




RESEARCH ARTICLE

Prevalence of successful alcohol reduction attempts among risky drinkers: A national survey in England

[version 1; peer review: 1 approved]

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Abstract

Little is known about the success of alcohol reduction attempts made outside of an experimental setting, and the association between brief alcohol interventions and other evidence-based support and the success of these attempts. This study aimed to answer these questions among risky drinkers using observational data (baseline and 6-month follow-up surveys) from England between 2014 and 2016 (n=3,129). Around one third (31.4%, 95% CI=29.8-33.0) of risky drinkers reported making an alcohol reduction attempt between baseline and 6-month follow-up. Of those making an attempt, nearly two-thirds (64.1%, 95% CI=61.1-67.1) self-reported their attempt was successful. Those who received a brief alcohol intervention in primary care were 3-times more likely to report their attempt was successful (OR_{adj}=3.01, 95% CI=1.87-4.82). No association was detected between using evidence-based support during an attempt and self-reported success (OR_{adj}=0.87, 95% CI=0.47-1.66). A different pattern of results was found when using AUDIT score at 6-month follow-up (adjusted for baseline) as the outcome: receiving (vs. not receiving) a brief alcohol intervention in primary care (B_{adj}=3.56, 95% CI=2.78-4.35) and using (vs. not using) evidence-based support during an alcohol reduction attempt (B_{adj}=1.89, 95% CI=0.72-3.06) was associated with *higher* AUDIT scores. These findings were not robust to sensitivity analyses, highlighting the importance of using measures focused on more recent alcohol consumption in this type of study design. Further

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Any reports and responses or comments on the article can be found at the end of the article.

research is needed to unpick these findings and to capture the potential heterogeneity in goals for alcohol reduction attempts.

Keywords

alcohol, reduction, success



This article is included in the **Addiction and Related Behaviors** gateway.



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1. Introduction

Alcohol consumption has a significant impact on public health (Rehm et al., 2009) and is a leading contributor for disease burden with increasing levels of consumption (Public Health England, 2016), as well as contributing to health inequalities (Boyd et al., 2021). Reducing alcohol consumption is therefore a public health priority (Beaglehole & Bonita, 2009) with over 10 million adults in England drinking above recommended levels (NHS Digital, 2019; Public Health England, 2016) who would benefit from reducing their consumption (Charlet & Heinz, 2017). Only 20% of risky drinkers (defined as Alcohol Use Disorder Identification Test–Consumption (AUDIT-C) score ≥ 5) in England reported that they were currently attempting to reduce their alcohol consumption between 2014 and 2016 (Beard et al., 2017). There is a lack of evidence on whether these attempts are successful in terms of how they are viewed by the individual and whether their alcohol consumption has changed.

Research among those with alcohol dependence or in treatment usually defines success as abstinence (Chiappetta et al., 2014) though reductions in alcohol consumption can cause meaningful and sustained improvements in health and well-being (Witkiewitz, Heather, et al., 2020a; Witkiewitz, Kranzler, et al., 2020b), and be as effective as abstinence-focused approaches at reducing consumption (Marlatt & Witkiewitz, 2002). Considering abstinence as the only form of success may prevent treatment seeking by risky drinkers (Public Health England, 2018) and it is important to have definitions of success (e.g., reduction) that may be more relevant to this group.

Evidence from systematic reviews shows that brief interventions (short conversations to motivate individuals to plan a change in their drinking) in primary care are effective at reducing alcohol consumption in risky drinkers (E. F. Kaner et al., 2018). There is also a range of support with evidence from randomised trials that could be used when making an alcohol reduction attempt, including counselling and support sessions, medicines (e.g., acamprosate to support alcohol withdrawal) (National Institute for Health and Care Excellence, 2011) and digital interventions (E. F. S. Kaner et al., 2017; Oldham et al., 2024; Riper et al., 2018), though uptake of this support is low in the general population (Perski et al., 2019). However, what is observed in randomised trials may not generalise to outside of an experimental setting (e.g., where primary care may offer different support when not taking part in a trial) and to the general population in England (e.g., those not willing to take part in a trial).

