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To cite this article: Debi A. LaPlante, Taylor G. Lee, John M. Slabczynski, Howard J. Shaffer & Heather M. Gray (2022): Five barriers to defining responsible drinking, *Addiction Research & Theory*, DOI: [10.1080/16066359.2022.2135703](https://doi.org/10.1080/16066359.2022.2135703)

To link to this article: <https://doi.org/10.1080/16066359.2022.2135703>



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Published online: 22 Oct 2022.



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Five barriers to defining responsible drinking

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ABSTRACT

‘Responsible drinking’ remains a poorly defined construct despite decades of use among diverse stakeholders including industry, academics, governmental agencies, and addiction advocacy groups. To move the field closer to a consensus definition of responsible drinking that is useful for educational and research purposes, we describe five primary barriers that discourage the construction of a shared definition of responsible drinking. These barriers include the lack of foundational empirical evidence, the social construction of the term, the possibility that different targets require different definitions, the political implications of responsible drinking, and the possibility that there is no safe level of alcohol consumption. We conclude this article by offering suggestions to overcome these barriers through further research.

ARTICLE HISTORY

Received 25 May 2022
Revised 7 October 2022
Accepted 10 October 2022

KEYWORDS

Responsible drinking; safe drinking; moderate drinking; construct development; alcohol; conceptual definition

Responsibility for minimizing drinking-related harms should be shared among the alcohol industry, public policymakers and regulators, beverage alcohol drinkers, and various other alcohol-related stakeholders. Stakeholders offer admonitions to ‘drink responsibly’. Yet, ‘responsible drinking’ is a poorly defined concept, offering little practical guidance to individual drinkers. Uses of the term might allude to some unspecified drinking limit, such as the U.S. Department of Education’s definition, ‘With alcohol, you must drink responsibly, limiting the amount you consume’ (Drug Enforcement Administration and U.S. Department of Education 2012), or call upon drinkers to regulate their behavior in an ambiguous manner, such as college residential advisors’ sense that responsible drinking entails ‘drinking that goes on behind closed doors and makes no public trouble’ and that which is not ‘disorderly, disruptive, or destructive’ (Rubington 1996). Observers have noted that, even during the early years of its use, the term was mired in ambiguity that clouded exactly what it means to drink responsibly (Engs 1981).

Despite a general uncertainty about the meaning of responsible drinking, use of this term has proliferated: the alcohol industry, government bodies, professional addiction organizations, and academics all have used the construct of responsible drinking (Shaffer et al. 2022). Diverse stakeholders often ignore this conceptual ambiguity and sidestep the process of providing concrete definitions. This is true even within the context of investigative studies designed to evaluate responsible drinking interventions (Gray et al. 2021). In this article, we describe responsibility and identify five

barriers to defining responsible drinking. We conclude this discussion by proposing some steps to resolve the challenges associated with those barriers.

What is responsibility?

‘Responsibility’ is a flexible term that implies a sense of obligation. It can represent the state of a person or group of people (e.g. ‘Priya has *responsibility* for keeping the kids safe’) or the state of something for which a person/group of people is responsible (e.g. ‘Keeping the kids safe is the *responsibility* of Priya’) (Merriam-Webster 2022). Although, as Szasz (1996) noted, we can distinguish among physical, legal, and moral responsibility, arguably the concept of responsible drinking has always been charged with morality. For instance, in the thirteenth century, Thomas Aquinas declared temperance one of the cardinal moral virtues, noting that excessive consumption of drink, food, or sex could have negative consequences not just for the individual, but for society more generally. Today, some might understand the notion of responsible drinking as embedded within the dominant principle of each individual being responsible for their health, a burden that requires ‘continuous self-improvement, entailing constant self-monitoring and self-discipline’ (Vicario 2021, 1457). Yet, many questions remain about the nature of responsible drinking.

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Five barriers to defining responsible drinking

There are at least five primary barriers that complicate and limit the development of a shared definition of responsible drinking. Understanding these existing barriers is fundamental to advancing the development of a valid and measurable definition of responsible drinking. This goal is consistent with other recent efforts to more precisely define a number of commonly used addiction terms, such as relapse, recovery, behavioral addiction, and responsible gambling (Hing et al. 2017; Kardefelt-Winther et al. 2017; Witkiewitz et al. 2020; Sliedrecht et al. 2022). Developing a shared definition also is necessary for informed discussions of the value of responsible drinking to public health.

Building a definition requires a strong foundation: Ambiguous definitions provide little guidance

To develop a definition of responsible drinking that can be understood and endorsed by diverse stakeholders, a logical first step might be to collect existing definitions, critically analyze them, and search for common underlying themes and principles. The assumption guiding such efforts is that it is possible to use scientific expertise to identify principles that are most valid and worthy of inclusion in a new consensus definition. In other words, ‘the truth accrues and error cancels out’ (personal communication, Robert Rosenthal). Other researchers have used this approach to develop consensus definitions of addiction-related concepts. For example, in their attempt to provide a unified definition of recovery, Witkiewitz et al. (2020) collected, categorized, and characterized extant definitions of recovery. They compared and contrasted constructs that characterize these definitions with research operationalizations of recovery to identify fundamental attributes of recovery for a unified definition. A strategy like this might be helpful for defining responsible drinking. However, as detailed below, the quality and specificity of available definitions of responsible drinking preclude such methods.

