The “alcoholic other”: harmful drinkers resist problem recognition to manage identity threat

Morris, J., Moss, A.C., Albery, I.P., Heather, N.

*Correspondence concerning this article should be addressed to: James Morris, Centre for Addictive Behaviours Research, School of Applied Sciences, London South Bank University, United Kingdom., e-mail morrij24@lsbu.ac.uk

Abstract

Objective: Harmful drinkers represent an important Alcohol Use Disorder (AUD) group in public health terms, accounting for significant health and social costs. However, harmful drinkers are characterized by low problem recognition; they tend to construct their drinking identity as positive and problem-free, actively setting themselves apart from the stigmatised ‘alcoholic other’. As such, harmful drinkers rarely engage in treatment and represent an important opportunity for lower threshold interventions and self-change. The present study sought to explore AUD problem framing and stigma effects on problem recognition. Methods: Harmful drinkers without perceived addiction experience recruited online (n = 244, 54% male, 46% female, 96% British) were randomised to one of six conditions comprising beliefs about alcohol problems (control, continuum, binary disease model) and stigma (stigma, non-stigma), and completed measures relating to problem recognition. Results: As predicted, results found that harmful drinkers exposed to binary disease model beliefs and stigmatising language had significantly lower problem recognition than those in other conditions. However, no support was found for the prediction that continuum beliefs would be associated with higher problem recognition. Results suggest that the interaction of binary disease model beliefs and stigma prompted alcoholic label avoidance. Conclusion: These findings suggest that problem framing has important consequences for harmful drinkers. Implications for behaviour change amongst harmful drinkers through mechanisms of problem framing and identity are discussed.

Keywords: alcohol, stigma, problem recognition, framing, addiction

Public health significance statement:

This study highlights the importance of problem framing and language in problem recognition amongst harmful drinkers, a key public health target group.

1. Introduction

Harmful drinking is associated with significant health and social costs, for instance, harmful drinkers account for 1 in 5 UK hospital admissions (Roberts et al., 2019). Harmful drinkers are individuals whose alcohol consumption causes them problems (WHO, 2018), with specific alcohol consumption[1] or assessment tool thresholds used to identify harmful drinking levels (NICE, 2011a). However, harmful drinkers are characterised by low problem recognition, for instance, by significantly underestimating their consumption (Garnett et al., 2015), assessing their drinking risks or problems at similarly low levels to non-harmful drinkers (Morris et al., 2020) and pointing to *others* as problem drinkers (Khadjesari et al., 2018; Parke et al., 2018; Wallhed Finn et al., 2014). As a consequence, harmful drinkers rarely engage in treatment (Dunne et al., 2018) and therefore represent an important opportunity for public health interventions (NICE, 2011b; Witkiewitz et al., 2019).

Problem recognition likely represents an important first step for behaviour change amongst harmful drinkers, yet appears an under-researched mechanism in addressing Alcohol Use Disorders (AUDs; Morris et al., 2021; Oser et al., 2010). Indeed, a number of important barriers to help-seeking for AUDs are likely to be associated with low problem recognition (Glass et al., 2013; May et al., 2019; Probst et al., 2015; Tucker et al., 2004). These include poor identification by primary care physicians (Oyefeso et al., 2008), a belief that abstinence is the only acceptable drinking goal (Witkiewitz et al., 2021) or that Alcoholics Anonymous (AA) is the only source of help available (Khadjesari et al., 2018). Various manifestations of stigma have also been consistently identified as a notable barrier to treatment engagement

[1] In the UK, harmful drinkers are identified as regularly drinking above 35 or 50 units per week for women and men respectively, or as scoring 16 or more on the Alcohol Use Disorders Identification Test (Babor et al., 2001).

(May et al., 2019). Alcohol problems are amongst the most stigmatised conditions (Peter et al., 2021; Schomerus, Lucht, et al., 2011), with common public stereotypes of problem drinkers as weak, dangerous, untrustworthy or blameworthy (Crisp et al., 2005; Nieweglowski et al., 2018). People with AUDs commonly state a fear of being labelled ‘an alcoholic’ as a result of engaging in treatment, known as *label avoidance* (Corrigan & Wassel, 2008; Glass et al., 2013; May et al., 2019; Wallhed Finn, Bakshi, & Andréasson, 2014), whilst former self-identified ‘alcoholics’ carefully evaluate the risks of disclosing their recovery identity (Romo et al., 2016).

Label avoidance reflects awareness of the threats to the self presented by stigma. For example, *social identity threat* results from awareness of owning a stigmatised characteristic in the eyes of others and subsequent social devaluation (Schmader & Major, 2017). Further, *self-stigma* reflects the internalization of publicly-held stereotypes (Bos et al., 2013) and can result in diminished self-esteem or recovery self-efficacy (Corrigan, Bink, et al., 2016; Schomerus, Corrigan, et al., 2011). It has therefore been argued that a binary disease model of alcoholism carries a high labelling burden which can be prohibitive to alcohol problem recognition and AUD interventions (Aira et al., 2003; Morris et al., 2021; Walters, 2002; Young, 2011). Such findings point to the importance of extant research indicating the role of beliefs about the nature of alcohol problems for problem recognition and recovery (Heather et al., 1982; Miller et al., 1996; Morris et al., 2020; Wiens & Walker, 2015).

To this end, a number of recent studies have sought to explore framing effects about alcohol and substance use problems as factors in problem recognition, stigma, help-seeking and other related factors (Ashford et al., 2018; Burnette et al., 2019; Morris et al., 2020; Rundle et al., 2021; Sumnall et al., 2020; Wiens & Walker, 2015). Such framing studies have broadly explored common models of addiction versus other conceptualisations with differing

implications for AUD aetiology and recovery. Notably, a binary disease model of alcoholism (BDM) implies there are two distinct populations: those with the disease of alcoholism and those without. Under such disease model framings, alcohol problems are more likely to be perceived as severe and of a genetic or neurological basis, and to be associated with powerlessness and prognostic pessimism, and with beliefs that abstinence and medical treatments are necessary for recovery (Haslam & Kvaale, 2015; Lebowitz & Appelbaum, 2017; Loughman & Haslam, 2018; Miller et al., 1996; Miller & Kurtz, 1994; Piras et al., 2016; Reinarman, 2005).

