



Research Paper

Competing narratives and public support for drink-drive policy reform: a framing experiment in England and Wales

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ARTICLE INFO

Keywords:

Drink-driving
Policy
Alcohol
Framing
Experiment
Industry
Public Health

ABSTRACT

Lowering legal blood-alcohol concentration limits for driving is an evidence-based policy to prevent harms. In England and Wales, proposals to reduce the drink-drive limit from 80 mg to 50 mg alcohol per 100 ml of blood have generated competing narratives, including alcohol-industry claims about harm to rural pubs and public-health arguments emphasising road safety. We conducted a pre-registered online experiment with adults in England and Wales ($N = 495$) to test how these narratives shape policy support. Participants read one of three news-style articles framing the proposed reduction as alcohol-industry aligned, public-health aligned, or neutral. The prespecified primary outcome measure was support for lowering the drink-drive limit. Secondary outcome measures assessed perceived policy consequences including road-safety benefits and harm to rural pubs. Mediators included measures of identity and perceptions of others who sometimes drink and drive. Bayesian analyses showed decisive evidence that framing influenced support for lowering the drink-drive limit ($BF_{10} = 1.38 \times 10^6$), with support highest under public-health framing and lowest under industry framing. Public health framing increased perceived road-safety benefits ($BF_{10} = 115.70$), while industry framing increased perceived economic harm to rural pubs ($BF_{10} = 50,667.00$). There was evidence against framing effects on responsible-driver identity ($BF_{10} = 0.05$). Exploratory mediation analyses suggested limited indirect effects via descriptive norms and drink-driver prototype similarity under industry framing only. These findings show that public support for drink-drive policy reform is shaped by competing narratives about harms and benefits. Public-health messaging may therefore need to highlight road-safety benefits while directly addressing economic harm narratives that could undermine support for policy change.

Introduction

The UK Government's 2026 Road Safety Strategy consultation included a proposal to lower the drink-drive limit in England and Wales from 80 mg to 50 mg per 100 ml of blood, bringing it in line with Scotland and most of Europe (Department for Transport, 2026; WHO, 2018). This has triggered a public debate with competing narratives: (a) alcohol industry-aligned messaging warning of harm to rural pubs and hospitality¹ and (b) public-health-aligned messaging stressing rural road safety, international evidence, and enforcement².

The policy context sits against a strong empirical backdrop. Crash risk rises exponentially with blood alcohol concentration (BAC) and increases even at levels well below the current UK limit of 80 mg/

100 ml, supporting limits of 50 mg/100 ml, or lower (Fell & Scherer, 2017; Høye & Storesund Hesjevoll, 2023). International evidence supports reducing limits to 50 mg/100 ml, alongside highly visible and sustained enforcement (Johns Hopkins International Injury Research Unit, 2024). International evaluations, including in Utah, USA, have found reductions in fatal-crash and fatality rates after lowering limits (Høye & Storesund Hesjevoll, 2023; Johns Hopkins International Injury Research Unit, 2024).

Approaches outside Europe also combine lower general BAC limits with stricter rules for novice drivers. Australia applies a general limit of 50 mg/100 ml, with zero limits for learner and provisional drivers, while New Zealand applies a 50 mg/100 ml limit for drivers aged 20 and over and a zero limit for those under 20 (Alcohol and Drug Foundation, 2026;

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E-mail address: edavies@brookes.ac.uk (E.L. Davies).¹ <https://www.independent.co.uk/news/uk/home-news/rural-pubs-drink-drive-limit-b2896213.html>² <https://www.ias.org.uk/2025/08/26/why-england-and-wales-need-a-lower-drink-drive-limit/><https://doi.org/10.1016/j.drugpo.2026.105526>

NZ Transport Agency, 2026).

Evidence concerning the wider consequences of lowering BAC limits is more nuanced. Scottish qualitative research suggested the 2014 reduction to 50 mg/100 ml did not cause long-term financial harm for most on-trade venues, with reductions in sales of alcohol partly offset by purchases of food and alcohol-free products (Sumpter et al., 2020). This is consistent with evidence from Utah, where lowering the limit was not associated with economic losses in the hospitality sector (Johns Hopkins International Injury Research Unit, 2024). These findings could be considered against a broader pattern of declining alcohol consumption across population groups (NHS Digital, 2026). However, Scottish time series analyses also detected no crash reduction following the legislation change, which highlights that legislation on BAC alone may be insufficient (Lewsey et al., 2019).