In their analysis of contemporary brewer-sponsored responsible drinking messages, Hessari and Petticrew (2018) reviewed 321 documents from eight industry-associated groups and three independent public health bodies. Hessari and Petticrew observed only one explicit definition of responsible drinking and posited that this observation provides evidence that the alcohol industry strategically disperses vague messaging. Although the alcohol industry certainly bears some culpability for responsible drinking remaining a poorly defined construct, other stakeholder groups, including academics, have likewise avoided the difficult task of offering and consistently applying an explicit definition (Gray et al. 2021). Gray et al. conducted a scoping review of 49 studies that evaluated responsible drinking interventions but identified only three explicit definitions that offered little consensus for the construct. Rather than defining responsible drinking, most authors instead provide ‘a definition of specific behavior(s) that ostensibly constitute responsible drinking (e.g. avoiding binge drinking, adhering

to safe drinking limits, using protective behavioral strategies)’ (p. 239).

In a recent systematic review of the scholarly literature and public-facing websites, Shaffer et al. (2022) searched for a definition of ‘responsible drinking’ or a close alternative among 133 sources representing the following stakeholder groups: (1) academics, (2) government organizations, (3) alcohol industry, (4) alcohol treatment centers, (5) U.S. higher education institutions, and (6) addiction professional organization. Although these sources frequently included the term ‘responsible drinking’, specifics were rare: just 17 definitions emerged across the six stakeholder groups. Of these 17 definitions, six were definitions from academic sources, five were from government organizations, three were from U.S. higher education institutions, two were from an alcohol industry group, and one was from an alcohol treatment center. This work suggests that, contrary to Hessari and Petticrew (2018), stakeholders beyond the alcohol industry frequently use the term ‘responsible drinking’.

Shaffer et al. (2022) further suggested that the alcohol industry is not the only stakeholder who avoids specificity; naive raters coded 70.6% of the 17 definitions as vague. For example, one government definition suggests that responsible drinking is ‘not drinking too much or too often’ (US Department of Health and Human Services 2007). This definition is insufficient because there is no mention of situations in which drinking anything may be inappropriate (e.g. before driving) and lacks any suggestion on what may qualify as ‘too much’ or ‘too often’. In another example, a U.S. university defines responsible drinking as ‘not drinking and driving, drinking excessively, or behaving irrationally’ (Wright et al. 2013). Like the government definition, this definition fails to encapsulate the range of behaviors that can be irresponsible. Although this does mention not drinking and driving, it is still hard to determine what ‘drinking excessively’ truly equates to. As this brief review illustrates, available definitions are rare and vague, which meaningfully limits the ability to search for common underlying themes and principles. The absence of a strong foundation for responsible drinking, therefore, represents the first barrier to developing a definition for responsible drinking.

The social construction of responsible drinking creates a moving target

As we mentioned at the outset of this paper, like other areas of social science (e.g. Flake et al. 2017), the responsible drinking construct remains in use but is underspecified. A major problem with such under-specification is the premature evaluation of poorly defined scientific claims. When this occurs, there is little likelihood of replicability and reproducibility—cornerstones of scientific research (Scheel 2022). Nevertheless, preliminary definitions are not problems themselves. ‘Preliminary operationalisations and fuzzy inferences are not a crime, but a normal starting point of scientific discovery. Yet to progress toward precise claims, the initial vagueness must be recognised and tackled in subsequent studies’, (Scheel 2022). This circumstance suggests

that the work of specifying the responsible drinking construct is worthwhile and important.

A challenge for specifying some constructs occurs when those constructs do not exist in a specific form, but rather are abstract and created by how we choose to measure them (see Fried 2017a,b for a discussion of psychological constructs). To illustrate, like definitions of mountains, seasons, or ‘alcoholism’, the nature of some constructs is impossible to fully specify with a single set of objective and immutable criteria (Vaillant 1982). This specification is more possible for those constructs that have permanence, and less so for transient constructs like responsible drinking. That is, responsible drinking is a state that can exist immutably, but is determined by social norms and preferences.

Some examples speak to the challenge that the social construction of responsible drinking poses. Most stakeholders readily agree that there is no responsible drinking for those underage; yet, religious ceremonies often include underage drinking (Zinberg & Fraser 1979; Zinberg 1984; Shaffer & Zinberg 1985). Few would argue that this is irresponsible. On the other hand, research suggests that perceptions of responsibility are influenced by systemic factors, such as racism (Mulia et al. 2009; Zapolski et al. 2014). And, sometimes, social expectations for drinking responsibility can be political. Consider Japan’s National Tax Agency’s Sake Viva! campaign, which has been criticized for promoting the message that Japan’s young adults are obliged to embrace greater alcohol consumption (Chappel 2022). These examples suggest that, as social norms and attitudes change, so too does the meaning of responsible drinking. The possibility of context-specific notions of responsible drinking, therefore, creates a second barrier to a unified and fixed definition of the construct.