In contrast, psychological or continuum derived models construe alcohol problems as existing along degrees of severity without discrete biological markers. Under continuum or psychological paradigms, it is proposed that people with alcohol problems are less likely to be seen as fundamentally different from the general population (Morris et al., 2021; Schomerus et al., 2016), thus potentially attenuating perceptions of separation and difference as key components of stigma (Link & Phelan, 2001). In turn, alcohol problems are more likely to be associated with experiencing trauma or difficult life events, and greater acceptability of psychosocial treatment interventions, self-change approaches or reduced drinking goals (Lebowitz & Appelbaum, 2017; Morris et al., 2020; Rundle et al., 2021; Saha et al., 2006; Tucker, 2005; Wiens & Walker, 2015; Witkiewitz et al., 2021). Continuum beliefs emphasise similarity between drinkers, and are therefore in direct contrast to disease model beliefs which may be seen to *essentialize* persons as pathologized or biological others (Buchman et al., 2011; Dar-Nimrod & Heine, 2011; Loughman & Haslam, 2018; Reinarman, 2005)

Limited empirical research has explored the extent to which such beliefs affect problem recognition processes amongst harmful drinkers (Morris et al., 2020; Young, 2011).

On this basis, the current study sought first to replicate our previous findings of a positive effect of continuum beliefs on problem recognition amongst harmful drinkers without addiction experience (Morris et al., 2020). In Morris et al. (2020), continuum beliefs were experimentally manipulated via a short narrative video vignette and found to be associated with higher levels of problem recognition versus control and binary disease model (BDM) conditions. However no difference between BDM beliefs and control was found. Thus, in the present study we investigated whether BDM beliefs about alcohol problems were associated with lower problem recognition versus continuum or control conditions via written informational vignettes, potentially reflecting identity deflection as a mechanism for label avoidance. Participants with perceived addiction experience were excluded from the analysis owing to confounding effects of either having self-identified alcohol problems or the likelihood of firmer pre-existing beliefs about addiction, as per Morris et al. (2020). We also sought to test a mediating role of self-stigma using a moderation-of-process design (Spencer et al., 2005)~~, such that lower self-stigma would be associated with higher problem recognition~~. That is, in Morris et al. (2020) we hypothesised that higher continuum beliefs ~~may~~ functioned to increase problem recognition via lower self-stigma, whilst in the present study we further hypothesised lower problem recognition as a function of BDM beliefs would be mediated via higher self-stigma. However, as no evidence of an experimental effect on the measure of self-stigma was found, results are reported in the supplemental materials for brevity. Secondary hypotheses for effects of belief type on measures of help~~-~~seeking intentions/behaviours and a secondary measure of problem recognition are also reported in

the supplemental materials. Hypotheses and further details about the study were registered[2] on AsPredicted.org. The data file is available via the Open Sciene Framework[3].

2. Method

2.1. Participants

Participants were invited to complete an online study using Qualtrics software via Facebook and Instagram advertisements targeting people in England over the age of 18. The survey was advertised as "Beliefs and attitudes about problem drinking". Recruitment was open to all persons who identified as alcohol consumers as data was simultaneously collected for a separate study on public stigma not reported here. Of the 2,095 participants who completed the questionnaire, 28% (n=577) reported no perceived addiction experience, 39% (n=826) reported personal addiction experience and 33% (n=692) reported close friends or family having addiction experience. Of all participants who completed the questionnaire, 967 were classified as harmful drinkers, of which 244 were identified as harmful drinkers without perceived addiction experience (see below for details of classification procedures) and were included in the present analysis. The sample comprised 54% (n=131) men and 46% (n=113) women ($\bar{X}$ *age* = 29.98, SD = 16.93). Ninety-six per cent (n=234) self-identified as British, 2% as Irish (n=5), with remaining responses (n=5) indicating other nationalities.

2.2. Design and Procedure

[2] Registered as "Belief effects about alcohol problems: PhD Study 2" (#20268) available here: https://aspredicted.org/67n39.pdf
[3] The data is saved as an SPSS file under the project name "Alcohol problem framing" available here: https://osf.io/ty26a/

The design of the study is shown in Figure 1: a between participants design with belief type (control, continuum, BDM) and stigma (absent, present) as independent variables, and problem recognition as the dependent variable. After accessing the study link, participants were directed to an information page and asked to provide informed consent. Optional demographic information was collected followed by AUD measures (see 2.3). Participants were then asked to prepare to read a text to be presented on the next page, to read it carefully and to reflect on it for a short while after reading. Participants were then randomised by the survey platform to one of the six manipulation conditions (control, control stigma, continuum, continuum stigma, BDM, BDM stigma). The manipulation conditions (see Supplementary Material for full scripts) presented a text written in the style of a short article describing the nature of alcohol problems as either in accordance with a continuum or BDM framing of alcohol problems (belief type). Texts referred to a fictional journal and included short quotes from a fictional scientist and person with lived experience. Non-stigma versions used the term “problem drinking” and used neutral descriptions or consequences (e.g. functioning, well-being), whilst stigma versions used more evocative or stereotyped language or consequences (e.g. dangerousness, loss of control). Only the BDM stigma condition used the term “alcoholic” and “alcoholism”. To ensure that participants had attended to the message content they were then required to correctly identify information for the condition they had been randomised to (i.e., the name of the expert mentioned in the text for the belief type conditions or the theme of the information in the control conditions). Answering incorrectly resulted in being asked to read the script again. Prior to the selection of harmful drinkers without addiction experience, eight participants answered incorrectly on the second attempt and were excluded from continuing.

