

# Shifts in the Australian public's opinions towards alcohol policies: 2004–2019

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## Abstract

**Introduction:** After a period of stagnation, alcohol policy in Australia has received increased attention in the past decade, with Sydney's lockout laws and Queensland's restrictions on trading hours garnering media attention. This study will investigate any changing trends in support towards alcohol policy and identify any demographic-specific shifts.

**Methods:** Respondents from the National Drug Strategy Household Survey (conducted every 3 years from 2004 to 2019) were asked to gauge their level of support for 16 alcohol policy items proposed to reduce the problems associated with excessive alcohol use. Mean levels of support for various policy options, as well as demographic predictors of support, were assessed.

**Results:** After an increase from 2004 to 2013, support for more evidence-based policies on alcohol (e.g., restricting the availability of alcohol) has decreased since 2013. Support for policy items that focus less on the restriction of the availability of alcohol and more on education remained relatively stable in comparison. While demographic groups continue to vary in their extent of support, shifts appear to be occurring fairly uniformly across sex, age, states and drinking groups.

**Discussion and Conclusions:** Support for public health-oriented alcohol policies has been decreasing since 2013. The introduction of high-profile policies and less of a media focus on alcohol may be contributing to decreases in support.

## KEYWORDS

alcohol consumption, attitudes, national drug strategy household survey, policy, public opinion

## 1 | INTRODUCTION

Australian alcohol policy in the past two decades has been characterised by brief periods of activity, mostly at the state/territory level, and longer periods of relative inactivity. These brief periods of activity are usually the result of the introduction of high-profile alcohol policies, which have drawn particularly large media or public

attention. Some of these include the Sydney Lockout Laws [1], a series of restrictions on alcohol trading within licensed premises, and the Queensland restrictions on trading hours [2]. The response from the public towards these policies varies, but has an important impact on the government's decision to introduce future policies [3]. This is particularly relevant when policies are aiming to influence health-related behaviours, with governments'

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less willing to introduce new health policies if anticipated public support is low [4]. Often the most effective policies, price-based interventions for example, are less well received by the public, whereas less effective measures tend to receive more support [5]. Given that public attitudes can influence policy implementation, changes in these attitudes are important to track to predict how the introduction of related policies would be received.

Within the population, attitudes towards alcohol are influenced by demographic and consumption variables, with women, older people and non-drinkers typically favouring restrictive measures more than men, young people and drinkers [6]. A previous analyses of Australian data examining attitudes towards alcohol policies found a steady decrease across all demographic cohorts in support between 1993 and 2004 [7]. For example, support for the policy gauging attitudes towards 'increasing the price of alcohol' decreased by 11%. There was no clear group responsible for this decrease in support of policies, with the change occurring population wide. These trends were then reversed, with a subsequent study finding an increase in support for restrictive policies between 2004 and 2010 [8]. Results showed a homogenous increase in support, with again no obvious demographic group or broader societal catalyst driving these changes.

A further study examined support public for restrictions on late night trading of licensed venues following high-profile restrictions implemented in Sydney in 2014 [9]. Support for related policy items declined, particularly among those in New South Wales, who would have been most affected. Content analyses of media relating to the laws found that opponents of the laws often reframed the policies away from that of alcohol-related violence and health to that of an economic issue, listing the negative economic impact on businesses the laws would have [10]. Those opposed were also more frequently mentioned and quoted in the media than those who were in support of or neutral towards the policies. The number of stakeholders commenting against the laws in the media may have been a factor in the apparent reduction in public support of the laws since they were introduced [9]. Whether this decline in support has extended across alcohol policies in general, and across other states, has yet to be explored.

Drinking in Australia has changed substantially since the last comprehensive analysis of trends in attitudes. Per-capita consumption fell by 8.9% between 2010 and 2019, with an increasing number of Australians abstaining from alcohol and consumption rates among those who do drink decreasing [11]. These trends have been primarily driven by large declines in drinking among young people [11], whereas older Australians' drinking

has been relatively stable. Some researchers have argued that population drinking moves in long waves, partly due to the ways that attitudes to alcohol restrictions tend move along with consumption and harm levels. They argue that when consumption and harms increase and become more visible, support for restrictions increases, while it falls as problems decline [12]. Simultaneously, there are strong associations between attitudes towards alcohol policies and consumptions level, where decreases in consumption levels correspond with increases in support for policies [13]. Earlier research in Australia identified growing support for alcohol policy restrictions during a period of increasing consumption and public attention to alcohol [14]. This study will examine if and how attitudes have changed in Australia over a period when drinking has been steadily declining, particularly among young people, and high-profile interventions have been introduced. This study will build upon previous research regarding Australians' attitudes towards alcohol policies, using updated data. This study will explore how support varies in 2019, and examine whether drinker status, age, income, gender and other demographic variables are associated with support for different alcohol policy items than previously found. Previously established policy categories (e.g., Controlling Public Space captures policies relevant to this category) will be used to consistently examine trends over time. Finally, we will explore whether attitude trends have varied between population sub-groups based on key demographic (age, sex and state) and consumption measures over time.