Different targets might require different responsible drinking definitions

Conversations about responsible drinking range from actions on the part of individual drinkers in the general population to actions that institutions can use to support responsibility, but do not involve the actual act of drinking alcoholic beverages. These different responsibilities are implicit in existing definitions. For instance, according to a University of Florida report, responsible drinking means ‘more than just limiting yourself to a certain number of drinks. It also means not getting drunk and not letting alcohol control your life or your relationships’ (as reported in Shaffer et al. 2022). The U.S. Department of Defense ‘Own Your Limits’ program defines responsible drinking prescriptively: ‘Knowing your alcohol limits and sticking to them. Not just legal limits - but personal limits too. ... Having control over how much alcohol you drink to protect yourself and those around you’ (as reported in Shaffer et al. 2022). With respect to institutional actions, recall, for instance, that soon after the U.S. Prohibition, distillers created voluntary codes of ‘responsible’ marketing practices. Likewise, ‘responsible alcohol service’ programs also target institutions rather than individual drinkers, in this case alcohol servers.

Multiple targets of responsible drinking represent an important barrier to defining the construct of responsible drinking because a definition developed for one stakeholder (e.g. individual drinkers) might, and likely will, have limited utility for another stakeholder (e.g. researchers or alcohol purveyors). Further, it is not possible to create a useful definition absent a shared understanding of the appropriate target of a definition. Stakeholders first need to ask: Is responsible drinking a one-size-fits-all concept, or do we need to consider the more likely, but infrequently discussed, possibility that different stakeholders need different definitions? A definition that is geared toward and useful to individual drinkers might not be useful to the alcohol industry as it considers what actions it can take on its own to advance responsible drinking.

Similar concepts, such as responsible gambling, already have evidenced a shift toward segregating definitions rather than attempting to address individuals and institutions using the same definition. Although not completely analogous, experts suggest that responsible gambling can refer to either the responsible provision of gambling or the responsible consumption of gambling (Hing 2003; Blaszczynski et al. 2004; Shaffer & Ladouceur 2021). With regard to the provider side, Blaszczynski et al. (2004) defined responsible gambling as ‘policies and practices’, such as consumer protection, education, and awareness programs, that are ‘designed to prevent and reduce potential harms associated with gambling’ (p. 308). Whereas the responsible consumption of gambling has been defined as ‘Exercising control and informed choice to ensure that gambling is kept within affordable limits of money and time, is enjoyable, in balance with other activities and responsibilities, and avoids gambling-related harm’ (Hing et al. 2017, p. 369). These two definitions clearly have different targets: gambling operators and regulators in the former and individuals in the latter. Although both definitions are strong and capture the principles needed by their target groups, neither can be applied uniformly to all stakeholders involved with responsible gambling. Any attempts to join the two would likely dilute the definitions’ effectiveness to relay information to their respective target groups. Although gambling purveyors participate in gambling, whereas alcohol purveyors do not, perhaps any effective definition of responsible drinking still requires the same delineation between provision and consumption practices. It is possible that any attempt toward a single unified definition of responsible drinking would face the same dilution issues as an all-encompassing definition of responsible gambling. The lack of clarity about the appropriate targets and inclusiveness of the construct present a third barrier to developing a definition of responsible drinking.

Political implications of responsible drinking might preclude consensus

Although the lack of quality definitions prevents us from identifying common underlying principles as a starting point for a new consensus definition, other consensus approaches exist. For instance, researchers have used consensual

empirical methods for building definitions of addiction-related concepts. To illustrate, Hing et al. (2017) performed a literature review, website analysis, and expert panel to identify the core principles of responsible gambling. In another collaborative effort, Kardefelt-Winther et al. (2017) used open science techniques to facilitate a unified definition of behavioral addiction. They offered an initial definition based on their prior knowledge of addiction and invited other researchers to discuss and continue to improve the offered definition. Commentary from other researchers and group discussions has led to follow-up work refining the definition.

Although consensual empirical methods for definition building are evident for other addiction-related constructs including responsible gambling (Hing et al. 2017), and behavioral addiction (Kardefelt-Winther et al. 2017), this might be a bigger challenge for responsible drinking. Since at least the 1960s, there has existed a sharp divide between those who argue responsible drinking is a faulty construct and those who seek to promote it. Representing the former category, early scholars pointed to the concept's ambiguity and tendency to blame the victim (Beauchamp 1976; Whitehead 1979). Others have argued that teaching the public to drink responsibly is imperative for mitigating the harms from alcohol. One of the earliest proponents of this argument, Morris E. Chafetz, argued that the lack of education regarding how to drink is the main difference between cultures with low and high incidence of alcohol-related harm (Chafetz 1967). Despite decades of continuous debate between these two sides, little has changed.