Next, participants completed self-stigma scales[4] and the primary problem recognition scale. Participants were then presented with a brief vignette text describing a man named Joe who had just been told by a doctor he was experiencing alcohol problems (see Appendix X). On the next page, a single question asked participants to correctly identify two things mentioned in the vignette to ensure participants had attended to its content. Answering incorrectly resulted in participants being asked to read the script again. Prior to the selection of harmful drinkers without addiction experience, 93 of the 2,095 participants answered incorrectly on the second attempt and were excluded from continuing. Participants then answered public stigma-related measures for a study not reported here which included non-harmful drinkers and those with addiction experience. Subsequently, participants were asked to complete the secondary measure of problem recognition (SELFI-A; see supplemental materials), and measures of addiction experience and help-seeking intentions/self-help options (see supplemental materials). Participants were then directed to the debriefing page and invited to leave optional contact details to be eligible for a prize draw awarding one of two £50 Amazon vouchers. After completing the survey, participants were directed to a survey completion page which included brief information about further sources of alcohol-related information or support.

Insert Figure 1 about here

Measures

2.3. Premanipulation

[4] Self-stigma was measured via 'Aware' and 'Agree' scales of the Self-Stigma of Alcohol Dependence Scales (Schomerus, Corrigan, et al., 2011); see Supplemental Materials.

Self-reported alcohol consumption was assessed via the AUDIT-C to identify harmful drinkers (Khadjesari et al., 2017; Morris et al., 2020). AUDIT-C has been found to be of comparable validity to the full AUDIT for detecting alcohol use disorders (Dawson et al., 2012) and distinguishing between levels of AUD at different cut-offs (Meneses-Gaya et al., 2010). AUDIT-C scores of ≥8 for women or ≥9 for men were operationalised as harmful drinking (range 0-12) based on previous studies showing these to be accurate cut-offs for identifying harmful drinking (Khadjesari et al., 2017). The remaining AUDIT questions (questions 4-10, range 0-28), known as the AUDIT-P problem subscale (Johnson et al., 2019), were gathered as a covariate to control for baseline problem recognition.

2.4. Postmanipulation

Problem Recognition. To assess problem recognition, participants completed four items from the SOCRATES (Stages of Change Readiness and Treatment Eagerness Scale: (Miller & Tonigan, 1996), as used in other studies (e.g., Morris et al., 2020; Nye, Agostinelli, & Smith, 1999). Two items from the SOCRATES ambivalence subscale were, “There are times when I wonder if I drink too much” and “Sometimes I wonder if I am in control of my drinking”, and two items from the Recognition Scale were, “If I don’t change my drinking soon, my problems are going to get worse” and “My drinking is causing a lot of harm”. Participants responded on a 5-point Likert scale ranging from *“Strongly disagree”* to *“Strongly agree”*. In the analysis below, problem recognition was measured by the total of these 4 SOCRATES items with a possible score range of 4 – 20, with higher scores indicating a higher degree of problem recognition. An internal reliability of $\alpha = .81$ was found in the present study.

Percieved addiction experience. To assess perceived addiction experience as an exclusion criteria for the present study, participants firstly responded to the question *“Have*

you personally ever experienced addiction?”. Participants who responded “no” were then asked, *“Have you had any close friends or family who have experienced a serious addiction?”*. Answering “yes” to either question was determined to be perceived addiction experience. Amongst all harmful drinkers (*n*=967) percieved addiction experience was significantly correlated with the problem recognition scale (r = .217, p<.001), as was perceived personal (r = .381, p<.001) and perceived friends or family (r = .211, p<.001) addiction experience.

2.5. Analysis Plan

To assess the effects of the experimental manipulation on problem recognition, a 3 (control vs. continuum vs. BDM) x 2 (stigma vs. non-stigma) between participants factorial ANCOVA was conducted. The primary dependent variable was problem recognition. The covariate was the mean of the AUDIT-P (questions 4-10 of the full AUDIT) as a problem subscale of the full AUDIT (Johnson et al., 2019). The seven AUDIT-P questions relate to alcohol-related problems, including signs of dependence and social consequences, and therefore reflect specific aspects of negative alcohol-related consquences. Analysis confirmed AUDIT-P was significantly correlated with the dependent variable of problem recognition (r = .59, p<.001). A Bonferroni adjusted simple effects analysis was conducted to test significant interaction effects identified by the ANCOVA.

3. Results

3.1. Effect of belief type framing and stigma on problem recognition

It was hypothesised that there would be an interaction effect of belief type framing and stigma on self-reported problem recognition, whereby continuum beliefs would be associated with higher problem recognition than BDM beliefs as a function of stigma. No

main effect of stigma (F (1, 237) = .86, p = .356) was shown, whilst the main effect of belief type approached but did not reach statistical significance (F (2, 237) = 3.03, p = .050). Belief type and stigma were shown to interact significantly (F (2, 237) = 3.24, p = .041, η_p^2 = .027). The covariate of AUDIT-P was significant in the ANCOVA (p<.001). Means and standard deviations are displayed in Table 1.

A post hoc power analysis for the belief type framing and stigma interaction effect was conducted using the software package, GPower (Erdfelder et al., 1996). The sample size of 244 was entered for the equation, along with the effect size (η_p^2 = .027 converted by the program to $f\,2$ = .167), alpha level (p < .05), numerator degrees of freedom (n=2), number of groups (n=6) and number of covariates (n=1). The post hoc analyses revealed the statistical power for this study was .63 for detecting the small effect, indicating modest power.

Insert table 1 here

To explore this significant interaction, a simple main effects analysis was conducted. Results showed a significant difference between belief types with stigma (F (2, 237) = 5.52, p = .005) but no significant difference between belief types without stigma (F (2, 237) = .889, p = .413). The BDM stigma condition was associated with significantly lower problem recognition versus control stigma (p = .017) and continuum stigma (p = .002). There was no significant difference between continuum stigma and control stigma (p = .415). Within the BDM condition, a significant difference between stigma and non-stigma was found (F (1,

237) = 6.75, p = .010), such that stigma was associated with significantly lower problem recognition. Simple effects are displayed in Figure 2.