Lower BAC limits therefore form part of a wider package of drink-driving countermeasures. International guidance recommends limits of 20 mg/100 ml or lower for novice and commercial drivers (WHO, 2018), alongside sustained enforcement through random breath testing and sobriety checkpoints (Global Road Safety Partnership, 2022). Alcohol-interlock devices are also recommended, particularly to reduce repeat offending (Elder et al., 2011). These measures are most effective when legislation is supported by visible enforcement and public-awareness activity (Global Road Safety Partnership, 2022). UK surveys also highlight “morning-after” risk and substantial public support for stricter limits and zero-tolerance limits for new drivers (IAM RoadSmart, 2025).

Framing is a well-established mechanism in communication science. There is considerable evidence showing that how issues are presented can shape public attitudes, risk perceptions, and policy judgements (Chong & Druckman, 2007; Guenther et al., 2021). In policy contexts, framing may be particularly pronounced where issues involve competing trade-offs, as individuals rely on salient considerations when forming views about the acceptability of policy change (Druckman & Nelson, 2003). Experimental research suggests that gain-framed messages are often more effective than loss-framed messages in promoting preventive behaviours (Gallagher & Updegraff, 2011). However, much of this evidence is based on simplified messages that isolate gain and loss framing and may not fully capture the complexity of real-world policy communication. In practice, policy debates often involve competing narratives that emphasise different consequences of the same policy, including economic, social, and value-based considerations. Evidence from other public-health domains shows similar patterns. For example, media coverage of sugar-sweetened beverage taxes has highlighted both health benefits and economic or liberty-based objections (e.g. Niederdeppe et al., 2013). Competing narratives are especially important in contested public-health policy domains, where different actors promote particular accounts of an issue that shape public understanding. This has been documented in alcohol industry communications and research on the commercial determinants of health (McCambridge et al., 2014; Petticrew et al., 2018). Recent UK research further highlights how public and expert understandings of alcohol harms and policy responses are different and how framing approaches can help communicate the evidence supporting policy change (Fitzgerald et al., 2024).

While framing can shape how people evaluate policy consequences, these effects may not operate through evaluative judgements alone. In many policy domains, individuals rely on social-cognitive processes, including identity, social norms, and perceptions of typical behaviour, when forming attitudes and making decisions under uncertainty (Sheeran & Webb, 2016). The Prototype Willingness Model (PWM) provides a framework for understanding these processes, distinguishing between deliberative intentions and more reactive, image-based willingness (Gerrard et al., 2008). From this perspective, drink-driving behaviour may be influenced not only by planned decision-making but also by perceptions of the typical person who engages in the behaviour (prototypes) and the perceived relevance of identities such as being a responsible driver (Rivis et al., 2011). These identity-linked cognitions

can influence willingness to engage in behaviour even when explicit intentions are low (Davies & Todd, 2021; Rivis et al., 2011; Rodwell et al., 2023). Survey evidence also suggests that drink-driving attitudes, perceived enforcement, and alcohol consumption patterns are associated with self-reported drink-driving behaviour, supporting the relevance of social-cognitive and normative processes in this domain (Stephens et al., 2017).

While a growing body of research has applied the Prototype Willingness Model to understand drink-driving behaviour (Jou & Hsu, 2025; Rivis et al., 2011; Rodwell et al., 2023; Yadav et al., 2021), it is not known how these processes may shape responses to drink-driving policy or policy-relevant communication. Narratives about drink-driving limits may therefore influence evaluations of policy consequences, and they may also affect identity salience and perceived similarity to drink-driver prototypes. This may be particularly influential where narratives draw on social norms and evaluations of other people's behaviours, which are central to social-cognitive models of health behaviour (Gerrard et al., 2008; Sheeran & Webb, 2016).

Despite strong evidence that lower drink-drive limits reduce harm, and extensive research demonstrating that framing shapes public attitudes, it remains unclear how competing, real-world policy narratives influence support for such measures. In particular, little experimental research has examined how industry and public-health-aligned framings operate within contemporary debates, or whether their effects are driven by changes in perceived consequences or by social-cognitive processes such as identity and norms. The present study therefore compared the effects of industry-aligned, public-health-aligned, and neutral framing of a proposed reduction in the drink-drive limit in England and Wales. We examined whether differences in policy support were reflected primarily by evaluative judgements about harms and benefits, or the activation of identity-related processes drawn from the PWM.

Research questions (RQs)

RQ1 (Primary): Does framing of drink-driving policy (industry vs public-health vs neutral) change support for lowering the legal limit from 80 mg to 50 mg? We expected that public-health framing would increase support for lowering the drink-drive limit relative to neutral and industry framing, while industry framing will produce the lowest support. This reflects the expectation that safety-oriented framing increases endorsement of restrictive policy measures, whereas industry framing reduces such support.