Modern critics argue that the term has been commandeered by the alcohol industry and holds little utility for public health (Smith et al. 2014; Babor et al. 2018; Hessari & Petticrew 2018). These critics point to evidence that industry-sponsored messaging is ineffective and has a propensity to promote drinking rather than discourage it. Jones et al. (2016) compare efforts by the alcohol industry to define responsible drinking to Project Sunrise—a tobacco industry campaign that held the ultimate goal of stymying tobacco reform. They argue that the alcohol industry is merely using responsible drinking campaigns to build good will among the public and avoid legislation that will improve public health to the detriment of industry profits. Similarly, a group of more than 50 health experts draws comparisons from the alcohol industry's corporate social responsibility initiatives to the tobacco industry's efforts and argues that independent organizations are necessary to ensure sound public health policy (Miller et al. 2009). It is quite likely that for many of these groups, the idea of promoting a term that has been so strongly associated with the alcohol industry—in light of other actions taken against the promotion of public health (e.g. downplaying the need for government controls while focusing attention on relatively ineffective education campaigns (Jones et al. 2016))—is out of the question, even if well-defined.

Despite these critics' arguments that responsible drinking has been poisoned by the alcohol industry to obscure regulatory focus, public education campaigns might still

supplement population-level approaches to reduce alcohol-related harm. Educational campaigns, though arguably ineffective on their own, can fill a need by teaching people how to engage in alcohol or other substance use safely (Shalbfan & Khademoreza 2020). To do this, public health advocates must come together to identify the behaviors and attitudes that encompass low-risk drinking and communicate these responsible approaches to the public. The above outlined discourse suggests that many public health advocates will not be interested in such consensus work if it is unified under the umbrella of 'responsible drinking'. The possibility of political divide over responsible drinking, therefore, creates a fourth barrier to a unified and fixed definition of the construct.

The possibility of safe drinking is uncertain

Highly publicized research initially suggested that some drinking habits were not only safe, but salubrious. For example, published research suggested that low levels of red wine consumption provide some protection against cardiovascular events (Streppel 2009; Yuan & Marmorstein 2013; Cao et al. 2015; Haseeb et al. 2017). This conclusion is consistent with the concept of hormesis, defined as 'a biphasic dose response with low dose stimulation or beneficial effect and a high dose inhibitory or toxic effect' (Mattson 2008, p. 1).

However, newer investigations suggest that there might be no safe level of alcohol consumption, or at the very least, that this level is lower than initially thought. For example, Topiwala et al. (2021) completed an observational cohort study that, using MRI and cognitive testing, linked drinking patterns with brain health among more than 25,000 people and concluded that, in terms of brain health, there is no safe limit of alcohol consumption. Likewise, a recent study of nearly 400,000 UK Biobank participants indicated that the presumed protective effects of light to moderate drinking result, at least in part, from purely coincidental healthy lifestyle choices (e.g. eating vegetables, exercising; Biddinger et al. 2022). Further, genetic analyses showed that light to moderate drinking is associated with increased cardiovascular risk, and such risk increases exponentially with increases in drinking. Finally, the Global Burden of Disease (GBD) 2016 Alcohol Collaborators (2018) estimated alcohol use, alcohol-attributable deaths, and disability-adjusted life-years for the period covering 1990 to 2016, for both men and women from 195 countries and territories. One aim of this study was to generate evidence-based low-risk drinking guidelines. Interpreting the relative risk curve, the authors concluded that the drinking level that minimized harm across health outcomes was zero—no standard drinks per week. The GBD 2016 Alcohol Collaborators accounted for possible protective effects of alcohol on health outcomes, concluding that any protective effects 'were offset by the risks associated with cancers, which increased monotonically with consumption' (p. 1025). Based on these findings, the authors called for population-level policies that reduce alcohol consumption.

Some stakeholders suggest that in the absence of risk free alcohol consumption, responsible drinking is not possible. For example, about the conceptual state of responsible drinking, Moss and Albery (2018) state, ‘Another way of interpreting this absence of clear definition is that responsible drinking is not actually a discrete set of drinking behaviors which are inherently and universally ‘responsible,’ but that responsible drinking is more suitably defined as any drinking behavior, which does not lead to harm, to oneself or others’ (p 2). Just as some suggest that the industry’s commercially strategic use of the term renders it worthless, for some, the idea that responsibility requires zero health risk, rather than reduced health risk, might also render the term worthless, given the findings reviewed above. Therefore, the possibility that no level of alcohol consumption is safe fuels the fifth barrier to defining responsible drinking.

Concluding thoughts

This article provides consideration of five primary barriers to the development of a conceptual definition of responsible drinking—one that is measurable and grounded in the interplay of theory and empirical evidence. We suggest that creating such a definition is necessary to determine whether the construct holds public health value, or has little value compared to alternatives. As mentioned earlier, stakeholders are divided about this issue. Since at least the 1960s, scholars have debated the importance of the construct (Chafetz 1967, 1970; Beauchamp 1976; Whitehead 1979). Yet, such arguments are doomed to be inconclusive if those involved in the dispute do not share a common understanding of what is being debated. It follows that recognizing the conceptual confusion that exists for the responsible drinking construct is important, and working to resolve this conceptual confusion is essential. Additionally, should responsible drinking be replaced, any work toward defining one construct can be used as the foundation for another. Any movement toward definitions for alternative constructs such as safe or moderate drinking would benefit from a strong conceptualization of responsible drinking.