Insert Figure 2 here

4. Discussion

This study adds to evidence that beliefs about alcohol problems have important implications for problem recognition. The predicted positive effect of continuum beliefs as found by Morris et al. (2020) was not supported as no difference in problem recognition was found amongst those exposed to continuum beliefs. However, BDM stigma beliefs were associated with significantly lower problem recognition versus continuum, control, and BDM non-stigma conditions. One possible interpretation of this finding is that because only BDM stigma beliefs included alcoholic terminology and associated negative stereotypes, alcoholic label avoidance was triggered, consistent with labelling and identity deflection theories (Glass et al., 2013; Thoits, 2016). That is, when exposed to BDM beliefs and alcoholic labelling/stereotypes, participants may have reacted to the stigma-related threat of a problem drinking identity, triggering lower problem recognition. In other words, it is possible that salience and accessibility of the stigma of the alcoholic stereotype motivated harmful drinkers to dissociate themselves from a problem drinking identity, thus enabling them to maintain inaccurate self-appraisals.

This apparent alcoholic identity deflection is consistent with Thoits’ identity deflection findings in people with non-labelled mental disorders who near universally rejected a stigmatising mental illness label (Thoits, 2016), akin to apparent deflection of alcoholic labelling (i.e., lower problem recognition) in the present study. Thoits (2016) found that deflection did not mediate predicted well-being effects but served to buffer them. This points to the belief type by stigma interaction effect of alcoholic label avoidance as motivated by protection of the self from the negative psychological consequences of alcoholic labelling (Dar-Nimrod et al., 2013; Young, 2011). For instance, adopting an alcoholic identity can carry significant potential threats in terms of both public and self-stigma, both strongly associated with potential negative psychological consequences.

Low problem recognition can therefore function as a psychological coping response by averting the consequences of internalised stigma or prejudice and discrimination associated with alcoholic labelling. Harmful drinkers can then maintain their drinking identities as positive, controlled and distinct from the problematised alcoholic other (Melia et al., 2021). Othering, at its core, constructs the outgroup as *not me* (Kalampalikis & Haas, 2008; Walsh, 2020) and emphasises separation and difference (Link & Phelan, 2001; Powell & Menedian, 2016), described as the *distancing-blame-stigma pattern* (Joffe, 2011). With this in mind, harmful drinkers may paradoxically increase stigma by reifying alcoholism as a binary disease which only applies to the alcoholic other (Buchman et al., 2011; Emslie et al., 2012; Schomerus, Lucht, et al., 2011).

The failure to replicate the positive effect of continuum beliefs found by Morris et al. (2020) may be due to the modest power of the study, suggesting that with a larger sample size or a stronger manipulation such an effect may have been observerd. For instance, Morris et al. (2020) used an audio-visual first-person vignette (i.e. ‘contact’) as the manipulation to

maximise narrative persuasion (e.g. identification with the narrator), whilst the present study used a text format. This suggests that any effects of continuum belief type on heightened problem recognition may have been moderated by perceived similarity with problem drinkers. That is, the audio-visual format used in Morris et al. (2020) may have increased identification and similarity with the narrative character, reducing perceived difference, whilst the informationally orientated text-based manipulation in the present study may have failed to generate perceived similarity ~~with problem drinkers~~. Similarity with perceived problem drinkers may therefore be a key mechanism for increasing problem recogntiton. Thus the text based manipulation in the present study may have failed to increase perceived similarity ~~and, in turn, no effects of~~via the continuum beliefs script, and in turn, no effect of increased ~~were found on~~ problem recognition or associated help~~-~~seeking intentions ~~intentions~~ (see supplemental materials) were found. Indeed, perceived similarity has been proposed as a potential mechanism in stigma reduction interventions (Schomerus et al., 2013; Violeau et al., 2020; Wiesjahn et al., 2016), consistent with both separation as a key process in stigma (Link & Phelan, 2001) and othering amongst harmful drinkers (Morris et al., 2020). For example, Schomerus et al. (2016) found that similarity, i.e. reduced notions of fundamental difference, partially mediated the effect of continuum beliefs in reducing desire for social distance. This interpretation also accords with Corrigan et al.’s (2016) findings in which a first-person narrative message was associated with decreased perceived difference towards persons with mental illness versus an equivalent script-based message.

In a wider context, personal contact (i.e., first-person narratives/testimonies) has also been identified as a key anti-stigma strategy (Corrigan et al., 2012; Gronholm et al., 2017), acting to decrease prejudice via increased empathy and reduced anxiety (Pettigrew & Tropp, 2008), and pointing to mechanisms behind perceived similarity in reducing stigma. As such, perceived similarity may also have moderated a potential effect of label avoidance in Morris

et al. (2020) where no decrease in problem recognition was associated with BDM beliefs including alcoholic labelling, as per the present study. Together these results suggest that contact via first-person narratives may have an important two-fold role to play in communicating continuum beliefs by both enhancing problem recognition *and* reducing label avoidance. As such, researchers, policy makers and other stakeholders should seek to avoid alcoholic and associated stigma-laden terminology ~~and~~ or concepts, instead promoting conceptualizations that reflect the diverse, complex and continuum nature of alcohol use and harms. Rather than relying on informational risk-oriented messaging, public health campaigns should exploit the potential for messages that directly target problem recognition via exposure to relatable and efficacy-enhancing representations of different AUD experiences.