This study used observational data from a monthly cross-sectional survey with a 6-month follow-up of adults in England to answer the following research questions (RQs):

1. What proportion of the sample a) made an alcohol reduction attempt in the last six months, and b) of those that did, what proportion self-reported success?
2. To what extent is making an alcohol reduction attempt in the last six months associated with:
 - a. Self-reported alcohol use?
3. To what extent is receiving a brief alcohol intervention in the last six months associated with:
 - a. Self-reported success, and
 - b. Self-reported alcohol use?
4. Of those who made an alcohol reduction attempt in the last six months, to what extent is using evidence-based support associated with:
 - a. Self-reported success, and
 - b. Self-reported alcohol use?

2. Methods

2.1 Design and study population

The Alcohol Toolkit Study (ATS) is an ongoing, monthly, population survey in England (Beard et al., 2015). The ATS consists of cross-sectional household surveys of nationally representative samples of approximately 1,700 people aged 16+ in England. The study sampling is a hybrid of random probability and simple quota – England is split into more than 170,000 areas stratified according to a geodemographic analysis of the population. Areas are then randomly allocated to interviewers who conduct interviews within that area until the quota is fulfilled.

This study used data from March 2014 to September 2016 (inclusive), the only period of time when respondents (who consented to follow-up) were asked to complete a telephone survey six months later on their alcohol use. Participants were respondents who were risky drinkers at baseline (AUDIT score ≥ 8 , or AUDIT-C score ≥ 5) and who were followed up six months later.

2.2 Ethics and governance

Ethics approval for the ATS was granted by the UCL Ethics Committee (ID 2808/005). The data were not collected by UCL and were anonymized when received by UCL. Participants gave informed consent to participate in the study before taking part.

2.3 Measures

Outcome variables measured at 6-month follow-up:

The primary outcome measure was self-reported success in relation to their most recent alcohol reduction attempt in the last six months. Participants who reported a reduction attempt, were asked: “How long did your most recent attempt last before you went back to drinking at least as much as before?”. Any “have still cut down successfully” responses were coded as ‘successful’, and all other responses (e.g., “less than a day”, “less than a week”) were coded as ‘unsuccessful’. For any participants who had not made a reduction attempt, their response was imputed as ‘unsuccessful’ (i.e., assumed they did not consider themselves successful in an attempt given they did not report making one). This measure was chosen as the primary outcome as it was the best measure available in the dataset to get at someone’s success after making a reduction attempt.

The secondary outcome measure was self-reported alcohol use in terms of AUDIT score at 6-month follow-up, adjusted for baseline AUDIT score (Babor et al., 2001; Tennant, Arnold, et al., 2021a).

Explanatory variables (i.e., the expected cause of change in outcome) measured at 6-month follow-up:

- RQ2. Alcohol reduction attempt made in the last six months: “How many attempts to restrict your alcohol consumption have you made in the last 6 months (e.g. by drinking less, choosing lower strength alcohol or using smaller glasses)?” with ‘0’ coded as ‘no’ and ‘1’ or above coded as ‘yes’.
- RQ3. Receipt of a brief alcohol intervention in the last six months: “In the last 6 months, has a doctor or other health worker within your GP surgery discussed your drinking?”. Responses indicating that they were offered advice, help or support to help them cut down on drinking, referred to an alcohol service or advised to seek specialist help was coded as ‘yes’ with all other responses coded as ‘no’.
- RQ4. Use of evidence-based support during their most recent alcohol reduction attempt: “Which, if any, of the following did you use to try to help restrict your alcohol consumption during the most recent attempt?”. If respondents selected any of ‘any medicines’ (National Institute for Health and Care Excellence, 2011), ‘counselling/advice/support sessions’, ‘specialist alcohol clinic or centre’, ‘community pharmacist support’, ‘helpline’, ‘website’ or ‘app’ (E. F. S. Kaner et al., 2017; Riper et al., 2018) for help with their drinking they were coded as ‘yes’, otherwise they were coded as ‘no’.