Some of the identified barriers might be easier for the field to address than others. In the absence of existing scholarly and lay definitions of responsible drinking that might offer a set of underlying principles (i.e. barrier 1), researchers could identify such underlying principles using a Delphi method, ‘a systematic means for gathering expert opinions about complex issues or problems for which there are no verifiable, evidence-based solutions’ (Kaplan et al. 2014, p. 367). Expert consensus methods are likely to be insufficient for finalizing a definition: such methods are only as good as the available science. Nonetheless, consensus methods might provide an important starting point or confirmatory evidence supporting a new definition, particularly if they take into consideration well-developed instruments that attempt to operationalize aspects of responsible drinking and closely related activities, such as protective behavioral strategies (e.g. Barry & Goodson 2011; Richards et al. 2021).

Notably, this work would have to address the possibility that drinking responsibly means different things in different contexts (barrier 2), which likely will result in a flexible rather than fixed consensus definition.

Likewise, it would be possible to address barrier 3 by logically specifying the criteria that are fundamental to an individual-focused definition of responsible drinking and those that are fundamental to an institutional-focused definition of responsible drinking. Systematic consideration of the overlap and uniqueness of such criteria will inform the appropriateness of a solitary definition versus the need for target-specific definitions.

Barriers four and five are more complicated to resolve. Regarding the former, it might not be possible to fully resolve this barrier. Political opinion related to drinking and the potential influence of the industry often is strong. This is because the threat of such bias to objective public health measures is real. However, if a contributing factor of such opinions is skepticism about industry meddling in the science of responsible drinking, then methodological strategies that can mitigate or eliminate the potential for industry bias and increase trust in research might be essential to overcoming barrier 4. One potential pathway to accomplishing this might be a greater adoption of open science principles and practices (Louderback et al. 2020; Soderberg et al. 2021; Pennington & Heim 2022). Open science practices work toward transparency and against common questionable research practices, like p-hacking (i.e. inappropriate analysis to ensure statistically significant outcomes for a favored result; Kirtley 2022). Though research suggests that open science practices can accomplish these goals, unfortunately, their use in addiction-related research remains limited (Vassar et al. 2020; Adewumi et al. 2021). Limited use of open science also is apparent in related fields, like the gambling studies field (LaPlante, Louderback, & Abarbanel 2021), which also contends with difficult debates regarding industry influence upon the scientific literature (Batra 2018; Collins et al. 2020). It is imperative, then, that addiction studies fields increase their knowledge of and use of open science principles and practices. Doing so can help manage industry relationships and the perceived trustworthiness of published findings. This is essential to the possibility of overcoming barrier 4.

Regarding the latter (barrier 5), as discussed, contemporary research has failed to definitively identify the point at which the consumption of alcohol becomes harmful. While contemporary works generally proliferate the view that any consumption introduces disproportionate harm (GBD 2016 Alcohol Collaborators 2018), other research suggests a complex relationship between alcohol and health that is dependent on variables such as quantity of alcohol, age, and even geographic location (GBD 2020 Alcohol Collaborators 2022). To those who believe the former, that any level of consumption introduces harm, it might seem reasonable to conclude that responsible drinking is an oxymoron under the premise that harmful behaviors can never be considered responsible. However, this is an absolutist position, one that treats safety as an all-or-nothing condition. We suggest that, in reality,

safety is a continuous variable with incremental risks (i.e. costs such as physical harm or psychosocial harm) often offset by gains (i.e. benefits, such as physical satisfaction or psychosocial satisfaction). People regularly engage in activities that present at least a low level of risk, by choice or requirement. Whether it is climbing ladders, eating sushi, driving during rush hour, or skiing, these activities present some risk for harm, but those who engage in them are not considered irresponsible. If accurate for these activities, the same must be true for drinking alcohol. Ultimately, the acceptability of engaging in an activity is personal and arbitrary, dependent on a sliding scale that values costs and benefits. What those of us concerned with public health must not do is convey the faulty belief that ‘responsible’ requires an activity to be ‘100% safe’.

Ultimately, concessions might be needed on both sides of the debate. Maximizing the effectiveness of public health interventions will likely rely on both population level reforms, such as price controls and limits on availability, as well as interventions at the individual level such as teaching people how to drink responsibly. Although both of these approaches are useful for mitigating alcohol-related harms, neither is capable of totally eliminating those harms. Further, endorsing one does not negate the importance of the other.

In sum, after reviewing five existing barriers to defining responsible drinking, we suggest an evidence-informed path forward. The first step is to derive expert consensus about the essential principles of the concept, in a way that recognizes the (1) inherently context-dependent nature of this activity, (2) potential need for unique definitions for individuals and institutions, and (3) potential need for new terminology consistent with contemporary research regarding the health effects of even moderate drinking. The second step is to use these findings to generate individual-level and institutional-level definitions and then test these proposed definitions with representatives of their target audiences and, exploring their target audiences’ understanding and acceptability of proposed definitions. Although these recommendations might, at first, appear excessive or regressive, given that the term (and close concepts) has been in use for so many years, the necessity and value of doing so is clear. Furthermore, this work, along with other recent construct development work of common addiction-related terms (Hing et al. 2017; Kardefelt-Winther et al. 2017; Witkiewitz et al. 2020; Sliedrecht et al. 2022) points to a greater need for systematic construct development work in the addiction field, more generally.