5. Limitations

The sample consisted of harmful drinkers without self-identified addiction experience, who were recruited via social media advertising. As such, generalisability is limited and further research is warranted to replicate and extend these findings amongst a larger sample of harmful drinkers and other AUD groups, particularly in view of the modest power indicated for the present sample. The non-significant main effect of belief type (p = .~~5~~05) and small effect size for the signifgicant interaction effect may in part reflect the brevity of the manipulation ~~and small sample size~~. Thus further work should seek to test different alcohol problem framing manipulations and their effects with higher statistical power. Future work should also seek to develop an understanding of key moderators, including the role of addiction experience and other factors affecting stigma and behaviour change processes such as demographics. Similarly, conceptual understanding of problem recognition should be developed including how more or less explicit measures or problem recognition may be

utilised, and how related measures such as problem identification (e.g., AUDIT-P) or alcohol addiction experience may align. Further, other important framing effects not measured in present study include potential differences in beliefs about drinking outcomes and recovery, for example, in terms of abstinence versus reduced drinking, treatment implications or drinking related self-efficacy (Burnette et al., 2019; Schomerus, Corrigan, et al., 2011; Wiens & Walker, 2015; Witkiewitz et al., 2020). No manipulation check was included in the study, thus limited inference concerning the effect of the conditions on problem framing can be drawn.

6. Conclusion

Beliefs about the nature of alcohol problems hold important implications for harmful drinkers, a group unique in terms of low problem recognition and currently under-served by AUD policy and interventions. Notably, the stigma associated with disease model stereotypes appears to be a key driver in preventing harmful drinkers from evaluating their drinking as problematic. Further research should explore potential mechanisms of alcoholic label avoidance/deflection in this population. These include emotion regulation strategies on affect-related responses such as fear and anxiety, and associated cognitive evaluations such as severity, susceptibility, and self-efficacy. The potential for continuum beliefs or associated frames to alleviate label avoidance and potentially increase problem recognition and subsequent behavioural responses should also be explored, including how continuum models may be conceptualised or understood. The potential for population level changes regarding beliefs about alcohol problems should be explored in terms of potential public health impacts, including on natural recovery and help-seeking.

References

Aira, M., Kauhanen, J., Larivaara, P., & Rautio, P. (2003). Factors influencing inquiry about patients’ alcohol consumption by primary health care physicians: qualitative semi-structured interview study. *Family Practice*, *20*(3), 270–275. https://doi.org/10.1093/fampra/cmg307

Ashford, R. D., Brown, A. M., & Curtis, B. (2018). Substance use, recovery, and linguistics: The impact of word choice on explicit and implicit bias. *Drug and Alcohol Dependence*, *189*, 131–138. https://doi.org/10.1016/j.drugalcdep.2018.05.005

Babor, T. F., Higgins-Biddle, J. C., Saunders, J. B., & Monteiro, M. G. (2001). AUDIT - The Alcohol Use Disorders Identification Test: Guidelines for Use in Primary Care (second edition), 2001. In *WHO*. World Health Organization. http://www.who.int/substance_abuse/publications/alcohol/en/

Bos, A. E. R., Pryor, J. B., Reeder, G. D., & Stutterheim, S. E. (2013). Stigma: Advances in Theory and Research. *Basic and Applied Social Psychology*, *35*(1), 1–9. https://doi.org/10.1080/01973533.2012.746147

Buchman, D. Z., Illes, J., & Reiner, P. B. (2011). The paradox of addiction neuroscience. *Neuroethics*, *4*(2), 65–77. https://doi.org/10.1007/s12152-010-9079-z

Burnette, J. L., Forsyth, R. B., Desmarais, S. L., & Hoyt, C. L. (2019). Mindsets of Addiction: Implications for Treatment Intentions. *Journal of Social and Clinical Psychology*, *38*(5), 367–394. https://doi.org/10.1521/jscp.2019.38.5.367

Corrigan, P. W., Bink, A. B., Schmidt, A., Jones, N., & Rüsch, N. (2016). What is the impact of self-stigma? Loss of self-respect and the “why try” effect. *Journal of Mental Health*, *25*(1), 10–15. https://doi.org/10.3109/09638237.2015.1021902

Corrigan, P. W., Morris, S. B., Michaels, P. J., Rafacz, J. D., & Rüsch, N. (2012). Challenging the Public Stigma of Mental Illness: A Meta-Analysis of Outcome Studies. *Psychiatric Services*,

63(10), 963–973. https://doi.org/10.1176/appi.ps.201100529

Corrigan, P. W., Schmidt, A., Bink, A. B., Nieweglowski, K., Al-Khouja, M. A., Qin, S., & Discont, S. (2016). Changing public stigma with continuum beliefs. *Journal of Mental Health*, 1–8. https://doi.org/10.1080/09638237.2016.1207224

Crisp, A., Gelder, M., Goddard, E., & Meltzer, H. (2005). Stigmatization of people with mental illnesses: a follow-up study within the Changing Minds campaign of the Royal College of Psychiatrists. *World Psychiatry : Official Journal of the World Psychiatric Association (WPA)*, *4*(2), 106–113. http://www.ncbi.nlm.nih.gov/pubmed/16633526

Dar-Nimrod, I., & Heine, S. J. (2011). Genetic essentialism: on the deceptive determinism of DNA. *Psychological Bulletin*, *137*(5), 800–818. https://doi.org/10.1037/a0021860

Dar-Nimrod, I., Zuckerman, M., & Duberstein, P. R. (2013). The effects of learning about one’s own genetic susceptibility to alcoholism: A randomized experiment. *Genetics in Medicine*, *15*(2), 132–138. https://doi.org/10.1038/gim.2012.111

Dawson, D. A., Smith, S. M., Saha, T. D., Rubinsky, A. D., & Grant, B. F. (2012). Comparative performance of the AUDIT-C in screening for DSM-IV and DSM-5 alcohol use disorders. *Drug and Alcohol Dependence*, *126*(3), 384–388. https://doi.org/10.1016/j.drugalcdep.2012.05.029

Dunne, J., Kimergård, A., Brown, J., Beard, E., Buykx, P., Michie, S., & Drummond, C. (2018). Attempts to reduce alcohol intake and treatment needs among people with probable alcohol dependence in England: a general population survey. *Addiction*, *113*(8), 1430–1438. https://doi.org/10.1111/add.14221