Co-variables (assessed at baseline):

The sociodemographic characteristics were: age; sex (female/male and in another way; due to sparse data when used in adjustments); ethnicity (white/ethnic minorities); social grade (ABC1 (managerial, professional and intermediate occupations)/C2DE (skilled, semi-skilled, unskilled manual and lowest-grade worked or unemployed)); region in England (South/Central/North), and children in the household (yes/no).

Drinking and smoking characteristics

- Strong urges to drink was derived by participants responding “strong, very strong or extremely strong” to: “How strongly have you felt the urge to drink alcohol in the past 24 hours”.
- Motivation to cut down on drinking was derived by participants responding, “I really want to cut down on drinking alcohol and intend to in the next month/next 3 months” to: “Which of the following best describes you?” (Kotz et al., 2013).

- Baseline AUDIT score (continuous, range from 8-40) (Babor et al., 2001), transformed using natural (cubic) splines with five knots placed at equally spaced quantiles of the data to allow for non-linear trends (Greenland, 1995; Smith, 1979).
- Smoking status (current smoker/not).

Co-variables (measured at 6-month follow-up):

Characteristics of alcohol reduction attempts

- Time since most recent alcohol reduction attempt: i) In the last week; ii) More than a week and up to a month; iii) More than 1 month and up to 2 months; iv) More than 2 months and up to 3 months; and v) More than 3 months and up to 6 months.
- Whether most recent attempt to cut down was a serious attempt to cut down on drinking permanently (yes/no).

Potential confounder variables:

- Survey year (continuous, 2014 to 2016).
- Survey month, transformed using natural (cubic) splines with five knots placed at equally spaced quantiles of the data (Greenland, 1995; Smith, 1979).

2.4 Analyses

All analyses were conducted in RStudio (version 2023.06.0+421) with complete cases for all variables of interest. The protocol and analysis plan were pre-registered on the Open Science Framework (<https://osf.io/ejkmt>). Changes to the analysis were made after pre-registration and these are reported in Supplementary File 1.

For RQ1, the proportion (and 95% confidence interval [CI]) of risky drinkers who had made an alcohol reduction attempt in the last six months was reported. Of those who made an attempt, the proportion (and 95% CI) who self-reported a successful attempt was reported.

For RQ2-4, binary logistic or linear (as appropriate) generalised linear models were used to estimate the longitudinal association between the explanatory variable and the outcome variables, adjusting for relevant covariables. We drew directed acyclic graphs (DAGs), see Supplementary File 2 and Figure 1 for a simplified version, to formally define each association of interest and make the research teams’ assumptions about the relationships between variables explicit (Tennant, Murray, et al., 2021b).

For RQ2, the explanatory variable was whether an alcohol reduction attempt was made between baseline and 6-month follow-up, the outcome variable was AUDIT score at 6-month follow-up, and the confounding variables adjusted for were: baseline AUDIT score, urges to drink, brief alcohol intervention, age, sex, social grade, and survey year and month.

For RQ3, the explanatory variable was receipt of brief alcohol interventions, the outcome variables were (a) successful attempt and (b) AUDIT score at 6-month follow-up, and the confounding variables adjusted for were: baseline AUDIT

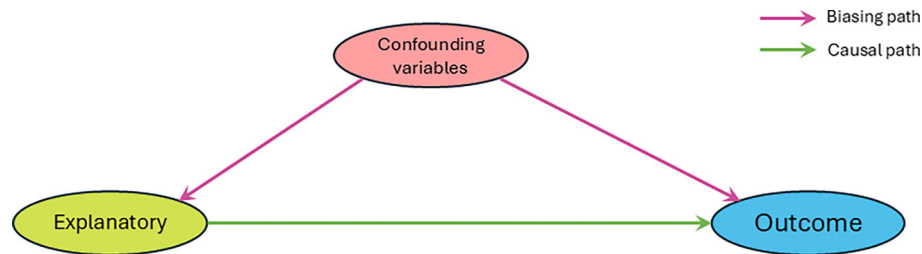


Figure 1. Simplified version of a DAG. The variables are depicted by nodes and connected by unidirectional arrows depicting the hypothesised relationship, where the arrow direction is determined temporally, as the future cannot cause the past (Tennant, Murray, et al., 2021b).

score, motivation to cut down on drinking, urges to drink, smoking status, age, sex, social grade, and survey year and month.