Non-blinded Disclosure of Interest

Preparation of this research was supported by the Foundation for Advancing Alcohol Responsibility (FAAR), a foundation that receives funding from the alcohol industry. FAAR was not involved in any way in the preparation of this article.

The Division on Addiction also receives funding from DraftKings, Inc., a sports betting and gaming company; Entain

PLC (formally GVC Holdings PLC), a sports betting and gambling company; EPIC Risk Management; Massachusetts Department of Public Health, Office of Problem Gambling Services via Health Resources in Action; MGM Resorts International via the University of Nevada, Las Vegas; National Institutes of Health (National Institute of General Medical Sciences and National Institute on Drug Abuse) via The Healing Lodge of the Seven Nations; and Substance Abuse and Mental Health Services Administration via the Addiction Treatment Center of New England. During the past 5 years, the Division on Addiction also has received funding from David H. Bor Library Fund, Cambridge Health Alliance; Fenway Community Health Center, Inc.; Greater Boston Council on Alcoholism; Integrated Center on Addiction Prevention and Treatment of the Tung Wah Group of Hospitals, Hong Kong; Massachusetts Department of Public Health, Bureau of Substance Addiction Services; Massachusetts Department of Public Health, Bureau of Substance Addiction Services via St. Francis House; the Massachusetts Gaming Commission, Commonwealth of Massachusetts; and Substance Abuse and Mental Health Services Administration via the Gavin Foundation.

During the past five years, Dr. LaPlante has served as a paid grant reviewer for the National Center for Responsible Gaming (NCRG; now International Center for Responsible Gaming), received travel funds, speaker honoraria, and a scientific achievement award from the ICRG, has received speaker honoraria and travel support from the National Collegiate Athletic Association, received honoraria funds for preparation of a book chapter from Université Laval, received publication royalty fees from the American Psychological Association, and received course royalty fees from the Harvard Medical School Department of Continuing Education. Dr. LaPlante is a non-paid member of the New Hampshire Council for Responsible Gambling and the Conscious Gaming advisory board.

During approximately the past five years, Dr. Shaffer received speaker honoraria and compensation for consultation or royalties from the American Psychological Association, University of Massachusetts, Las Vegas Sands Corp., Davies Ward Phillips and Vineberg, LLP, Freshfields Bruckhaus Deringer, LLP, and from the Dunes of Easthampton, a residential addiction treatment program, for serving as a consultant.

During the past five years, Dr. Gray has served as a paid grant reviewer for the National Center for Responsible Gaming (NCRG; now the ICRG), received honoraria funds for preparation of a book chapter from Université Laval, received travel funds and honoraria from the ICRG, received speaker fees from the Responsible Gaming Association of New Mexico and the University of Iowa, and received course royalty fees from the Harvard Medical School Department of Continuing Education. Dr. Gray is a non-paid member of the New Hampshire Council for Responsible Gambling.

Ethical approval

The research in this paper does not require ethics board approval.

Disclosure statement

Preparation of this research was supported by a foundation that receives funding from the alcohol industry. The foundation was not involved in any way in the preparation of this article.

Funding

This work was supported by the Foundation for Advancing Alcohol Responsibility.