RQ2 (Secondary): Does framing shift broader policy and risk attitudes? We examined framing effects on perceived drink-driving risk, perceived road-safety benefits, perceived harm to rural pubs, and support for related policies, including zero-tolerance limits for new drivers, roadside breath testing, and alcohol-interlock devices. We expected public-health framing to be associated with higher perceived risk, safety benefits, and policy support, and industry framing to be associated with greater concern about harm to rural pubs.

RQ3 (Mechanisms): Are framing effects mediated by identity processes specified by the Prototype Willingness Model? We examined whether framing effects were mediated by identity processes specified by the Prototype Willingness Model. Specifically, we tested whether post-exposure identity salience, prototype similarity and favourability, and identity-norm congruence mediated framing effects on the primary and secondary outcomes. We expected public-health framing to strengthen responsible-driver and community-protection identities and alignment with safe-driver prototypes, whereas industry framing was expected to show weaker or opposite identity patterns. Identity mechanisms were expected to partially account for framing effects on policy attitudes.

Methods

Design

This was a between-subjects online framing experiment testing how different news style presentations of proposed drink-driving policy changes influence attitudes, perceived risks, identity states, and behavioural willingness/intentions. Participants were randomly assigned to one of three framing conditions: an industry-focused frame, a public-health frame, or a neutral factual frame. All materials and measures were presented via Qualtrics. The study protocol and planned analyses were registered on the Open Science Framework (Davies et al., 2026).

Participants

Participants were adults residing in England and Wales recruited via Prolific between 11th March 2026 and 31st March 2026. Quotas were used to approximate England and Wales population characteristics according to age, gender and ethnicity. The target sample size was pre-registered. Based on a smallest effect size of interest of partial $\eta^2 = 0.02$, equivalent to Cohen's $f = 0.143$, a one-way ANOVA with three groups, $\alpha = 0.05$, and 80% power indicated that $N = 477$ participants were required. We therefore targeted $N = 500$ to allow for exclusions. The final analytic sample comprised 495 participants who ranged in age from 18 to 84, 50.7% identified as women, and 78.6% were White British (see Table 1). Participants received a payment equivalent to £12.59 per hour. Study procedures were reviewed by the Research Ethics Committee at the host institution (ref 241837) and all participants provided informed consent.

Experimental manipulation

Participants were randomly assigned to read one of three short news-style articles about the proposed reduction of the drink-drive limit from 80 mg to 50 mg. The industry frame emphasised potential economic consequences for rural pubs and hospitality, including concerns about reduced trade and pressure on already vulnerable rural venues. The public-health frame emphasised road-safety benefits, impairment evidence, rural road risk, and community protection. The neutral frame presented factual information about the consultation, including the proposed limit change and related policy options, without emphasising either economic harms or public-health benefits. Full article wording and all measures are provided in Appendix A.

Measures

Primary outcome: support for lowering the drink-drive limit

Support was assessed using a single item: "To what extent do you support or oppose lowering the legal drink-drive limit in England and Wales from 80 mg to 50 mg per 100 ml of blood?" Responses were recorded on a 7-point Likert scale (1 = strongly oppose, 7 = strongly support).

Secondary outcomes: policy evaluations

Perceived policy consequences: Participants rated the perceived risk of driving after one alcoholic drink and after two alcoholic drinks, from 1 (*not at all risky*) to 7 (*extremely risky*); these items were combined into a perceived-risk score. Perceived harm to rural pubs was assessed using two statements, including "Lowering the drink-drive limit would harm rural pubs," rated from 1 (*strongly disagree*) to 7 (*strongly agree*). The second item was reverse-scored, and the two items were averaged, with higher scores indicating greater perceived harm to rural pubs. Perceived road-safety benefit was assessed by agreement that lowering the limit would reduce deaths and serious injuries on rural roads rated from 1 (*strongly disagree*) to 7 (*strongly agree*).

Table 1

Descriptive statistics of participant characteristics and baseline measures.