For RQ4, the explanatory variable was use of evidence-based support (among only those who made an alcohol reduction attempt), the outcome variables were (a) successful attempt and (b) AUDIT score at 6-month follow-up, and the confounding variables adjusted for were: serious attempt made (for a permanent reduction), brief alcohol intervention, baseline AUDIT score, age, sex, social grade, and survey year and month.

Sensitivity analyses

Baseline measures were compared between those who did complete the 6-month follow-up survey and i) those who reported at baseline being willing but did not complete the follow-up survey, and ii) those who reported at baseline not being willing. The validity of the measure of self-reported alcohol reduction success was compared with AUDIT score at 6-month follow-up, which is presented in Supplementary File 1.

We conducted three unplanned sensitivity analyses. The first compared two sub-samples: those who made their attempt i) within the last month and ii) between 3 and 6 months ago. This explored whether the findings differed based on how recently an attempt was made given that the AUDIT questionnaire covers a six-month period, both before and after an attempt was made. The second used the AUDIT-C as the outcome measure, which focuses on consumption-related items and is likely more responsive to change as changes in AUDIT-C scores reflect changes in drinking (Rubinsky et al., 2019). The third focused on serious attempts made to cut down on drinking alcohol permanently to assess how the proportions and associations differed.

3. Results

There were 6,461 adults in England who were risky drinkers at baseline though only 3,129 participants agreed to and completed the 6-month follow-up (48.4%) and were therefore included in this study. See Table 1 for participant characteristics.

Differences in age, social grade, region, AUDIT-C score and current smoking status were detected between risky drinkers who completed the 6-month follow-up survey with a) those who reported being willing but did not complete it (n=616; 9.5%) and b) those who were not willing (n=2,716; 42.0%), see Supplementary Table 1.

Table 1. Baseline participant characteristics (n=3,129).

| Characteristic | Overall, n=3,129 | Alcohol reduction attempt made in last six months (n=3,129) | | Of those who had made alcohol reduction attempt (n=982) | |
|--|------------------|---|--------------|---|-------------------|
| | | No, n=2,147 | Yes, n=982 | Unsuccessful, n=353 | Successful, n=629 |
| Age (years) | 50.2 (16.86) | 50.1 (17.45) | 50.5 (15.50) | 50.7 (15.65) | 50.4 (15.42) |
| Sex, % female | 33.9% (1,061) | 31.7% (681) | 38.7% (380) | 37.1% (131) | 39.6% (249) |
| Ethnicity, % white | 96.4% (3,016) | 96.2% (2,066) | 96.7% (950) | 96.9% (342) | 96.7% (608) |
| Social grade, % ABC1 | 71.2% (2,227) | 69.6% (1,495) | 74.5% (732) | 73.4% (259) | 75.2% (473) |
| Region in England | | | | | |
| South | 36.6% (1,146) | 34.6% (743) | 41.0% (403) | 39.1% (138) | 42.1% (265) |
| Central | 20.5% (643) | 21.0% (451) | 19.6% (192) | 22.1% (78) | 18.1% (114) |
| North | 42.8% (1,340) | 44.4% (953) | 39.4% (387) | 38.8% (137) | 39.7% (250) |
| Urges to drink, % strong | 5.2% (162) | 4.2% (90) | 7.3% (72) | 8.5% (30) | 6.7% (42) |
| Motivation to cut down on drinking, % high | 5.3% (167) | 2.0% (44) | 12.5% (123) | 13.9% (49) | 11.8% (74) |
| AUDIT score | 8.3 (3.69) | 7.8 (3.20) | 9.2 (4.43) | 9.7 (4.72) | 9.0 (4.24) |
| AUDIT-C score | 6.8 (1.84) | 6.7 (1.78) | 7.1 (1.92) | 7.3 (1.97) | 7.0 (1.89) |
| Current smoker, % (yes) | 19.6% (613) | 20.7% (445) | 17.1% (168) | 21.0% (74) | 14.9% (94) |

Mean (SD); % (n).