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References

- Adewumi MT, Vo N, Tritz D, Beaman J, Vassar M. 2021. An evaluation of the practice of transparency and reproducibility in addiction medicine literature. *Addict Behav.* 112:106560.
- Babor TF, Robaina K, Brown K, Noel J, Cremonte M, Pantani D, Peltzer RI, Pinsky I. 2018. Is the alcohol industry doing well by 'doing good'? Findings from a content analysis of the alcohol industry's actions to reduce harmful drinking. *BMJ Open.* 8(10)2018: e024325.
- Barry AE, Goodson P. 2011. Developing and testing the CHORDS: characteristics of responsible drinking survey. *Am J Health Promot.* 25(6):e11–e21.
- Batra A. 2018. Research in the field of gambling disorders funded by gambling providers: Lessons to learn from the pharmaceutical industry? *Sucht: Zeitschrift Für Wissenschaft Und Praxis.* 64(5-6): 335–339.
- Beauchamp DE. 1976. Alcoholism as blaming the alcoholic. *Int J Addict.* 11(1):41–52.
- Biddinger KJ, Emdin CA, Haas ME, Wang M, Hindy G, Ellinor PT, Kathiresan S, Khera AV, Aragam KG. 2022. Association of habitual alcohol intake with risk of cardiovascular disease. *JAMA Netw Open.* 5(3):e223849.
- Blaszczynski A, Ladouceur R, Shaffer HJ. 2004. A science-based framework for responsible gambling: the Reno model. *J Gambl Stud.* 20(3):301–317.
- Cao Y, Willett WC, Rimm EB, Stampfer MJ, Giovannucci EL. 2015. Light to moderate intake of alcohol, drinking patterns, and risk of cancer: results from two prospective US cohort studies. *BMJ.* 351: h4238.
- Chafetz ME. 1967. Alcoholism prevention and reality. *Q J Stud Alcohol.* 28(2):345–348.
- Chafetz ME. 1970. The prevention of alcoholism. *Int J Psychiatry.* 9: 329–348.
- Chappel B. 2022. Japan launches a contest to urge young people to drink more alcohol. NPR. Retrieved from <https://www.npr.org/2022/08/18/1118163173/japans-tax-alcohol-young-people-campaign>.
- Collins P, Shaffer HJ, Ladouceur R, Blaszczynski A, Fong D. 2020. Gambling research and industry funding. *J Gambl Stud.* 36(3): 989–997.
- Drug Enforcement Administration and U.S. Department of Education. 2012. *Growing Up Drug Free: A Parent's Guide to Prevention*. Washington, D.C.: Drug Enforcement Administration and U.S. Department of Education
- Engs RC. 1981. Responsibility and Alcohol. *Health Educ.* 12(1):20–22.
- Flake JK, Pek J, Hehman E. 2017. Construct validation in social and personality research: Current practice and recommendations. *Soc Psychol Personal Sci.* 8(4):370–378.
- Fried EI. 2017a. What are psychological constructs such as personality traits, intelligence, or mental disorders? Retrieved from <https://osf.io/65pdh/>.
- Fried EI. 2017b. What are psychological constructs? On the nature and statistical modelling of emotions, intelligence, personality traits and mental disorders. *Health Psychol Rev.* 11(2):130–134.
- GBD 2016 Alcohol Collaborators. 2018. Alcohol use and burden for 195 countries and territories, 1990–2016: A systematic analysis for

