**A continuum model of alcohol use and problems can advance public health goals without undermining treatment agendas. Reply to commentaries.**

We wish to thank the authors for their thought-provoking commentaries and engagement with the importance of a continuum model of alcohol use and problems. We strongly agree with Callinan and Room (2023) that alcohol problems are more accurately reflected by multiple continuums, rather than existing as a single continuum (see Watts et al. (2021) for empirical and theoretical support of the multiple continuum model). Our intention was to highlight the value of a single continuum for pragmatic purposes, particularly in terms of public health objectives including stigma reduction and other potential benefits such as greater problem recognition amongst people with lower severity alcohol use disorder (AUD).

There are also challenges and risks in adopting a continuum model for practitioners who “will continue to operate out of necessity for the most part in a more categorical way” (Callinan & Room, 2023), which they propose could lead to a disconnect between research and practice. We agree there is likely a need for clinical thresholds for practitioners working directly with people experiencing alcohol problems. However, a broader promotion of a continuum model for public health goals does not inevitably undermine the utility of categorical approaches amongst practitioners, or vice versa. Indeed, as Callinan and Room suggest, utilising sub-categories for treatment of AUD is one response to assist with such issues, but does not mean that a continuum model could not be effectively advanced in broader non-clinical contexts or used in clinical contexts to confer levels of risk to patients in clinical practice.

Callinan and Room conclude by recommending that “recognition of a more multidimensional ‘alcohol-related problems’ construct” should be sought, presumably for many of the same reasons we advocate a broader continuum concept. Whilst we agree, we suggest that specifically emphasizing a *continuum* orientated conceptualization has particular advantages for disrupting the strong categorical biases that exist in the *public’s* heuristics towards alcohol problems, which an ‘alcohol-related problems’ concept does not explicitly challenge.

Arunogiri and Manning (2023) also focus on similar issues presented by a continuum model for treatment, whilst acknowledging the potential for continuum models for reducing stigma as a major barrier to help-seeking in AUD. However, similarly, we propose that promoting a continuum model to support broader public health objectives does not need to undermine or replace pragmatic treatment approaches including diagnostic thresholds. However, Arunogiri and Manning appear to infer that in calling for a continuum model equates to lowering treatment thresholds, which is not the case. Rather, we propose key advantages of a more continuum-aligned understanding of alcohol problems amongst the general public will hold specific advantages for problem recognition and natural recovery, particularly amongst those with alcohol related problems that may not meet clinical ‘AUD’ thresholds.

Arunogiri and Manning are correct that Morris et al. (2022) did not find an association between continuum beliefs and greater problem recognition, but do not report that this association *was* found by Morris et al. (2020). Morris et al. (2022) suggest that these differences may have been due to the different experimental manipulations used, whereby an audio-visual vignette may have increased engagement (Morris et al., 2020) which was not replicated via a script-based manipulation (Morris et al., 2021). Further, whilst Morris et al. (2022) did not replicate the effect of continuum beliefs on problem recognition, the study did find lower problem recognition amongst the ‘alcoholism’ condition, highlighting the need for alternatives to disease models to address AUD stigma (Rundle et al., 2021). Subsequent studies have also indicated the potential for continuum beliefs and enhanced AUD problem recognition (e.g., Leonhard et al., 2022).

Arunogiri and Manning further highlight the importance of alcohol treatment and issues of low access to treatment and underinvestment. We agree these are key issues in addressing more severe alcohol-related problems, but again do not agree that advancing a continuum model in the broader domain needs to undermine treatment objectives. We also do not agree that decision makers should “reserve scarce treatment resources for those with the greatest need” without consideration. The rationale for this idea is intuitive but we propose that it also overlooks the importance of the prevention paradox whereby the greatest volume of harm at the population level is spread across larger populations of people with lower severity problems (Davison et al., 2008). One may instead argue that when resources are scarce, they should be invested further ‘usptream’ for greater cost-effectiveness (Williams et al., 2018). Further, it may be argued that treatment and prevention approaches (which to some extent represent an artificial dichotomy (Storbjörk & Room, 2008), should not be a zero-sum game in which resources for one are pitted against the other. Nonetheless, we believe that the promotion of continuum beliefs *for public health objectives* does not equate to expanding existing treatment to less severe cases (i.e., ‘concept creep’ (Haslam, 2016). Further, as suggested in our original commentary, one untested potential benefit of continuum beliefs may in fact be increased support for investment in alcohol treatment or other effective polices responses which are currently under-utilized, in part due to dichotomous public understandings of alcohol problems (McCambridge et al., 2021).

We agree with Arunogiri and Manning that further research is needed regarding pathways and interventions for people who are unlikely to access treatment due to typically lower AUD severities. We also agree that screening and brief intervention (SBIRT) as an efficacious intervention has not been successfully implemented. However, this failure has in part been attributed to a lack of continuum aligned understanding of alcohol problems amongst healthcare practitioners and the public, and the associated stigma of binary ‘alcoholism’ conceptualizations (Aira et al., 2003; Khadjesari et al., 2018; Morris & Schomerus, 2023; O’Donnell et al., 2020). In conclusion, we believe the emergent evidence suggests that if avoiding the risks of (mis)applying continuum models in treatment contexts, advancing a continuum model as a top level concept, primarily targeting *public beliefs* about the nature of alcohol use and problems, will in fact be of significant benefit to advancing population level outcomes - without harming treatment agendas.

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