Emslie, C., Hunt, K., & Lyons, A. (2012). Older and wiser? Men’s and women’s accounts of drinking in early mid-life. *Sociology of Health and Illness*, *34*(4), 481–496. https://doi.org/10.1111/j.1467-9566.2011.01424.x

Erdfelder, E., Faul, F., & Buchner, A. (1996). GPOWER: A general power analysis program. *Behavior Research Methods, Instruments, and Computers*, *28*(1), 1–11.

https://doi.org/10.3758/BF03203630

Garnett, C., Crane, D., West, R., Michie, S., Brown, J., & Winstock, A. (2015). Normative misperceptions about alcohol use in the general population of drinkers: A cross-sectional survey. *Addictive Behaviors*, *42*, 203–206. https://doi.org/10.1016/j.addbeh.2014.11.010

Glass, J. E., Mowbray, O. P., Link, B. G., Kristjansson, S. D., & Bucholz, K. K. (2013). Alcohol stigma and persistence of alcohol and other psychiatric disorders: A modified labeling theory approach. *Drug and Alcohol Dependence*, *133*(2), 685. https://doi.org/10.1016/j.drugalcdep.2013.08.016

Gronholm, P. C., Henderson, C., Deb, T., & Thornicroft, G. (2017). Interventions to reduce discrimination and stigma: the state of the art. In *Social Psychiatry and Psychiatric Epidemiology* (Vol. 52, Issue 3, pp. 249–258). Springer Berlin Heidelberg. https://doi.org/10.1007/s00127-017-1341-9

Haslam, N., & Kvaale, E. P. (2015). Biogenetic Explanations of Mental Disorder: The Mixed-Blessings Model. *Current Directions in Psychological Science*, *24*(5), 399–404. https://doi.org/10.1177/0963721415588082

Heather, N., Winton, A., & Rollnick, S. (1982). An Empirical Test of “A Cultural Delusion of Alcoholics.” *Psychological Reports*, *50*(2), 379–382. https://doi.org/10.2466/pr0.1982.50.2.379

Joffe, H. (2011). Public apprehension of emerging infectious diseases: Are changes afoot? *Public Understanding of Science*, *20*(4), 446–460. https://doi.org/10.1177/0963662510391604

Johnson, E. C., St. Pierre, C. L., Meyers, J. L., Aliev, F., McCutcheon, V. V., Lai, D., Dick, D. M., Goate, A. M., Kramer, J., Kuperman, S., Nurnberger, J. I., Schuckit, M. A., Porjesz, B., Edenberg, H. J., Bucholz, K. K., & Agrawal, A. (2019). The Genetic Relationship Between Alcohol Consumption and Aspects of Problem Drinking in an Ascertained Sample. *Alcoholism: Clinical and Experimental Research*, *43*(6), 1113–1125. https://doi.org/10.1111/acer.14064

Kalampalikis, N., & Haas, V. (2008). More than a theory: A new map of social thought. *Journal for*

the Theory of Social Behaviour, *38*(4), 449–459. https://doi.org/10.1111/j.1468-5914.2008.00381.x

Khadjesari, Z., Stevenson, F., Toner, P., Linke, S., Milward, J., & Murray, E. (2018). ‘I’m not a real boozer’: a qualitative study of primary care patients’ views on drinking and its consequences. *Journal of Public Health*. https://doi.org/10.1093/pubmed/fdy067

Khadjesari, Z., White, I. R., McCambridge, J., Marston, L., Wallace, P., Godfrey, C., & Murray, E. (2017). Validation of the AUDIT-C in adults seeking help with their drinking online. *Addiction Science & Clinical Practice*, *12*(1), 2. https://doi.org/10.1186/s13722-016-0066-5

Lebowitz, M. S., & Appelbaum, P. S. (2017). Beneficial and detrimental effects of genetic explanations for addiction. *International Journal of Social Psychiatry*, *63*(8), 717–723. https://doi.org/10.1177/0020764017737573

Link, B. G., & Phelan, J. C. (2001). Conceptualizing Stigma. *Annual Review of Sociology*, *27*(1), 363–385. https://doi.org/10.1146/annurev.soc.27.1.363

Loughman, A., & Haslam, N. (2018). Neuroscientific explanations and the stigma of mental disorder: a meta-analytic study. *Cognitive Research: Principles and Implications*, *3*(1), 1–12. https://doi.org/10.1186/s41235-018-0136-1

May, C., Nielsen, A. S., & Bilberg, R. (2019). Barriers to treatment for alcohol dependence. In *Journal of Drug and Alcohol Research* (Vol. 8, Issue 2, pp. 1–17). Journal of Drug and Alcohol Research. https://doi.org/10.4303/jdar/236083

Melia, C., Kent, A., Meredith, J., & Lamont, A. (2021). Constructing and negotiating boundaries of morally acceptable alcohol use: A discursive psychology of justifying alcohol consumption. *Addictive Behaviors*, *123*, 107057. https://doi.org/10.1016/J.ADDBEH.2021.107057

Meneses-Gaya, C., Zuardi, A. W., Loureiro, S. R., Hallak, J. E. C., Trzesniak, C., De Azevedo Marques, J. M., MacHado-De-Sousa, J. P., Chagas, M. H. N., Souza, R. M., & Crippa, J. A. S. (2010). Is the full version of the AUDIT really necessary? study of the validity and internal

construct of its abbreviated versions. *Alcoholism: Clinical and Experimental Research*, *34*(8), 1417–1424. https://doi.org/10.1111/j.1530-0277.2010.01225.x

Miller, W. R., & Kurtz, E. (1994). Models of alcoholism used in treatment: Contrasting AA and other perspectives with which it is often confused. *Journal of Studies on Alcohol*, *55*(2), 159–166. https://doi.org/10.15288/jsa.1994.55.159

Miller, W. R., & Tonigan, J. S. (1996). Assessing drinkers’ motivation for change: The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES). *Psychology of Addictive Behaviors*, *10*(2), 81–89. https://doi.org/10.1037/0893-164X.10.2.81

