu, beer, and wine, deeply embedded in the country's cultural heritage. Moreover, the text highlights the societal significance of alcohol consumption in traditional Chinese medicine, emphasizing the interplay between health, culture, and economics within the context of alcohol regulation and consumption.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

REFERENCES

- [1] Analytica O. New tastes create China market for alcoholic drinks. Emerald Expert Briefings, 2016.
- [2] Cao Y-F. Review on Chinese liquor (Baijiu) industry and flavor researches in Jiangsu province, 2019.
- [3] Chen J-I. Spirit beverage development in the Asia-China region. Whisky and Other Spirits: Elsevier; 2022: 41-61.
- [4] Chen M, Yu Z. The Successful Strategy of Kweichow Moutai in the Chinese Market. 2022 7th International Conference on Social Sciences and Economic Development (ICSSED 2022), 2022.
- [5] Dautcher J. Public health and social pathologies in Xinjiang. Xinjiang: Routledge, 2015: 276-95.
- [6] Ding L, Song B, Wu C, et al. Alcohol use in China: Unrecorded and recorded bai jiu in three rural regions. International Journal of Environmental Research and Public Health, 2021, 19(1): 405.
- [7] Jiang X, Chen Y, Xiong S. Sustainable performance measurement of Baijiu supply chain in China. Information Systems and Economics. 2020;1(1):1-17.
- [8] Jiang X, Mu Y, Luo J. A Performance Assessment Framework for Baijiu Sustainable Supply Chain in China. Proceedings of the Thirteenth International Conference on Management Science and Engineering Management, 2020, 2(13).
- [9] Jiang X, Qing P, Yang Y. Risk management of Baijiu sustainable supply chain in China. Financial Engineering and Risk Management, 2020, 3(1): 31-44.
- [10] Jiang X, Xu J, Luo J, et al. Network design towards sustainability of chinese baijiu industry from a supply chain perspective. Discrete Dynamics in Nature and Society, 2018(1): 4391351.
- [11] LIESKOVSKY M, RAMSEY-ELLIOT M. CASE STUDY: BAIJIU IN CHINA. EPIC Board of Directors.23.
- [12] Ma N. An Autoethnographic Exploration of Chinese Baijiu and Toasting Rituals, 2023.
- [13] Niu Y, Zhou Z, Wan Z. Study on the profitability of Fenjiu group based on the financial index system. 2021 International Conference on Financial Management and Economic Transition (FMET 2021), 2021.
- [14] Peng C, Guo X. High quality development path of Chinese sauce-flavor Baijiu industry—Analysis based on consumption data. E3S Web of Conferences, 2021.
- [15] Pingali S. Opportunities in China's Alcoholic Beverage Market. China Business Review, 2011, 38(3).
- [16] Wang Y, Fan W, Xu Y. Extraction and isolation method of volatile compounds with astringent and bitter taste in Baijiu (Chinese liquor). Food and Fermentation Industries, 2018, 44(6): 240-4.
- [17] Wu Y. Changing patterns of alcohol consumption in rural China: Implications for the grain sector. Journal of the Asia Pacific Economy, 1998, 3(2): 223-36.

- [18] Wu Z, Zheng X, Chen Y, et al. Coordination between scientific and technological innovation and the high-quality development of Baijiu industry: The coupling and decoupling perspective. *Plos one*, 2024, 19(5): e0301589.
- [19] Xiong Y. The Integrated Application of Chinese Baijiu Culture and Storytelling in Teaching Chinese as a Second Language. *SHS Web of Conferences*, 2024.
- [20] Yi Z, Jiang L. Research on Sichuan Wine Culture and Brand Communication from the Perspective of Globalization. *2nd International Conference on Language, Communication and Culture Studies (ICLCCS 2021)*, 2021.
- [21] Yu P, Bobik M, Qiu S. Innovative marketing of Chinese Baijiu for online and offline markets: A case study of Wuliangye and Moutai. *Marketing and Advertising in the Online-to-Offline (O2O) World*: IGI Global, 2023: 224-46.
- [22] Zou X. Research on the Protection Management and Sustainable Development of Chinese Baijiu Workshops under the Background of Joint World Heritage Application. *2023 5th International Conference on Economic Management and Cultural Industry (ICEMCI 2023)*, 2024.