Measure	Whole sample	Industry frame	Neutral frame	Public health frame
N (%)	495	165 (33.3)	167 (33.7)	163 (32.9)
Demographics				
Age M (SD)	47.94 (15.11)	47.04 (15.78)	47.85 (14.72)	48.95 (14.83)
Age Median (IQR)	47 (35–61)	45 (33.5–61)	47 (35–62)	48 (36–61)
Gender				
Woman N (%)	251 (50.7)	83 (50.3)	86 (51.5)	82 (50.3)
Ethnicity				
White British N (%)	389 (78.6)	133 (80.6)	128 (76.6)	128 (78.5)
Political views 1 = left 7 = right M (SD)	3.84 (1.45)	3.67 (1.44)	3.95 (1.39)	3.90 (1.50)
Driving				
Driving licence N (%)	432 (87.3)	147 (89.1)	146 (87.4)	139 (85.3)
Driving daily M (SD)	238 (48.1)	85 (51.5)	78 (46.7)	75 (46.0)
Knowledge of drink-drive limit N % correct	61 (12.3)	24 (14.5)	17 (10.2)	20 (12.3)
Alcohol consumption				
AUDIT-C M (SD)	3.18 (2.73)	3.33 (2.45)	3.14 (2.90)	3.08 (2.85)
Baseline prototype perceptions				
Responsible driver identity	5.91 (1.38)	5.85 (1.32)	6.00 (1.36)	5.87 (1.44)
Drink-driver prototype favourability M (SD)	2.10 (1.26)	2.22 (1.29)	2.05 (1.25)	2.02 (1.25)
Drink-driver prototype similarity M (SD)	1.87 (1.40)	2.10 (1.51)	1.77 (1.33)	1.75 (1.33)
Never drink driver prototype favourability M (SD)	6.32 (1.10)	6.24 (1.19)	6.35 (0.97)	6.36 (1.12)
Never drink driver prototype similarity M (SD)	5.97 (1.42)	5.99 (1.39)	6.07 (1.24)	5.86 (1.62)

Note. Only 12.3% of participants correctly identified the current legal drink-drive limit (80 mg/100 ml), with most respondents underestimating the existing threshold.

Enforcement and policy support: Participants rated the perceived likelihood that someone driving after drinking would be stopped by the police, from 1 (*not at all likely*) to 7 (*extremely likely*). They also rated agreement with increasing roadside breath testing, introducing zero-tolerance limits for new drivers and for all drivers, and requiring alcohol-interlock devices for high-risk or repeat offenders, from 1 (*strongly disagree*) to 7 (*strongly agree*).

Identity and social-cognitive measures (mediators)

Identity, prototype, and norm measures. Consistent with the Prototype Willingness Model, participants completed measures assessing responsible driver identity, favourability and similarity to the drink-driver and non-drink-driver prototypes and perceived descriptive norms about drink-driving behaviour. Baseline responsible-driver identity was assessed using three items including "Being a safe driver is an important part of who I am," rated from 1 (*strongly disagree*) to 7 (*strongly agree*). Items were averaged to produce a composite score, with higher scores indicating stronger responsible-driver identity ($\alpha = 0.925$).

Following the article, participants rated their current responsible-driver and community-protection identities from 1 (*not at all*) to 7 (*very much so*). Prototype measures assessed favourability towards, and perceived similarity to, a typical person who sometimes drinks and drives and a typical person who always separates drinking from driving. Responses ranged from 1 (*very unfavourable/not at all similar*) to 7 (*highly*

favourable/highly similar). Two further items assessed perceived norms among similar others concerning avoiding alcohol before driving and supporting stronger action to reduce drink-driving, from 1 (*strongly disagree*) to 7 (*strongly agree*).

Exploratory behavioural and trust measures. Participants rated their willingness to drive 30 min after one alcoholic drink, and their likelihood of ordering alcohol when expecting to drive, using seven-point scales. A hypothetical choice task asked which drink they would choose when planning to drive, with options ranging from standard alcoholic drinks to alcohol-free and soft drinks. Trust in public-health and alcohol-industry organisations as sources of drink-driving information was rated from 1 (not at all) to 7 (strongly trust).

Demographic and background measures: Participants reported age in years, gender, ethnicity, highest educational qualification, household income, area of residence, driving-licence status, driving frequency, and personal or family experience of road-traffic collisions. Political orientation was measured from 1 (*strongly left-leaning*) to 7 (*strongly right-leaning*), and voting intention was collected using an open-text item. Alcohol consumption was assessed using the three-item AUDIT-C ($\alpha = 0.798$).

Data analysis

Analyses followed the pre-registered protocol (Davies et al., 2026) unless otherwise specified below. Primary and secondary outcome analyses were conducted using Bayesian one-way ANOVAs in JASP, with framing condition (industry, public health, neutral) as the between-subjects factor. The default Cauchy prior width of $r = 0.50$ was used for the main Bayesian ANOVAs, with pre-registered sensitivity analyses using narrower and wider prior specifications ($r = 0.25$ and $r = 0.707$) to assess robustness. Bayes factors (BF_{10}) are reported as evidence for the alternative model including framing condition relative to the null model. BF_{10} values below 1 were interpreted as evidence favouring the null model.