Miller, W. R., Westerberg, V. S., Harris, R. J., & Tonigan, J. S. (1996). What predicts relapse? Prospective testing of antecedent models. *Addiction*, *91*(12s1), 155–172. https://doi.org/10.1046/j.1360-0443.91.12s1.7.x

Morris, J., Albery, I. P., Heather, N., & Moss, A. C. (2020). Continuum beliefs are associated with higher problem recognition than binary beliefs among harmful drinkers without addiction experience. *Addictive Behaviors*, *105*, 106292. https://doi.org/10.1016/j.addbeh.2020.106292

Morris, J., Albery, I. P., Moss, A. C., & Heather, N. (2021). Promoting problem recognition amongst harmful drinkers: A conceptual model for problem framing factors. In *The Handbook of Alcohol Use* (pp. 221–236). Elsevier. https://doi.org/10.1016/b978-0-12-816720-5.00026-8

NICE. (2011a). *Alcohol-use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence [CG115]*. The British Psychological Society and The Royal College of Psychiatrists. https://www.nice.org.uk/guidance/cg115/evidence

NICE. (2011b). *Alcohol use disorders: alcohol dependence costing report*.

Nieweglowski, K., Corrigan, P. W., Tyas, T., Tooley, A., Dubke, R., Lara, J., Washington, L., Sayer, J., & Sheehan, L. (2018). Exploring the public stigma of substance use disorder through community-based participatory research. *Addiction Research and Theory*, *26*(4), 323–329. https://doi.org/10.1080/16066359.2017.1409890

Nye, E. C., Agostinelli, G., & Smith, J. E. (1999). Enhancing alcohol problem recognition: a self-regulation model for the effects of self-focusing and normative information. *Journal of Studies on Alcohol*, *60*(5), 685–693. https://doi.org/10.15288/jsa.1999.60.685

Oser, M. L., McKellar, J., Moos, B. S., & Moos, R. H. (2010). Changes in ambivalence mediate the relation between entering treatment and change in alcohol use and problems. *Addictive Behaviors*, *35*(4), 367–369. https://doi.org/10.1016/j.addbeh.2009.10.024

Oyefeso, A., Deluca, P., Drummond, C., Cheeta, S., Perryman, K., Coulton, S., & Phillips, T. (2008). Low identification of alcohol use disorders in general practice in England. *Addiction*, *103*(5), 766–773. https://doi.org/10.1111/j.1360-0443.2008.02198.x

Parke, H., Michalska, M., Russell, A., Moss, A. C., Holdsworth, C., Ling, J., & Larsen, J. (2018). Understanding drinking among midlife men in the United Kingdom: A systematic review of qualitative studies. *Addictive Behaviors Reports*, *8*, 85–94. https://doi.org/10.1016/J.ABREP.2018.08.001

Peter, L.-J., Schindler, S., Sander, C., Schmidt, S., Muehlan, H., McLaren, T., Tomczyk, S., Speerforck, S., & Schomerus, G. (2021). Continuum beliefs and mental illness stigma: a systematic review and meta-analysis of correlation and intervention studies. *Psychological Medicine*, 1–11. https://doi.org/10.1017/s0033291721000854

Pettigrew, T. F., & Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediatorsy. *European Journal of Social Psychology*, *38*(6), 922–934. https://doi.org/10.1002/ejsp.504

Piras, A. P., Preti, A., Moro, M. F., Giua, A., Sini, G., Piras, M., Pintus, M., Pintus, E., Manca, A., Cannas, G., Cossu, G., Angermeyer, M. C., & Carta, M. G. (2016). Does calling alcoholism an illness make a difference? The public image of alcoholism in Italy. *Drug and Alcohol Dependence*, *166*, 39–44. https://doi.org/10.1016/j.drugalcdep.2016.06.015

Powell, J. A., & Menedian, S. S. (2016). The Problem of Othering: Towards Inclusiveness and

Belonging. *Othering and Belonging*, *1*, 14–39. http://www.otheringandbelonging.org/the-problem-of-othering/

Probst, C., Manthey, J., Martinez, A., & Rehm, J. (2015). Alcohol use disorder severity and reported reasons not to seek treatment: A cross-sectional study in European primary care practices. *Substance Abuse: Treatment, Prevention, and Policy*, *10*(1), 32. https://doi.org/10.1186/s13011-015-0028-z

Reinarman, C. (2005). Addiction as accomplishment: The discursive construction of disease. *Addiction Research & Theory*, *13*(4), 307–320. https://doi.org/10.1080/16066350500077728

Roberts, E., Morse, R., Epstein, S., Hotopf, M., Leon, D., & Drummond, C. (2019). The prevalence of wholly attributable alcohol conditions in the United Kingdom hospital system: a systematic review, meta-analysis and meta-regression. In *Addiction* (Vol. 114, Issue 10, pp. 1726–1737). John Wiley & Sons, Ltd (10.1111). https://doi.org/10.1111/add.14642

Romo, L. K., Dinsmore, D. R., & Watterson, T. C. (2016). “Coming out” as an alcoholic: how former problem drinkers negotiate disclosure of their nondrinking identity. *Health Communication*, *31*(3), 336–345. https://doi.org/10.1080/10410236.2014.954090

Rundle, S. M., Cunningham, J. A., & Hendershot, C. S. (2021). Implications of addiction diagnosis and addiction beliefs for public stigma: A cross-national experimental study. *Drug and Alcohol Review*. https://doi.org/10.1111/dar.13244

Saha, T. D., Chou, S. P., & Grant, B. F. (2006). Toward an alcohol use disorder continuum using item response theory: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Psychological Medicine*, *36*(7), 931–941. https://doi.org/10.1017/S003329170600746X

Schmader, T., & Major, B. (2017). Stigma, Social Identity Threat, and Health. In B. Major, J. F. Dovidio, & B. G. Link (Eds.), *The Oxford Handbook of Stigma, Discrimination, and Health* (Vol. 1, pp. 85–103). Oxford University Press.