3.1 RQ1: Proportion of alcohol reduction attempts made and proportion of successful attempts

Of the risky drinkers, 31.4% (n=982, 95% CI=29.8–33.0) reported making an alcohol reduction attempt between baseline and 6-month follow-up. Of those who made an attempt, 64.1% (n=629, 95% CI=61.1–67.1) self-reported that their attempt was successful.

Of the risky drinkers, 16.2% (n=506, 95% CI=14.9-17.5) reported having made a serious attempt to cut down on their drinking permanently with 77.5% of those (n=392, 95% CI=73.8–81.1) self-reporting that their attempt was successful.

3.2 RQ2: Association between alcohol reduction attempt and alcohol use

There was a positive association between making an alcohol reduction attempt in the last six months and AUDIT score at the 6-month follow-up among risky drinkers ($B_{adj}=0.72$, 95% CI=0.53–0.92), see Table 2. This association was larger among those who had made their attempt within one month of the follow-up assessment ($B=1.17$, 95% CI=0.90–1.43) and no association was detected for those between 3 and 6 months ago ($B=0.11$, 95% CI=-0.17–0.39).

The association was attenuated when using the AUDIT-C as the outcome measure ($B=0.12$, 95% CI=0.003–0.24) and no association between making a serious alcohol reduction attempt and AUDIT score was detected ($B_{adj}=0.31$, 95% CI=-0.08–0.69), see Supplementary Table 2.

3.3 RQ3: Association between brief alcohol intervention and success and alcohol use

Those participants reporting receiving a brief alcohol intervention in the last six months were 3-fold more likely ($OR_{adj}=3.01$, 95% CI=1.87–4.82) to self-report that their attempt was successful, see Table 3, and 3-fold likelier ($OR_{adj}=3.13$, 95% CI=1.87–5.14) to self-report that their serious attempt was successful, see Supplementary Table 3.

Receiving a brief alcohol intervention in the last six months was associated with a higher AUDIT score compared with those not receiving one ($B_{adj}=3.56$, 95% CI=2.78–4.35), see Table 3. A similar size association between brief alcohol interventions and AUDIT score was detected among both those making an attempt within one month of the follow-up assessment ($B=3.79$, 95% CI=2.85–4.73) and between three and six months ago ($B=3.66$, 95% CI=2.64–4.68). No association was detected between receiving a brief alcohol intervention and alcohol use when using the AUDIT-C as the outcome measure ($B=0.42$, 95% CI=-0.05–0.89).

3.4 RQ4: Association between evidence-based support and success and alcohol use among those making an alcohol reduction attempt

No association was detected between using evidence-based support and self-reported success when making an alcohol reduction attempt ($OR_{adj}=0.87$, 95% CI=0.47–1.66, see Table 4) or when making a serious alcohol reduction attempt ($OR_{adj}=1.14$, 95% CI=0.53-2.65, see Supplementary Table 4).

When making an alcohol reduction attempt, using evidence-based support (versus not) was associated with a higher AUDIT score ($B_{adj}=1.89$, 95% CI=0.72–3.06), see Table 4. This association was larger when looking at only those attempts within one month ($B=4.30$, 95% CI=2.47–6.14) and no association was detected for those between three and six months ago ($B=0.52$, 95% CI=-1.21–2.25).

No association was detected between use of evidence-based support and alcohol use when using the AUDIT-C as the outcome measure ($B=0.14$, 95% CI=-0.50–0.79). A weak positive association between using evidence-based support when making a serious alcohol reduction attempt and AUDIT score was detected ($B_{adj}=1.55$, 95% CI=0.05–3.04), see Supplementary Table 4.