Planned post-hoc comparisons were conducted for theoretically relevant effects, comparing public health versus neutral, industry versus neutral, and public health versus industry conditions. Additional robustness checks for the primary outcome used Bayesian model comparison including pre-registered baseline covariates: AUDIT-C, driving frequency, baseline responsible-driver identity, and baseline drink-driver prototype similarity. Full model comparison results are reported in Supplementary File 1.

Exploratory mediation analyses were conducted to examine potential identity-related mechanisms. Because the framing variable was categorical and Bayesian mediation was not available for this model structure in JASP, mediation analyses were conducted using regression-based frequentist models with planned contrasts: public health versus neutral and industry versus neutral. Indirect effects were estimated using maximum likelihood with 95% confidence intervals. These analyses are interpreted as exploratory. Additional unplanned exploratory mediation analyses examined selected belief-level outcomes, namely perceived harm to rural pubs and perceived road-safety benefits; these are reported in Supplementary File 3.

No formal correction for multiple testing was applied to the Bayesian analyses, consistent with the pre-registered approach. Bayes factors were interpreted as measures of evidence for each specified outcome, with emphasis placed on the overall pattern of evidence across primary, secondary, and exploratory analyses.

Results

Sample and data quality

Of 508 participants who started the survey, nine did not complete and submit their responses, and one did not meet the eligibility criteria of living in England or Wales. Three participants each failed one

attention check and were excluded, resulting in a final analytic sample of $N = 495$. This was more stringent than the preregistered criterion, which specified exclusion only when all three attention checks were failed. The median completion time was 9 min 32 seconds, and the minimum was 4 min 20 s; no participant completed the survey in less than one-third of the median duration. Prolific's automated screening for exceptionally fast submissions was enabled during recruitment to identify submissions falling substantially below the estimated completion time.

Allocation across experimental conditions was approximately even (industry: $n = 165$; neutral: $n = 167$; public health: $n = 163$; see Table 1), and baseline characteristics were broadly comparable across conditions. Comprehension of the articles was high, with 94.9% of participants correctly recalling the proposed policy change (a reduction from 80 mg to 50 mg), and no evidence of differential misunderstanding between conditions. Before randomisation to one of the three articles, participants were asked to estimate the current legal drink-drive limit in England and Wales. Most underestimated the existing limit: over half (56.2%) believed the limit to be 20 mg per 100 ml of blood, and fewer than one in eight (12.3%) correctly identified the current 80 mg limit. This indicated that baseline knowledge of current policy was low, suggesting that many participants assumed the existing limit was more restrictive than it was.

RQ1: Primary outcome: support for lowering the drink-drive limit

A Bayesian one-way ANOVA compared the framing conditions (industry, public health, neutral) on the primary outcome measure of support for lowering the drink-drive limit (see Table 2). This analysis provided decisive evidence for an effect of framing condition ($BF_{10} = 1.38 \times 10^6$). The public health frame resulted in the highest level of support ($M = 6.28$, $SD = 1.45$), followed by the neutral condition ($M = 6.07$; $SD = 1.56$), and the industry condition ($M = 5.19$, $SD = 1.98$). Planned post-hoc contrasts revealed that the largest difference was between the public health and industry conditions ($BF_{10} = 340,337$). There was also strong evidence that support was higher in the neutral condition compared to the industry condition ($BF_{10} = 1,750$). However, there was evidence favouring the null model for the difference between the public health and neutral frames ($BF_{10} = 0.15$).

Sensitivity analyses using alternative prior widths ($r = 0.25$ and $r = 0.707$) resulted in the same conclusions, with decisive evidence for framing effects on support for lowering the drink-drive limit across all priors. The framing effect remained when adjusting for baseline alcohol consumption, driving frequency, and baseline identity and drink-driver prototype similarity measures, with Bayesian model comparison strongly favouring models including framing over covariate-only alternatives. Full Bayesian model comparison results are provided in Supplementary File 1. Exploratory Bayesian ANCOVA indicated that political orientation was associated with support for lowering the drink-drive limit, with more right-leaning participants showing lower overall support. However, there was no evidence that political orientation moderated the effect of framing condition: the best-supported model included framing condition and political orientation, but not their interaction.