## 2 | METHODS

### 2.1 | Sample

This paper uses data from the National Drug Strategy Household Survey (NDSHS) [15], a repeated cross-sectional national population study of alcohol and other drug use conducted every 3 years in Australia. The sample was recruited through a multi-stage stratified area random sample design of Australian households. Respondents were able to complete the questionnaire online, on paper or over the phone. While mode of administration varied over the years, estimates of consumption tend to increase or decrease in line with sales data over time [16]. The 2019 sample size was 22,274, and the response rate was similar to previous waves at 49.0%. Given our focus is on attitudes towards alcohol policies, only data for respondents aged 18 and over were included, to concentrate on participants who are at voting and drinking age. Data were further obtained from the last six waves (2004, 2007, 2010, 2013, 2016 and 2019) of the NDSHS [15, 17–21]

to measure trends over time. Across the six waves of the NDSHS, 106,006 participants aged 18 or above completed the survey (males = 47,845, females = 58,161). To remain consistent with the previous studies on attitudes towards alcohol policies [7, 8], respondents were excluded from the study if they did not answer any of the relevant alcohol policy items. Table S1, Supporting Information, shows the number of participants included in this study from each survey from 2004 to 2019.

## 2.2 | Measures

### 2.2.1 | Alcohol policy attitudes

Sixteen items in the 2019 NDSHS addressed the respondent's attitudes towards alcohol policies (see Table 1). Each question started with 'To reduce the problems associated with excessive alcohol use, to what extent would you support or oppose...?' Responses were answered on a 5-point Likert scale from 1 (strongly oppose) to 5 (strongly support) with 3 representing a neutral response (neither support nor oppose). Sixteen alcohol policy items were consistently administered until 2019. In 2019, the item 'Increase the number of alcohol-free events' was removed and the following item introduced: 'To have a minimum price for different alcoholic drinks. The price would be based on how much alcohol content is in each drink'. Given that this has only been asked once, it was not included in this study's analysis, but has been included in Table 1 for reference. This study will use the four-factor structure for the 16 consistently administered items found by Wilkinson et al. [7]. These factors are 'Controlling Accessibility', 'Promotion Limits and Warnings', 'Controlling Hazardous Behaviour', and 'Controlling Public Space'. The individual items that make up these factors can be viewed in Table 1. In 2019, one of the questions captured by the Controlling Public Space factor was not asked ('...increase the number of alcohol-free events'). The Controlling Public Space factor was not included for 2019 because of this. The mean total score for all consistently administered items was named 'General Restrictiveness'.

### 2.3 | Drinking measures

Respondents were categorised as abstainers or drinkers based on their response to questions regarding their past-year alcohol consumption. Drinkers (those who had consumed any alcohol over the past 12 months) were then asked standard graduated quantity-frequency survey items [22]. Using this graduated quantity frequency approach, respondents were questioned how often they

had consumed various quantities of alcohol (e.g., 1–2 drinks, 3–4 drinks, up to 20+ drinks) in the past 12 months and how often they had consumed these beverages (e.g., every day, 5–6 days a week, less often and never). Drinkers were categorised as 'risky-drinkers' (5+ standard drinks on any drinking occasion at least once a month) or non-risky drinkers. An Australian standard drink is defined as 10 g of pure alcohol.

## 2.4 | Demographics

Questions on sex, age, annual household income, attained education level, socio-economic advantage of the home neighbourhood (measured in quintiles) [23] and state or territory of residence were asked. A large proportion of respondents chose not to answer the question on income. In order to include all participants in the regression analyses, a separate category was created within the household income group variable (15% of the sample) for missing data.

## 2.5 | Analysis

All analyses were conducted using STATA version 18 [24], using weighted data through the use of the 'svy' suite of commands. The results were weighted to account for disproportionate representation in the sample compared with population benchmarks, and were post-weighted by geographic location, age and sex, with the total weighted  $n$  set equal to the unweighted  $n$ . The response rate and method of administration can be found in Table S1. The mean score and 95% confidence interval for each consistently asked policy item from 2004 to 2019 was reported. Then, using Wilkinson's factors [7], multivariable linear regressions predicting alcohol policy support in 2019 with demographic and consumption-related variables were run. Finally, we assessed whether trends in policy support varied by subgroups by running multivariable linear regression on the data from the 2010 to 2019. The General Restrictiveness score was the outcome variable, and interactions between year and each of the socio-demographic and consumption variables were used to assess whether attitude trends varies significantly. These years were selected in order to focus on the most recent declining trend. Where there were significant interactions, estimated marginal means were plotted in order to aid with interpretation.