Table 2. Association between making an alcohol reduction attempt in the last six months on AUDIT score.

| Alcohol reduction attempt made in the last six months | AUDIT score (raw) | | Unadjusted model, B (95% CI) | Adjusted model*, B (95% CI) |
|---|---------------------|------------------------------|------------------------------|-----------------------------|
| | Baseline, mean (SD) | 6-month follow-up, mean (SD) | | |
| No attempt made | 7.8 (3.20) | 7.6 (3.77) | | |
| Attempt made | 9.2 (4.43) | 9.5 (5.05) | 1.37 (1.14-1.59) | 0.72 (0.53-0.92) |

*Adjusted for baseline AUDIT score, urges to drink, brief alcohol intervention, age, sex, social grade and survey year and month.

Table 3. Association between receiving a brief alcohol intervention in the last six months and i) self-reported success and ii) AUDIT score.

| Brief alcohol intervention received | Self-reported success, % (n) | | Unadjusted model, OR (95% CI) | Adjusted model*, OR (95% CI) | AUDIT score, mean (SD) | | Unadjusted model, B (95% CI) | Adjusted model*, B (95% CI) |
|-------------------------------------|------------------------------|-------------|-------------------------------|------------------------------|------------------------|-------------------|------------------------------|-----------------------------|
| | Unsuccessful | Successful | | | Baseline | 6-month follow-up | | |
| No brief intervention, n=3,043 | 80.6% (2,452) | 19.4% (591) | | | 8.1 (3.49) | 8.0 (4.06) | | |
| Brief intervention, n=86 | 50.0% (48) | 50.0% (48) | 3.28 (2.12-5.07) | 3.01 (1.87-4.82) | 12.4 (6.89) | 14.1 (7.62) | 6.14 (5.24-7.04) | 3.56 (2.78-4.35) |

*Adjusted baseline AUDIT score, motivation to cut down on drinking, urges to drink, smoking status, age, sex, social grade and survey year and month.

Table 4. Association between using evidence-based support when making an alcohol reduction attempt and i) self-reported success and ii) AUDIT score.

| Evidence-based support used | Self-reported success, % (n) | | Unadjusted model, OR (95% CI) | Adjusted model*, OR (95% CI) | AUDIT score, mean (SD) | | Unadjusted model, B (95% CI) | Adjusted model*, B (95% CI) |
|-----------------------------|------------------------------|-------------|-------------------------------|------------------------------|------------------------|-------------------|------------------------------|-----------------------------|
| | Unsuccessful | Successful | | | Baseline | 6-month follow-up | | |
| No use of support, n=925 | 36.1% (334) | 63.9% (591) | | | 9.0 (4.12) | 9.3 (4.79) | | |
| Use of support, n=57 | 33.3% (19) | 66.7% (38) | 1.13 (0.65-2.03) | 0.87 (0.47-1.66) | 12.4 (7.26) | 13.3 (7.26) | 4.00 (2.67-5.33) | 1.89 (0.72-3.06) |

*Adjusted for serious attempt made (for a permanent reduction), brief alcohol intervention, baseline AUDIT score, age, sex, social grade and survey year and month.

4. Discussion

4.1 Summary of main findings

Around a third of risky drinkers made an alcohol reduction attempt over a six-month period between 2014 and 2016 in England, and nearly two-thirds of those reported having still cut down successfully. Those who reported receiving a brief alcohol intervention in primary care at the 6-month follow-up were 3-times more likely to report their attempt as successful. Among those who made an attempt in the last six months, no association between using evidence-based support and self-reported success was detected. However, the pattern of results differed when using AUDIT score as an outcome measure, where it was expected that successful attempts would result in lower AUDIT scores (if the goal was long-term reduction in alcohol consumption). Making an alcohol reduction attempt and receiving a brief alcohol intervention in the last six months was associated with *higher* AUDIT scores than those who did not. Among those making an attempt, using evidence-based support was also associated with a higher AUDIT score. A 1-point difference in AUDIT score can reflect an additional 2-units of alcohol consumed on a typical day when drinking, which is similar to that found in both digital alcohol intervention outcomes (E. F. S. Kaner et al., 2017) and face-to-face brief intervention outcomes (E. F. Kaner et al., 2018), and at a population-level would result in about 4,000 fewer alcohol attributable deaths annually (Angus et al., 2016).