RQ2: Secondary outcomes: policy and risk perceptions

Framing also affected evaluations of the consequences emphasised in the articles (Table 2). There was very strong evidence that perceived harm to rural pubs differed by framing condition ($BF_{10} = 50,667.34$), with industry framing associated with greater perceived harm than either the neutral or public-health frames. There was also strong evidence for framing effects on perceived road-safety benefits of lowering the limit ($BF_{10} = 115.70$), with the highest perceived benefits under the public-health frame.

Table 2
Primary and secondary policy outcomes by framing condition.

Measure	Whole sample	Industry frame	Neutral frame	Public health frame	BF 10
Primary outcome (RQ1)					
Support for lowering drink-drive limit	5.84 (1.74)	5.19 (1.98)	6.07 (1.56)	6.28 (1.45)	1.375 × 10 ⁺⁶
Policy measures referred to in articles					
Harm to rural pubs	3.85 (1.64)	4.36 (1.50)	3.81 (1.62)	3.38 (1.65)	50667.34
Road safety	5.88 (1.42)	5.61 (1.55)	5.79 (1.44)	6.25 (1.20)	115.70
Enforcement and deterrence					
Likelihood of being stopped by police	3.41 (1.40)	3.36 (1.37)	3.29 (1.38)	3.58 (1.44)	0.127
Support for increased breath testing	5.97 (1.38)	5.87 (1.40)	6.02 (1.28)	6.01 (1.44)	0.040
Policy extension measures					
Support for zero limit for new drivers	6.21 (1.44)	6.07 (1.46)	6.14 (1.54)	6.42 (1.30)	0.263
Support for zero limit for all drivers	5.29 (2.03)	4.88 (2.18)	5.41 (1.96)	5.58 (1.90)	3.630
Support for alcoholock devices	6.33 (1.25)	6.08 (1.38)	6.41 (1.23)	6.48 (1.11)	2.009
Perceived risk of drink driving					
Perceived risk of driving after drinking	5.32 (1.40)	5.04 (1.40)	5.30 (1.42)	5.63 (1.33)	24.009

Note. Values are means (SDs). Bayes factors (BF₁₀) are from separate Bayesian one-way ANOVAs comparing framing conditions.

Beyond these core policy evaluations, framing effects did not consistently extend to perceptions of enforcement or support for related policy measures. There was evidence favouring the null model for perceived likelihood of police enforcement (BF₁₀ = 0.13) and support for increased breath testing (BF₁₀ = 0.04). Similarly, support for most policy extension measures showed little evidence of framing effects, including support for zero limits for new drivers (BF₁₀ = 0.26) and alcohol interlock devices (BF₁₀ = 2.01), although there was modest evidence for a difference in support for a universal zero-limit policy (BF₁₀ = 3.63), with the greatest support in the public health condition. In contrast, perceived risk of driving after drinking, assessed via a composite measure, showed strong evidence of framing effects (BF₁₀ = 24.01), with higher perceived risk under the public-health frame relative to the industry frame.

RQ3: Identity-related mechanisms and behavioural responses

There was evidence against framing effects on post-exposure identity-related and behavioural responses (Table 3). Bayesian analyses indicated no effect of framing on responsible-driver identity (BF₁₀ = 0.051), nor on prototype perceptions of people who drink and drive or those who consistently avoid drinking before driving, with Bayes factors consistently favouring the null model (BF₁₀ < 1).

Table 3
Identity-related, behavioural, and trust outcomes by framing condition.

Measure	Whole sample	Industry frame	Neutral frame	Public health frame	BF 10
Driver identity					
Post article responsible driver identity	6.08 (1.27)	5.98 (1.24)	6.17 (1.2)	6.10 (1.36)	0.051
Prototype perceptions					
Post article drink driver favourability	1.91 (1.24)	2.06 (1.32)	1.79 (1.26)	1.88 (1.43)	0.116
Post article drink driver similarity	1.73 (1.25)	1.97 (1.42)	1.62 (1.13)	1.61 (1.56)	0.624
Post article never drink driver favourability	6.40 (1.03)	6.35 (1.05)	6.37 (1.08)	6.47 (0.96)	0.043
Post article never drink driver similarity	6.12 (1.33)	6.09 (1.39)	6.25 (1.15)	6.02 (1.44)	0.075
Descriptive norms					
Perceived drink-driving social norms	5.97 (1.27)	5.69 (1.46)	6.07 (1.19)	6.16 (1.09)	0.106
Willingness to drive after drinking					
Behavioural willingness to drive after drinking	2.47 (1.57)	2.68 (1.60)	2.50 (1.61)	2.23 (1.46)	0.655
Alcoholic drink choice, n (%)	106 (21.4)	41 (24.8)	36 (21.7)	29 (17.8)	0.037
Trust in organisations					
Public health	5.44 (1.28)	5.46 (1.18)	5.40 (1.31)	5.44 (1.35)	0.025
Industry	3.61 (1.68)	3.47 (1.56)	3.69 (1.67)	3.65 (1.80)	0.048

Values are means (SDs) unless otherwise indicated. Bayes factors (BF₁₀) are from separate Bayesian one-way ANOVAs comparing framing conditions other than for drink choice, which was analysed using a Bayesian contingency table. BF₁₀ values less than 1 indicate evidence favouring the null model.