## 3 | RESULTS

The mean score for each alcohol policy item asked in the NDSHS from 2004 to 2019 is given in Table 1. Histograms

TABLE 1 Means for items across six waves of the National Drug Strategy Household Survey (2004–2019).

Items	2004	2007	2010	2013	2016	2019
<i>Controlling accessibility</i>						
1. Increasing the price of alcohol	2.55 [2.53–2.57]	2.67 [2.64–2.69]	2.76 [2.74–2.79]	2.78 [2.76–2.80]	2.79 [2.77–2.81]	2.68 [2.65–2.70]
2. Reduce the number of outlets that sell alcohol	2.89 [2.87–2.91]	2.99 [2.97–3.02]	3.04 [3.02–3.06]	3.08 [3.06–3.10]	3.03 [3.01–3.05]	2.92 [2.90–2.94]
3. Reducing trading hours for all pubs and clubs	2.91 [2.89–2.94]	3.10 [3.08–3.13]	3.32 [3.30–3.34]	3.33 [3.31–3.35]	3.10 [3.08–3.12]	2.87 [2.85–2.90]
4. Raising the legal drinking age	3.20 [3.18–3.23]	3.36 [3.34–3.39]	3.44 [3.42–3.46]	3.36 [3.34–3.38]	3.21 [3.19–3.24]	3.10 [3.05–3.14]
5. Restrict late-night trading of alcohol	3.52 [3.50–3.54]	3.69 [3.66–3.71]	3.82 [3.80–3.84]	3.83 [3.81–3.85]	3.59 [3.57–3.62]	3.41 [3.38–3.43]
6. Increasing the tax on alcohol products to pay for health, education, and the cost of treating alcohol-related problems	3.04 [3.01–3.06]	3.11 [3.09–3.14]	3.15 [3.13–3.18]	3.17 [3.15–3.20]	3.21 [3.18–3.23]	3.09 [3.06–3.11]
Total	3.02 [3.00–3.04]	3.15 [3.13–3.18]	3.26 [3.24–3.27]	3.26 [3.24–3.28]	3.16 [3.14–3.18]	3.03 [3.01–3.05]
<i>Promotional limits and warnings</i>						
7. Limit advertising for alcohol on TV until after 9:30 PM	4.04 [4.02–4.06]	4.05 [4.03–4.07]	4.05 [4.03–4.06]	4.08 [4.07–4.10]	4.01 [4.00–4.03]	4.00 [3.99–4.02]
8. Banning alcohol sponsorship of sporting events	3.47 [3.45–3.49]	3.52 [3.50–3.54]	3.50 [3.48–3.52]	3.64 [3.62–3.66]	3.62 [3.60–3.64]	3.60 [3.58–3.62]
9. Requiring guidelines on all alcohol containers	3.96 [3.94–3.98]	3.98 [3.96–4.00]	3.88 [3.87–3.90]	3.86 [3.84–3.87]	3.86 [3.85–3.88]	3.84 [3.83–3.86]
10. Increasing the size of standard drink labels on alcohol containers	3.90 [3.88–3.92]	3.88 [3.86–3.90]	3.82 [3.80–3.83]	3.78 [3.76–3.79]	3.75 [3.73–3.77]	3.74 [3.72–3.76]
Total	3.84 [3.83–3.86]	3.86 [3.84–3.87]	3.81 [3.80–3.82]	3.84 [3.82–3.85]	3.81 [3.79–3.83]	3.82 [3.81–3.84]
<i>Controlling hazardous behaviour</i>						
11. Stricter enforcement of the law against serving customers who are drunk	4.23 [4.22–4.25]	4.23 [4.21–4.25]	4.24 [4.22–4.25]	4.20 [4.19–4.22]	4.14 [4.13–4.17]	4.09 [4.07–4.10]
12. More severe legal penalties for drink driving	4.39 [4.38–4.41]	4.40 [4.38–4.41]	4.38 [4.37–4.40]	4.36 [4.35–4.38]	4.33 [4.31–4.34]	4.33 [4.31–4.34]
13. Strict monitoring of late night-licensed premises	4.00 [3.98–4.02]	4.09 [4.07–4.11]	4.18 [4.17–4.20]	4.18 [4.16–4.19]	3.98 [3.96–4.00]	3.83 [3.81–3.85]
Total	4.21 [4.19–4.22]	4.24 [4.22–4.25]	4.27 [4.25–4.28]	4.24 [4.23–4.26]	4.15 [4.14–4.17]	4.09 [4.08–4.11]
<i>Controlling public space</i>						
14. Serving only low-alcohol drinks, such as low-alcohol beer, at sporting events or venues	3.60 [3.58–3.62]	3.57 [3.55–3.60]	3.56 [3.54–3.58]	3.49 [3.47–3.52]	3.44 [3.41–3.46]	3.36 [3.34–3.39]
15. Increase the number of alcohol-free events	3.77 [3.75–3.79]	3.74 [3.72–3.77]	3.74 [3.72–3.76]	3.73 [3.71–3.75]	3.67 [3.65–3.69]	N/A
16. Increase the number of alcohol-free zones or dry areas	3.78 [3.76–3.80]	3.76 [3.73–3.78]	3.79 [3.77–3.81]	3.75 [3.73–3.77]	3.67 [3.65–3.69]	3.54 [3.52–3.56]
Total	3.72 [3.70–3.74]	3.69 [3.67–3.71]	3.70 [3.68–3.72]	3.66 [3.64–3.67]	3.60 [3.58–3.61]	N/A