These results appear to show a disconnect between people's perceptions of their success in cutting down and standardised measures of alcohol consumption. This different pattern of results could be a rebound effect where people trying to cut down then drink more after their attempt ends (as in smoking where cessation fatigue predicts relapse (Heckman et al., 2018)), or that the intervention was effective in the short-term but the intervention's impact may have reduced over time. Also, not all attempts will have the same goal of long-term reduction in alcohol consumption; the findings from the sensitivity analyses focusing only on serious attempts provides some support for this explanation. Some drinkers report having a month abstaining from alcohol to prove to themselves they are in control of their drinking (Morfett et al., 2025), but this may have a negative rebound effect with drinkers being less worried about their drinking after the brief period of abstinence and subsequently drinking more as a result.

Alternatively, there may be measurement issues which impact on consumption measures at 6-months which are leading to this apparent disconnect. An individual's awareness of their drinking after making an attempt or receiving a brief alcohol intervention could lead to more accurate reporting and therefore higher AUDIT scores at follow-up. People may have an alcohol-related incident (e.g., injury) that leads them to make an alcohol reduction attempt, though that incident would score highly on the full AUDIT after the attempt if it occurred in the last six months. This is supported by the finding that the associations were attenuated or not detected when using the AUDIT-C as the outcome measure, which is responsive to changes in consumption (Rubinsky et al., 2019). Though a recent study identified potential collider bias and right censoring in using the AUDIT-C as a measure of change, which may undermine its validity for this purpose and increase the risk of failing to detect true effects (false negatives) (Romero et al., 2025).

Another potential explanation is that the AUDIT asks about alcohol consumption over the last six months and therefore also includes the time before an attempt may have occurred. If the attempt occurred more recently then we would expect the AUDIT score to be higher, compared with longer ago, as more time before the attempt was made (with a hypothesised higher AUDIT score) would be included in the average consumption for that period. This is what was seen where the associations between making an alcohol reduction attempt and using evidence-based support and AUDIT score were larger among those who made their attempt within one month, and no association detected among those who made their attempt between three and six months ago. This suggests that care is needed if using the AUDIT as an outcome measure if the AUDIT covers the time period before the exposure variable occurs. Future observational research should include methods focused on more recent recall which encourages more accurate reporting of alcohol volumes such as the Timeline Followback (Romero et al., 2025), alongside measures of longer-term drinking patterns (Stockwell et al., 2004). Also, caution is advised when using AUDIT scores as an outcome measure when investigating associations with brief interventions as the risk of inflation of the scores among those receiving a brief intervention is plausible (Cunningham et al., 2017).

This study highlights the importance of measuring both self-reported success as well as other definitions given the differences found in the pattern of results. Furthermore, there are many possible definitions of 'success' for alcohol reduction attempts (e.g., only drinking on weekends or having one pint less per drinking occasion) beyond simply having still cut down successfully (implying the goal is sustained alcohol reduction). Future research should investigate the different alcohol reduction goals that drinkers have and measure whether they "successfully met their goal" to try to capture the heterogeneity in alcohol reduction attempts and tailor alcohol reduction goals to individuals.

4.2 Strengths and limitations

A major strength of this study was the application of causal inference methods to observational data. In addition, the sample was from a large population survey and was the first, to the authors' knowledge, to report the prevalence of successful alcohol reduction attempts made among risky drinkers in England. However, the only time period where the relevant variables were available was from 2014 to 2016 and there have been major changes in alcohol consumption over that period (Jackson et al., 2020; Kilian et al., 2021) with an increase in the prevalence of risky drinkers and rates of making an alcohol reduction attempt in England (Jackson et al., 2020). Though there is not any evidence to suggest that success rates of alcohol reduction attempts have changed over this period, and this study provides an important historical baseline for context as to whether alcohol reduction attempt success rates have changed over time.