Similarly, there was evidence against framing effects on perceived descriptive social norms regarding drink-driving (BF₁₀ = 0.106) and on behavioural willingness to drive after drinking (BF₁₀ = 0.655). Framing condition also showed no evidence of influencing drink choice when planning to drive, with Bayes factors favouring the null model.

Because mediation analyses were conducted using regression-based frequentist models, indirect effects are reported using confidence intervals rather than Bayes factors. Exploratory mediation analyses provided little evidence that framing effects on support for lowering the drink-drive limit operated through pro-safety identity mechanisms specified by the Prototype Willingness Model. There was no evidence that public-health framing influenced policy support via responsible-driver identity, descriptive social norms, or prototype perceptions, with indirect effects small and confidence intervals including zero. For industry framing, however, there was some limited evidence of indirect effects via perceived descriptive social norms and drink-driver prototype similarity, indicating that industry-aligned narratives may modestly reduce support by reinforcing perceptions of normative acceptability and similarity to drink-drivers (see Supplementary File 2).

To probe those findings further, additional exploratory mediation analyses were conducted to examine belief-level outcomes. As reported in Supplementary File 3, industry framing, but not public-health framing, showed indirect effects via descriptive social norms and defensive identity alignment when shaping perceptions of both harm to rural pubs and road-safety benefits.

Discussion

This study provides experimental evidence that public support for lowering the drink-drive limit is shaped by how the policy is framed. Support was highest following public-health framing and lowest following industry-aligned framing. The overall framing effect was supported across analytic approaches and sensitivity analyses.

The results suggest that framing operated primarily through changes in evaluative judgements about policy consequences (Chong & Druckman, 2007). Public-health framing increased perceived road-safety benefits, while industry framing increased perceived harm to rural pubs, and these evaluations closely tracked differences in policy support (Druckman & Nelson, 2003). In contrast, there was no evidence that framing altered responsible driver identity, perceived norms, or behavioural willingness. While these social-cognitive processes are emphasised in frameworks such as the Prototype Willingness Model (Gerrard et al., 2008; Ravis et al., 2011), the present findings suggest that they did not play a central role in shaping policy support in this context. This aligns with qualitative evidence from England showing that although people are generally aware that drink-driving laws exist, they often do not know the legal limits or how these translate into drinking behaviour, relying instead on heuristics such as “one or two drinks” (Keatley et al., 2020).

These findings can be interpreted in relation to established distinctions between gain- and loss-framed messages. Public-health framing in the present study emphasised the benefits of policy change (road safety), whereas industry-aligned framing emphasised potential harms (economic impact on rural pubs), broadly mapping onto gain-loss distinctions identified in the framing literature (Gallagher & Updegraff, 2011). Consistent with this literature, gain-oriented framing was associated with higher support for a preventive policy. However, the present findings also suggest that the effects of these policy narratives cannot be explained solely as gain-loss framing (Niederdeppe et al., 2013). Industry-aligned narratives appeared to engage additional social-cognitive processes, including perceived norms and identity-relevant considerations, although further research is needed to establish this finding.

Although identity-related processes did not drive framing effects overall, exploratory mediation analyses indicated a more limited and asymmetric role. For belief-level outcomes, indirect effects involving descriptive norms and prototype similarity were evident under industry framing, but not public-health framing. These indirect effects were associated with greater perceived harm to rural pubs and lower perceived road-safety benefits. This exploratory pattern suggests that identity-related and normative processes may be more relevant to specific policy beliefs than to overall policy support. This interpretation is consistent with evidence linking drink-driving attitudes, perceived enforcement and social acceptability with drinking patterns and self-reported drink-driving behaviour (Stephens et al., 2017).