TABLE 1 (Continued)

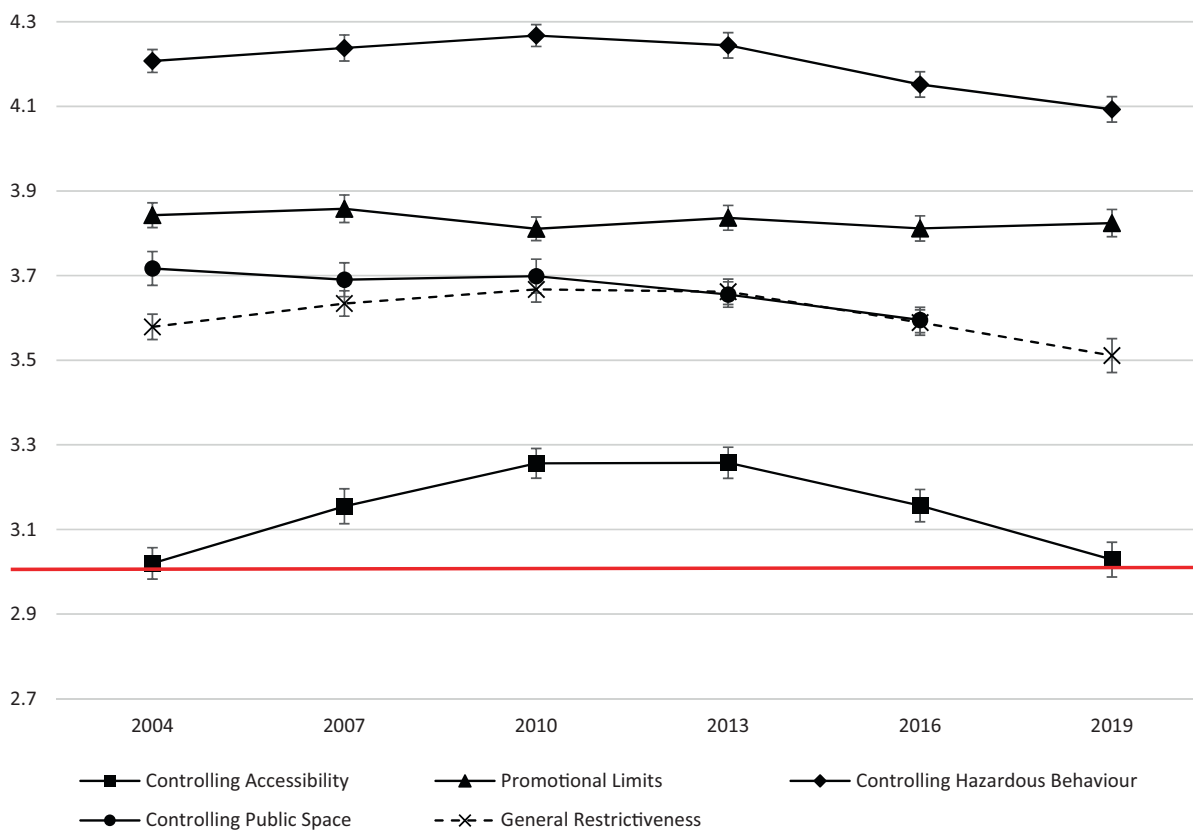
Items	2004	2007	2010	2013	2016	2019
<i>Items not consistently asked</i>						
17. To have a minimum price for different alcoholic drinks. The price would be based on how much alcohol content is in each drink	N/A	N/A	N/A	N/A	N/A	3.15 [3.13–3.18]
18. Displaying health warnings on all alcoholic containers	N/A	N/A	N/A	N/A	N/A	3.81 [3.79–3.82]
19. Stricter enforcement of law against supplying minors	N/A	N/A	N/A	N/A	3.99 [3.97–4.00]	4.17 [4.15–4.18]
20. Support for regulation of alcohol supply to minors on private premises	N/A	N/A	N/A	N/A	3.54 [3.52–3.56]	3.75 [3.73–3.77]
Total	3.58 [3.56–3.59]	3.63 [3.62–3.65]	3.67 [3.65–3.68]	3.66 [3.65–3.68]	3.59 [3.57–3.60]	3.51 [3.49–3.53]