The study minimised the effect of recall bias on drinking characteristics as these were assessed prospectively at baseline, rather than retrospectively at 6-month follow-up avoiding potential underestimation of drinking characteristics. However, the alcohol reduction characteristics were assessed at 6-month follow-up requiring retrospective recall of the last six months.

The 6-month follow-up sample was not nationally representative and had a fairly high attrition rate as well as issues of selection bias in the follow-up with differences detected in age, social grade, region, AUDIT-C score and smoking status among those who were followed-up at six months with those who could have been followed-up but were not.

This study relied on self-report both in terms of alcohol reduction success and AUDIT scores and under-reporting alcohol consumption is well-established (Boniface & Shelton, 2013; Stockwell et al., 2004) though there is no evidence to suggest that the extent to which someone under-reported would change over time and this study focuses on within-person changes over time.

Another limitation was that only those who were risky drinkers at baseline (defined by AUDIT score) were invited to take part in the 6-month follow-up survey. This results in conditioning-on-the-outcome where the outcome (AUDIT score) is truncated due to selection of participants on this same measure at baseline. Regression to the mean is likely to indicate change in this group where it may only be random variation, which may cause collider-error and create a dependency with all random determinants of the outcome. Future research should assess this among all drinkers, not only risky drinkers.

Also, respondents may have interpreted the response option 'have still cut down successfully' differently or not have planned to cut down long-term. Future research should include more detailed measures on 'success' which cover different definitions. Furthermore, there may be factors associated with the success of an alcohol reduction attempt that were not assessed in this study (e.g., continuum beliefs [19, 20], drinking contexts, use of different strategies [15]).

4.3 Conclusions

Around a third of risky drinkers reported making an alcohol reduction attempt over a six-month period in England between 2014 and 2016, and nearly two-thirds of those reported that they had still cut down successfully. Those who reported receiving a brief alcohol intervention in the last six months were 3-times more likely to report a successful attempt. A different pattern of results was detected when using AUDIT score as the outcome measure, where it was expected that successful attempts would result in lower AUDIT scores. However, these findings were not robust to sensitivity analyses, highlighting the importance of using measures focused on more recent alcohol consumption in observational research, and that capture the potential for heterogeneity in goals of alcohol reduction attempts.

Data and software availability statement

Underlying data

Open Science Framework: Alcohol reduction attempts and their success among increasing and higher risk drinkers in England <https://doi.org/10.17605/OSF.IO/FQS3N> (Garnett et al., 2025).

This project contains the following underlying data:

- Analysis > Data analysis syntax. R (syntax for data analysis).
- Analysis > Toolkit_alc_red_success.sav (study data).

Data are available under the terms of the [Creative Commons Attribution 4.0 International license](https://creativecommons.org/licenses/by/4.0/) (CC-BY 4.0).

Extended data

Open Science Framework: Alcohol reduction attempts and their success among increasing and higher risk drinkers in England <https://doi.org/10.17605/OSF.IO/FQS3N> (Garnett et al., 2025).

This project contains the following extended data:

- Supplementary File 1.docx (supplementary file detailing changes after pre-registration and sensitivity analysis of validity of self-reported alcohol reduction success).
- Supplementary File 2.docx (supplementary file showing three directed acyclic graphs figures).
- Supplementary Tables.docx (file with four supplementary tables).

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The article is very interesting using a large sample. The authors appropriately recognized the limitations of the study and included suggestions to improve methodological issues in future studies. Considering different results using the AUDIT-C and the AUDIT, and taking into account the AUDIT-C evaluates only alcohol consumption and AUDIT also includes questions on consequences of it, I suggest the authors conduct complementary analysis using each question of the AUDIT to evaluate the outcome.

Is the work clearly and accurately presented and does it cite the current literature?

Yes

Is the study design appropriate and is the work technically sound?

Yes

Are sufficient details of methods and analysis provided to allow replication by others?

Yes

If applicable, is the statistical analysis and its interpretation appropriate?

Yes

Are all the source data underlying the results available to ensure full reproducibility?

Yes

Are the conclusions drawn adequately supported by the results?

Yes

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