https://doi.org/10.1093/oxfordhb/9780190243470.013.3

Schomerus, G., Angermeyer, M. C., Baumeister, S., Stolzenburg, S., Link, B. G., & Phelan, J. C. (2016). An online intervention using information on the mental health-mental illness continuum to reduce stigma. *European Psychitry*, *32*, 21–27. http://www.sciencedirect.com/science/article/pii/S0924933815006835

Schomerus, G., Corrigan, P. W., Klauer, T., Kuwert, P., Freyberger, H. J., & Lucht, M. (2011). Self-stigma in alcohol dependence: Consequences for drinking-refusal self-efficacy. *Drug and Alcohol Dependence*, *114*(1), 12–17. https://doi.org/10.1016/j.drugalcdep.2010.08.013

Schomerus, G., Lucht, M., Holzinger, A., Matschinger, H., Carta, M. G., & Angermeyer, M. C. (2011). The Stigma of Alcohol Dependence Compared with Other Mental Disorders: A Review of Population Studies. *Alcohol and Alcoholism*, *46*(2). https://academic.oup.com/alcalc/article/46/2/105/198339

Schomerus, G., Matschinger, H., & Angermeyer, M. C. (2013). Continuum beliefs and stigmatizing attitudes towards persons with schizophrenia, depression and alcohol dependence. *Psychiatry Research*, *209*(3), 665–669. https://doi.org/10.1016/j.psychres.2013.02.006

Spencer, S. J., Zanna, M. P., & Fong, G. T. (2005). Establishing a causal chain: Why experiments are often more effective than mediational analyses in examining psychological processes. *Journal of Personality and Social Psychology*, *89*(6), 845–851. https://doi.org/10.1037/0022-3514.89.6.845

Sumnall, H. R., Hamilton, I., Atkinson, A. M., Montgomery, C., & Gage, S. H. (2020). Representation of adverse childhood experiences is associated with lower public stigma towards people who use drugs: an exploratory experimental study. *Drugs: Education, Prevention and Policy*. https://doi.org/10.1080/09687637.2020.1820450

Thoits, P. A. (2016). “I’m Not Mentally Ill”: Identity Deflection as a Form of Stigma Resistance. *Journal of Health and Social Behavior*, *57*(2), 135–151. https://doi.org/10.1177/0022146516641164

Tucker, J. A. (2005). Finding common ground in the ‘two worlds of alcohol problems’: when behaviour change succeeds. *Addiction*, *100*(11), 1573–1574. https://doi.org/10.1111/j.1360-0443.2005.01254.x

Tucker, J. A., Vuchinich, R. E., & Rippens, P. D. (2004). A factor analytic study of influences on patterns of help-seeking among treated and untreated alcohol dependent persons. *Journal of Substance Abuse Treatment*, *26*(3), 237–242. https://doi.org/10.1016/S0740-5472(03)00209-5

Violeau, L., Valery, K. M., Fournier, T., & Prouteau, A. (2020). How continuum beliefs can reduce stigma of schizophrenia: The role of perceived similarities. *Schizophrenia Research*, *220*, 46–53. https://doi.org/10.1016/j.schres.2020.04.014

Wallhed Finn, S., Bakshi, A.-S., & Andréasson, S. (2014). Alcohol consumption, dependence, and treatment barriers: perceptions among nontreatment seekers with alcohol dependence. *Substance Use & Misuse*, *49*(6), 762–769. https://doi.org/10.3109/10826084.2014.891616

Walsh, D. (2020). *Why Do the Public Resist Efforts to Challenge Mental Health Related Stigma? A Critical Review of Public Health Campaigns.*

Walters, G. D. (2002). Twelve Reasons Why We Need to Find Alternatives to Alcoholics Anonymous. *Addictive Disorders & Their Treatment*, *1*(2), 53–59. https://journals.lww.com/addictiondisorders/Abstract/2002/06000/Twelve_Reasons_Why_We_Need_to_Find_Alternatives_to.3.aspx

WHO. (2018). International Classification of Diseases, 11th Revision (ICD-11). In *WHO*. World Health Organization. https://www.who.int/classifications/icd/en/

Wiens, T. K., & Walker, L. J. (2015). The chronic disease concept of addiction: Helpful or harmful? *Addiction Research & Theory*, *23*(4), 309–321. https://doi.org/10.3109/16066359.2014.987760

Wiesjahn, M., Jung, E., Kremser, J. D., Rief, W., & Lincoln, T. M. (2016). The potential of continuum versus biogenetic beliefs in reducing stigmatization against persons with schizophrenia: An experimental study. *Journal of Behavior Therapy and Experimental*

Psychiatry, *50*, 231–237. https://doi.org/10.1016/j.jbtep.2015.09.007

Witkiewitz, K., Falk, D. E., Litten, R. Z., Hasin, D. S., Kranzler, H. R., Mann, K. F., O’Malley, S. S., & Anton, R. F. (2019). Maintenance of World Health Organization Risk Drinking Level Reductions and Posttreatment Functioning Following a Large Alcohol Use Disorder Clinical Trial. *Alcoholism: Clinical and Experimental Research*, acer.14018. https://doi.org/10.1111/acer.14018

Witkiewitz, K., Montes, K. S., Schwebel, F. J., & Tucker, J. A. (2020). What Is Recovery? *Alcohol Research : Current Reviews*, *40*(3), 01. https://doi.org/10.35946/arcr.v40.3.01

Witkiewitz, K., Morris, J., & Tucker, J. A. (2021). Commentary on Henssler et al .: The public health case for promoting and valuing drinking reductions in the treatment of alcohol use disorder. *Addiction*, add.15429. https://doi.org/10.1111/add.15429

Young, L. B. (2011). Joe Sixpack: Normality, deviance, and the disease model of alcoholism. *Culture & Psychology*, *17*(3), 378–397. https://doi.org/10.1177/1354067X11408133