Note: Each item was asked with the prefacing question 'To what extent do you support or oppose...?' Factors only include questions used consistently throughout the six issues of the National Drug Strategy Household Survey from 2004 to 2019. The category 'Items not consistently asked' is not applicable to these factors. The means included in this table lie on scale of 1 strongly oppose; 2 oppose; 3 neither support or oppose; 4 support; 5 strongly support. Abbreviation: N/A, not applicable.

of the means were visually inspected and displayed normal distributions. Items were excluded if they were not included consistently throughout the surveys. Policy items have also been placed into the factors identified from Wilkinson's (2009) work (Controlling Accessibility, Promotional Limits and Warnings, Controlling Hazardous Behaviour and Controlling Public Space). Lowest support in the last wave (2019) was found for the item 'Increasing the price of alcohol'. Highest support was found for the item 'More severe legal penalties for drink driving'. Items that fell under the 'Controlling Accessibility' factor were the least supported of the factors, demonstrating the lowest levels of approval consistently.

A graph displaying the mean scores for the four broad policy factors from the 2004 to 2019 NDSHS waves is shown in Figure 1. Lower levels of support were found in 2004 compared with 2019 with a peak in 2010, reflecting earlier results found by Wilkinson et al. [7] and Callinan et al. [8]. The controlling public space factor remained the least supported and had a greater decline between 2016 and 2019 than other factors. Controlling hazardous behaviour was consistently the most supported factor across all study years. Promotional limits demonstrated the least variation in mean score across the study period.

The results for a series multivariable regression analysis predicting attitude scores from demographic variables are given in Table 2. Women were found to consistently be more supportive of all policy interventions when compared with males across all factors. Older age groups were compared with the youngest group. Younger respondents were less likely to be in support of policies across all factors. Conversely, older respondents, and particularly, the 65+ group, were the most supportive across all factors compared with the youngest group. Those in a higher household income bracket were more likely to be less supportive of all factors when compared with those with a lower household income. Looking at education, those who held a higher level of schooling were more supportive of alcohol policies compared with those who had not achieved their year 12 certificate. Those who resided in areas of the highest socio-economic advantage were more generally likely to be in support of policies than those in the areas of lowest socio-economic advantage. This was displayed across all factors apart from controlling accessibility, which did not demonstrate any significant differences between the groups. Those in the Northern Territory and Tasmania were consistently more likely to be in support of alcohol policy measures compared with New South Wales, apart from the Promotional Limits and Warnings. Drinkers were overall less supportive across most measures when compared with abstainers, with risky drinkers less supportive than non-risky drinkers.



**FIGURE 1** Mean level of support for alcohol policy factors in Australia 2004–2019. The means included in this table lie on scale of 1 strongly oppose; 2 oppose; 3 neither support or oppose; 4 support; 5 strongly support. Please note that the red line indicates a mean score of ‘3’ and represents a neutral opinion. The Controlling Public Space factor was not included for 2019 due to one of the questions it captured not being asked.

A multiple linear regression model predicting overall policy support (General Restrictiveness) with interaction effects between age, sex, drinker status and state by year was explored. The full model details can be found in Table S2, Supporting Information. The years 2004 and 2007 were excluded from this model to focus on the most recent decline in support, which began in 2010. Main effects for gender, age, drinker type and state were observed, with women, older adults and abstainers significantly more likely to be in support of restrictive policies. Three statistically significant interactions were found. An interaction between age and year predicting score on the general restrictiveness factor was found, and the estimated marginal means from this analysis are presented in Figure 2a. Overall, a gradual decrease in support by all age groups can be observed over the years. In particular, confidence intervals for respondents aged 18–24 shifted from being clearly lower from other age groups to overlapping in the latter years. Less of a difference was thus displayed between support for policies between the younger age groups and those in higher age groups over time. Another significant interaction as found between drinker type (abstainer, non-risky drinker and risky drinker) and

year predicting score on the general restrictiveness factor. While this interaction is significant, the marginal means displayed in Figure 2b indicate that they were not particularly meaningful, with the three groups decreasing support uniformly. A final interaction between state and year can be seen in Figure 2c, where a decrease can be seen across all states. States affected by the introduction of high-profile policies, Queensland and New South Wales, displayed a particularly noticeable decline in support across the targeted years.

## 4 | DISCUSSION

This study aimed to re-examine and update previous analyses assessing Australian public attitudes towards alcohol policies using recent data. Support generally decreased, particularly for policies relating to reducing the accessibility of alcohol. These changes in support were not major, but instead minor shifts in attitudes that reflected an overall decrease across the population.