The findings are relevant to the current policy debate in England and Wales. England and Wales remain out of step with Scotland and much of Europe, retaining an 80 mg/100 ml limit that has been largely unchanged since 1967, despite calls from medical and road-safety organisations to reduce the limit (BMA, 2024; Mahase, 2023). The findings demonstrate that public support for evidence-based interventions is highly sensitive to competing narratives about harms and benefits (Fitzgerald et al., 2024). Public-health communications that emphasise clear safety benefits appear more effective in building support, whereas industry-aligned narratives highlighting economic harms may undermine it. However, policy change alone is unlikely to be sufficient to change behaviour. Evidence from Scotland is mixed: the limit reduction was not associated with a detectable reduction in road traffic accident rates, highlighting the importance of enforcement and public awareness alongside legislative change (Haghpanahan et al., 2019).

Concerns about impacts on rural pubs may be plausible to the public, given wider structural pressures on the British pub sector, including

declines in pub numbers and uneven geographic impacts (Clark et al., 2023). However, evidence from Scotland suggests that lowering the drink-drive limit did not produce long-term financial harm for most on-trade venues, with some rural venues adapting through food provision and alcohol-free options (Sumpter et al., 2020). The present findings suggest that, even where economic harms are uncertain or context-dependent, framing them prominently can still reduce support for evidence-based road-safety policy.

Ensuring that public messaging communicates well-established safety outcomes, rather than contested harm narratives, may therefore be critical for successful policy implementation (Buykx et al., 2015). More broadly, the findings suggest that real-world policy framing may influence support through different processes depending on narrative content. The findings suggest that identity-related processes are not activated by all policy messages but may be more relevant when narratives make social norms or identity-relevant interpretations of behaviour more salient.

Strengths and limitations

This study has several important strengths. It employed a pre-registered experimental design with a large sample recruited using quotas for age, gender and ethnicity. The framing materials were grounded in contemporary UK policy debates, enhancing ecological validity compared to more abstract messaging studies. The conclusions were consistent across Bayesian sensitivity analyses. In addition, the inclusion of theoretically informed mechanism measures from the PWM allowed direct testing of whether identity-related processes contributed to framing effects.

However, several limitations should be noted. Although quotas were used to approximate the adult population of England and Wales by age, gender and ethnicity, the sample was not specifically recruited to represent the demographic characteristics of licenced drivers. The study was conducted in an online experimental setting using self-report measures. It used a single-exposure, which may not reflect repeated and competing real-world media exposure. Because this is an ongoing policy debate, participants may already have been exposed to public-health or industry-aligned messaging before taking part, which was not assessed. The framing manipulation reflected brief news-style articles, whereas public understanding of policy is likely shaped by repeated and competing messages over time. Increasingly, such exposure may occur through social media, where personalised content selection may lead some users to encounter repeated or less diverse policy narratives. Future research should therefore examine framing effects under conditions involving repeated exposure to messages through social media platforms. Although mediation analyses provided useful insights into potential mechanisms, these were exploratory and should be interpreted with caution. Finally, identity measures captured immediate responses and may not reflect deeper or longer-term identity change. Future research should examine how repeated exposure to competing narratives shapes belief formation and policy support over time and test whether similar patterns emerge across other alcohol and public health policy domains.

In conclusion, this study demonstrated that public support for lowering drink-drive limits was strongly influenced by how policy consequences were framed. Framing operated primarily through evaluative judgements about harms and benefits. The findings suggest that these framing effects extend beyond simple gain-loss distinctions and that different narratives may influence support through different processes. Identity-related processes may play a limited role, but indirect effects were found only under industry-aligned framing. Together, the results highlight the importance of strategically designed public-health communication and underscore the need to address competing narratives that may undermine support for evidence-based policy.

Ethics declaration

Written informed consent to take part in the study and to publish the article has been obtained from all participants or their legal representatives. The privacy rights of participants have been observed.

This study was performed in compliance with relevant laws, regulatory frameworks and guidelines where the research took place. This study was approved by the Oxford Brookes University. (Approval No. 241837)

Declaration of generative AI and AI-assisted technologies in the manuscript preparation process

During the preparation of this work, the authors used Microsoft Copilot for proof-reading. The authors reviewed and edited the output as needed and take full responsibility for the content of the published article.

CRedit authorship contribution statement

Emma L. Davies: Writing – review & editing, Writing – original draft, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization, Resources. **Jennifer Seddon:** Writing – review & editing, Writing – original draft, Methodology, Conceptualization. **Abigail K. Rose:** Writing – review & editing, Writing – original draft, Methodology, Conceptualization. **Sam Burton:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Funding

This research was funded by Centre for Psychological Research, Oxford Brookes University.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at [doi:10.1016/j.drugpo.2026.105526](https://doi.org/10.1016/j.drugpo.2026.105526).

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