- the Global Burden of Disease Study 2016. *Lancet* 392(10152): 1015–1035.
- GBD 2020 Alcohol Collaborators. 2022. Population-level risks of alcohol consumption by amount geography, age, sex, and year: a systematic analysis for the Global Burden of Disease Study 2020. *Lancet* 400(10347):185–235.
- Gray HM, Wiley RC, Williams PM, Shaffer HJ. 2021. A Scoping Review of “Responsible Drinking” Interventions. *Health Commun.* 36(2):236–256.
- Haseeb S, Alexander B, Baranchuk A. 2017. Wine and cardiovascular health: a comprehensive review. *Circulation.* 136(15):1434–1448.
- Hessari NM, Petticrew M. 2018. What does the alcohol industry mean by ‘Responsible drinking’? A comparative analysis. *J Public Health (Oxf).* 40(1):90–97.
- Hing N. 2003. Principles, processes and practices in responsible provision of gambling: a conceptual discussion. *UNLV Gaming Res Rev J.* 7(1):33–47.
- Hing N, Russell AMT, Hronis A. 2017. A definition and set of principles for responsible consumption of gambling. *Int Gambling Stud.* 18(3):1–24.
- Jones SC, Wyatt A, Daube M. 2016. Smokescreens and Beer Goggles: How Alcohol Industry CSM Protects the Industry. *Soc Market Quart.* 22(4):264–279.
- Kaplan DM, Tarvydas VM, Gladding ST. 2014. 20/20: A vision for the future of counseling: The new consensus definition of counseling. *J Counsel Dev.* 92(3):366–372.
- Kardefelt-Winther D, Heeren A, Schimmenti A, van Rooij A, Muraige P, Carras M, Edman J, Blaszczynski A, Khazaal Y, Billieux J. 2017. How can we conceptualize behavioural addiction without pathologizing common behaviours? *Addiction* 112(10):1709–1715.
- Kirtley OJ. 2022. Advancing credibility in longitudinal research by implementing open science practices: Opportunities, practical examples, and challenges. *Infant Child Dev.* 31(1):e2302.
- LaPlante DA, Louderback ER, Abarbanel B. 2021. Gambling researchers’ use and views of open science principles and practices: A brief report. *Int Gambling Stud.* 21(3):381–394.
- Louderback ER, Wohl MJA, LaPlante DA. 2020. Integrating open science practices into recommendations for accepting gambling industry research funding. *Addiction Research & Theory.*
- Mattson MP. 2008. Hormesis defined. *Ageing Res Rev.* 7(1):1–7.
- Merriam-Webster. 2022. *Dictionary*. Retrieved from <https://www.merriam-webster.com/dictionary/responsibility>.
- Miller PG, Kypril K, Chikritzhs TN, Skov SJ, Rubin G. 2009. Health experts reject industry-backed funding for alcohol research. *Med J Australia.* 190(12):713–714.
- Moss AC, Albery IP. 2018. The Science of Absent Evidence: Is There Such Thing as an Effective Responsible Drinking Message? *Alcohol Alcohol.* 53(1):26–30.
- Mulia N, Ye Y, Greenfield TK, Zemore SE. 2009. Disparities in Alcohol-Related Problems Among White, Black, and Hispanic Americans. *Alcohol Clin Exp Res.* 33(4):654–662.
- Pennington CR, Heim D. 2022. Reshaping the publication process: Addiction Research and Theory joins Peer Community In Registered Reports. *Addict Res Theory.* 30(1):1–4.
- Richards DK, Pearson MR, Field CA. 2021. Further validation of the Treatment Self-Regulation Questionnaire for assessing motivations for responsible drinking: A test of self-determination theory. *Exp Clin Psychopharmacol.* 29(6):679–688.
- Rubington E. 1996. The ethic of “responsible Drinking. *Deviant Behavior.* 17(3):319–335.
- Scheel AM. 2022. Why most psychological research findings are not even wrong. *Infant Child Dev.* 31(1):e2295.
- Shaffer HJ, Gray HM, Slabczynski JM, Lee TG, LaPlante DA. 2022. Stakeholder definitions of responsible drinking: A call to define an ambiguous construct. *Addiction Res Theory.* 1–7.
- Shaffer HJ, Ladouceur R. 2021. Moving Away from Individual Responsibility: A Comment. *J Gambl Stud.* 37(3):1071–1078.
- Shaffer HJ, Zinberg NE. 1985. The social psychology of intoxicant use: The natural history of social settings and social control. *Bull Soc Psychol Addictive Behav.* 4(1):49–55.
- Shalbfan M, Khadmoreza N. 2020. What we can learn from COVID-19 outbreak in Iran about the importance of alcohol use education. *Am J Drug Alcohol Abuse.* 46(3):385–386.
- Slidrecht W, Roozen H, de Waart R, Dom G, Witkiewitz K. 2022. Variety in Alcohol Use Disorder Relapse Definitions: Should the Term “Relapse” Be Abandoned? *J Stud Alcohol Drugs.* 83(2): 248–259.
- Smith KC, Cukier S, Jernigan DH. 2014. Defining strategies for promoting product through ‘drink responsibly’ messages in magazine ads for beer, spirits, and alcopops. *Drug Alcohol Depend.* 142(1): 168–173.
- Soderberg CK, Errington TM, Schiavone SR, Bottesini J, Thorn FS, Vazire S, Esterling KM, Nosek BA. 2021. Initial evidence of research quality of registered reports compared with the standard publishing model. *Nat Hum Behav.* 5(8):990–997.
- Streppel MT, Ocké MC, Boshuizen HC, Kok FJ, Kromhout D. 2009. Long-term wine consumption is related to cardiovascular mortality and life expectancy independently of moderate alcohol intake: The Zutphen Study. *J Epidemiol Commun Health.* 63(7):534–540.
- Szasz T. 1996. A brief history of medicine’s war on responsibility. *J Clin Epidemiol.* 49(6):609–613. PMID - 8656218
- Topiwala A, Ebmeier KP, Maullin-Sapey T, Nichols TE. 2021. No safe level of alcohol consumption for brain health: observational cohort study of 25,378 UK Biobank participants. *medRxiv.* 2021.2005.2010.21256931.
- U.S. Department of Health and Human Services. 2007. The surgeon general’s call to action to prevent and reduce underage drinking: A guide to action for families. U.S. Department of Health and Human Services, Office of the Surgeon General.
- Vaillant GE. 1982. On defining alcoholism. *Br J Addict.* 77(2):143–144.
- Vassar M, Jellison S, Wendelbo H, Wayant C. 2020. Data sharing practices in randomized trials of addiction interventions. *Addict Behav.* 102:106193.
- Vicario S, Peacock M, Buykx P, Meier PS, Bissell P. 2021. Negotiating identities of ‘responsible drinking’: Exploring accounts of alcohol consumption of working mothers in their early parenting period. *Sociol Health Illn.* 43(6):1454–1470.
- Whitehead PC. 1979. Public policy and alcohol related damage: Media campaigns or social controls? *Addict Behav.* 4(1):83–89.
- Witkiewitz K, Montes KS, Schwebel FJ, Tucker JA. 2020. What is recovery? *Alcohol Res Current Rev.* 40(3).
- Wright JD, Donley AM, Strickhouser S, Hall T, Jacque R, Newman R. 2013. Final report orange county partnership for success grant: year 2012–2013 activities. Institute for Social and Behavioral Sciences, University of Central Florida. <https://sciences.ucf.edu/sociology/wp-content/uploads/sites/2/2015/03/Partnership-for-Success-Report-2012-13.pdf>
- Yuan H, Marmorstein R. 2013. Red Wine, Toast of the Town (Again). *Science.* 339(6124):1156–1157.
- Zapolski TCB, Pedersen SL, McCarthy DM, Smith GT. 2014. Less drinking, yet more problems: Understanding African American drinking and related problems. *Psychol Bull.* 140(1):188–223.
- Zinberg NE. 1984. *Drug, set, and setting*. New Haven, CT: Yale University Press.
- Zinberg NE, Fraser KM. 1979. The role of the social setting in the prevention and treatment of alcoholism. In J. Mendelson & N. Mello (Eds.), *The Diagnosis & Treatment of Alcoholism* (p. 359–385). New York: McGraw-Hill Book Company.