Consistent with previous research, no demographic or drinking group was found to be a particularly large

**TABLE 2** Multivariable linear regression predicting alcohol policy support with demographic factors in 2019.

	Controlling accessibility	Promotional limits and warnings	Controlling hazardous behaviour	Controlling public space
<b>Sex</b>				
Male	0 (ref)	0 (ref)	0 (ref)	0 (ref)
Female	0.15 (0.11, 0.19)***	0.22 (0.17, 0.26)***	0.21 (0.17, 0.25)***	0.16 (0.12, 0.21)***
<b>Age, years</b>				
18–24	0 (ref)	0 (ref)	0 (ref)	0 (ref)
25–34	0.03 (–0.06, 0.12)	–0.07 (–0.15, 0.02)	–0.05 (–0.13, 0.04)	–0.12 (–0.22, –0.02)*
35–44	0.23 (0.15, 0.32)***	0.10 (0.02, 0.19)*	0.13 (0.04, 0.21)**	0.06 (–0.04, 0.15)
45–54	0.33 (0.24, 0.41)***	0.20 (0.12, 0.29)***	0.19 (0.11, 0.28)***	0.19 (0.09, 0.29)***
55–64	0.40 (0.32, 0.49)***	0.32 (0.24, 0.40)***	0.33 (0.24, 0.41)***	0.33 (0.24, 0.43)***
65+	0.46 (0.37, 0.54)***	0.36 (0.28, 0.45)***	0.40 (0.31, 0.48)***	0.37 (0.27, 0.47)***
<b>Household income</b>				
<30,700	0 (ref)	0 (ref)	0 (ref)	0 (ref)
33,700–64,999	0.06 (–0.02, 0.15)	0.12 (0.03, 0.20)**	0.07 (–0.01, 0.16)	0.09 (–0.01, 0.19)
65,000–93,999	0.07 (–0.02, 0.01)	0.12 (0.04, 0.20)**	0.12 (0.04, 0.20)**	0.09 (–0.00, 0.18)
104,000+	–0.07 (–0.15, –0.02)	0.05 (–0.03, 0.13)	0.07 (–0.01, 0.15)**	–0.03 (–0.12, 0.06)
<b>Education status</b>				
Less than year 12	0 (ref)	0 (ref)	0 (ref)	0 (ref)
Year 12	0.12 (0.03, 0.20)**	0.13 (0.05, 0.22)**	0.07 (–0.01, 0.16)	0.10 (0.01, 0.19)*
Certificate or associated/ undergraduate diploma	0.15 (0.09, 0.22)***	0.18 (0.12, 0.25)***	0.16 (0.10, 0.23)***	0.16 (0.09, 0.24)***
Bachelors or higher	0.32 (0.25, 0.39)***	0.41 (0.34, 0.48)***	0.22 (0.15, 0.29)***	0.31 (0.24, 0.39)***
<b>State</b>				
New South Wales	0 (ref)	0 (ref)	0 (ref)	0 (ref)
Victoria	0.05 (–0.00, 0.11)	0.06 (0.01, 0.12)*	0.05 (–0.00, 0.11)	–0.01 (–0.07, 0.05)
Queensland	0.02 (–0.03, 0.08)	–0.08 (–0.14, –0.02)**	0.09 (0.04, 0.15)**	0.01 (–0.06, 0.07)
South Australia	–0.01 (–0.07, 0.05)	–0.01 (–0.07, 0.05)	0.05 (–0.02, 0.11)	0.01 (–0.07, 0.08)
Western Australia	0.01 (–0.07, 0.05)	–0.00 (–0.07, 0.07)	0.05 (–0.02, 0.12)	–0.03 (–0.11, 0.05)
Tasmania	0.12 (0.03, 0.20)**	0.10 (0.02, 0.19)*	0.14 (0.06, 0.22)**	0.10 (0.01, 0.20)*
ACT	0.05 (–0.03, 0.14)	–0.01 (–0.10, 0.07)	–0.00 (–0.08, 0.08)	0.10 (0.01, 0.18)
Northern Territory	0.12 (0.03, 0.21)*	–0.11 (–0.20, –0.02)*	0.13 (0.03, 0.22)**	0.50 (–0.05, 0.15)
<b>Neighbourhood socio-economic advantage</b>				
1—Most disadvantaged	0 (ref)	0 (ref)	0 (ref)	0 (ref)
2	0.05 (–0.02, 0.12)	0.08 (0.01, 0.15)*	0.08 (0.01, 0.15)*	0.11 (0.04, 0.19)**
3	0.07 (0.00, 0.14)	0.12 (0.05, 0.19)***	0.10 (0.03, 0.17)**	0.07 (–0.01, 0.14)
4	0.06 (–0.00, 0.14)	0.14 (0.07, 0.20)***	0.11 (0.04, 0.18)**	0.13 (0.05, 0.20)**
5—Most advantaged	0.01 (–0.06, 0.08)	0.16 (0.09, 0.22)***	0.09 (0.02, 0.16)*	0.04 (–0.04, 0.12)
<b>Drinker type</b>				
Abstainer	0 (ref)	0 (ref)	0 (ref)	0 (ref)
Low-risk drinker	–0.52 (–0.59, –0.45)***	0.06 (–0.00, 0.13)	0.04 (–0.02, 0.11)	–0.20 (–0.27, –0.12)***
Risky drinker	–1.08 (–1.15, –1.01)***	–0.22 (–0.29, –0.15)***	–0.30 (–0.37, 0.23)**	–0.79 (0.87*, –0.71)***

Abbreviation: ACT, Australian Capital Territory.

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

contributor to the decrease in support for policy items. Instead, the decline appears to represent a change across the entire population. Still, demographic differences are often observed when exploring attitudes towards alcohol policies, with women and older individuals more likely to be in support of policies [6]. These differences were found in this study and remained consistent over time as support decreased fairly uniformly among these groups. While it is not a particularly striking finding that attitudes are shifting homogeneously, what is interesting is that these shifts are occurring in a time where Australian's are becoming an increasingly drier cohort [11]. There is generally a strong association between attitudes towards alcohol policies and consumption level, with those who consume less alcohol more likely to support alcohol policies [25]. Thus, we would expect that, as drinking declines in the population, support for restrictions would increase. However, the results of this study suggest that this is not happening: consumption has decreased which has not led to a corresponding increase in support for policy. In contrast, some scholars argue that support for restrictions increase as consumption and harms increase and become more visible (and vice versa) [13]. Our findings are broadly in line with this theory, with respondents increasingly disapproving of restrictions as alcohol consumption declines.

More specifically, younger drinkers remained firm in their general opposition towards all alcohol policies. It is well established that younger individuals are generally less supportive of alcohol policies than other age groups [13]. That this trend has held true, even in the context of younger drinkers consuming less per capita than before, is surprising in the context of abstainers and people who drink less are less likely to support alcohol policies [25]. It has been recently recorded that younger people are less likely to consider excessive alcohol as the issue of most concern for Australian society than their older counterparts [26]. Despite this, younger drinkers were growing in concern about alcohol-related harms [26]. Reasons for these conflicting findings are unknown. There may currently be a disconnect between attitudes towards the harmful effects of alcohol, consumption levels, and attitudes towards policy which needs to be further examined, particularly among this younger generation.

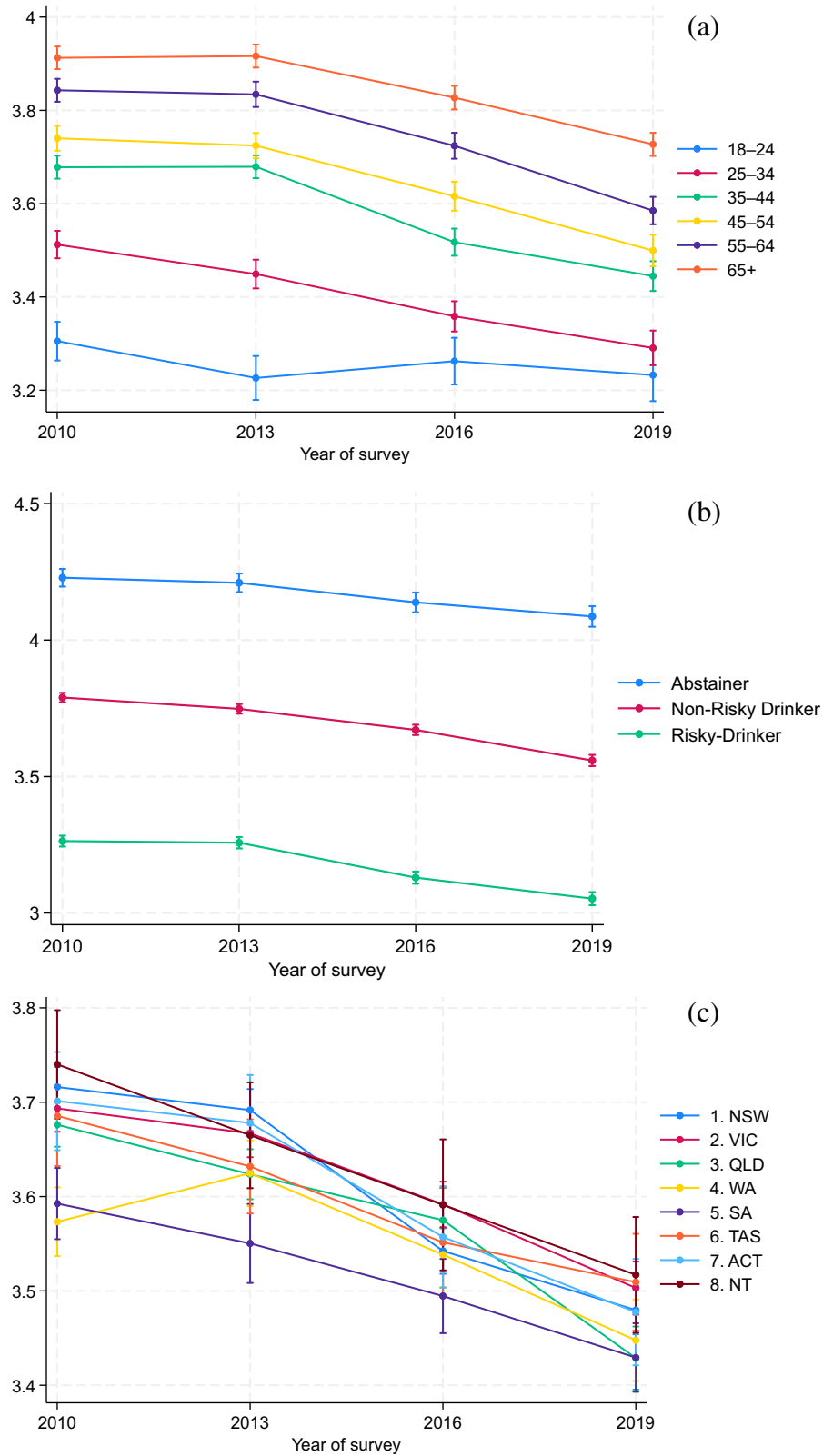
The decrease in support could also be in response to the introduction of a series of high-profile alcohol policies, such as the Sydney lock-out laws and the Queensland reduction in trading hours, which have been widely published in the media, often negatively. We know the media can play an integral role in shaping public opinion [27]. A content analysis of the media representation of the Sydney lock-out laws found that those who were against the laws were more frequently quoted and

mentioned by the media compared with those who were supportive or neutral [10]. While a causal relationship is difficult to establish, it could be a contributing factor to declines in public support of the Sydney-specific laws, and alcohol policies more generally. The notable decrease in support across New South Wales in this study's results may support this. Similarly, the shift could be a decrease in support for political involvement in what is deemed a personal matter. A study examining changes in Danish attitudes towards alcohol policy found little support for the regulation of the availability of alcohol, viewing alcohol consumption as a more private matter that did not require more political intervention [28]. Future research conducted across multiple countries could examine whether attitudes towards alcohol policies have changed alongside broader attitudinal shifts towards the government in general.

The decline may also be corresponding with a shift away from the perception of alcohol as causing the most harm to society compared with other types of drugs. Methamphetamine use has been a focus for not only the Australian government, but widely reported in the media in the past decade [29]. A common framing of the drug in the media is focused on the legal consequences of its use and the cost to society of related crime. Accompanying this increase in focus on the drug has been a rise in public concern, with methamphetamines ranked as the drug of most serious concern for the general community in the 2019 NDSHS [30]. A study examining media reporting on alcohol and other drugs in Australia identified that media entries on methamphetamine overwhelming focused on criminal justice, crime or law enforcement [31]. Comparatively, only one-third of alcohol-related media entries focused on crime/law issues. While the shift could be caused by some of these factors, further research is necessary to examine the underlying reason for the change more closely.

It is important to note that the following study did hold some limitations. First, as is the case with survey data in general, the NDSHS relies on self-reported alcohol consumption data, which can hold weaknesses with heavier drinkers, particularly in regards to underestimating their consumption [22, 32]. Similar to other Australian telephone-based surveys, the NDSHS response rates were not particularly high, ranging from 46% to 51%. This can result in some non-response bias, with some work finding that heavy drinkers are less likely to respond to population surveys [32, 33]. However, previous studies have shown that trends in the NDSHS broadly mirror more objectively measured trends (at least for consumption), providing some confidence that our results represent real shifts in attitudes over time [34]. Further, the methods used to collect data (see Table S1)





**FIGURE 2** (a) Estimated marginal means of change in support for alcohol policy by age and year of survey with 95% confidence intervals. (b) Estimated marginal means of change in support for alcohol policy by drinker type and year of survey with 95% confidence intervals. (c) Estimated marginal means of change in support for alcohol policy by state and year of survey with 95% confidence intervals. ACT, Australian Capital Territory; NSW, New South Wales; NT, Northern Territory; QLD, Queensland; SA, South Australia; TAS, Tasmania; VIC, Victoria; WA, Western Australia.

for the NDSHS have changed over time, including between the period examined in this study. These changes raise some concerns for consistency across the time periods studied and potential issues for comparability. However, analyses were conducted examining these concerns and found no major impacts of varying study modes on responses [35]. Finally, caution should be taken when generalising the results, as respondents who did not answer any questions regarding alcohol policy items were excluded from the study.

Overall, the results of this study demonstrate that attitudes towards public health-oriented alcohol policies among the Australian population have declined without any obvious demographic group causing this shift. Importantly, it has occurred during a period of overall decreasing alcohol consumption. While there could be a range of potential reasons for this homogenous shift in attitudes, further research is necessary to explore possible underlying causes in depth.

## AUTHOR CONTRIBUTIONS

Each author certifies that their contribution to this work meets the standards of the International Committee of Medical Journal Editors.

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## CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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