

Australians' Support for Alcohol Price-based Policies

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Abstract

Background: Price-based policies are effective alcohol harm minimisation policy options.

This paper examines public support for price-based policies based on patterns of consumption and expenditure, to determine if the extent to which an individual may be affected by a policy influences their support.

Methods: The current study included 1,684 Australian residents (59.8% male, M_{age} 43.8 [SD=16.7]). Respondents who purchased and consumed alcohol in the past six months were asked about their support for potential changes in a series of price-based policies.

Results: Increasing price was less likely to be supported than either implementing a minimum price or a tax-increase earmarked to pay for alcohol harms. Increasing price and taxing drinkers were more likely to be supported by older people and women. We found no relationship between income or perceived impact of price increases on purchasing and level of support.

Conclusion: Contrary to the idea that public support might be partly influenced by ability to pay for alcohol, support for a minimum unit price was not related to price paid per drink or income, only amount consumed. Thus, heavier drinkers may be inherently unlikely to support price-based policies even when these policies would have little impact on their actual purchasing.

Key words: Price-based policy, policy support, alcohol, Australia, self-interest

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Introduction

Alcohol is a significant and costly public health burden, causally related to over 60 medical conditions (AIHW, 2016). Price-based policies – i.e., taxation and increasing the price of alcohol through minimum unit pricing [MUP] – are effective alcohol harm minimisation policy options, supported by a strong evidence base, demonstrating significant reductions in consumption and associated harms (Wagenaar, Salois & Komro, 2009). Effects of price-based policies are heterogeneous, driven by factors like the level of alcohol consumption, purchasing patterns, drinking locations and the risk of harm from consumption (Holmes et al., 2014). A modelling study conducted in the United Kingdom found that moderate drinkers, regardless of their income, were “little affected” as a result of the introduction of a MUP (Holmes et al., 2014). Instead the greatest effects were noted for harmful drinkers, which often includes those on lower incomes (Holmes et al., 2014). This may similarly be the case in Australia where low-cost alcohol is most likely to be purchased by lower-income groups and heavy drinkers (Callinan, Room, Livingston & Jiang, 2015). For this reason, these population groups are also thought to receive the greatest benefits from price increases in terms of reduced mortality and morbidity (Holmes et al., 2014).

Public support is a key driver of alcohol policy. Overall, policies with the strongest evidence for reducing harm, including increasing price, have been shown to have lower support compared to policies that target specific individuals (Callinan, Room & Livingston, 2014;

Tobin, Moodie & Livingstone, 2011), which may in part be due to individualistic definitions of harms. Support for more restrictive policies, including price-based policies, tends to be highest among older population groups, women and light or non-drinkers (see for example: Callinan et al., 2014; Parry et al., 2018; Wilkinson, Room & Livingston, 2009), and level of support has a strong inverse relationship with drinking status/patterns (Parry et al., 2018; Wilkinson et al., 2009). Broadly, support for policy restrictions declined from 1995-2000 (Wilkinson et al., 2009) but started to increase post 2004 (Callinan et al., 2014; Livingston & Callinan, 2017). Notably, evidence-based policies remained less popular than the more targeted policies analysed (Livingston & Callinan, 2017).

Further improving our understanding of what drives public support for effective alcohol policy is important. It has been suggested that levels of support may also be determined by self-interest, that is individuals may be more likely to support policies that will have, or are perceived to have, less intrusive and direct impacts on their lives (Chong, Citrin & Conley, 2001; Karlsson, Holmberg & Weibull, 2020). That said, there has been surprisingly little consideration of price paid for alcohol and support for price-based policies, despite evidence that it influences pricing policy effects (Holmes et al., 2014). Therefore, this paper aims to examine support for price-based policies based on patterns of consumption and expenditure, to determine if the extent to which an individual may be affected by a policy influences their support for that policy.

Method

Sample

In 2013, 2,020 Australians aged 16 and over were recruited via computer assisted telephone interview. Random digit dialling was used to recruit a dual-frame sample (60% landline, 40%

mobile) with an oversampling of risky drinkers. This oversampling consisted of only asking 1/3 of those who did not report at least monthly sessions of five or more standard drinks (10g ethanol) to participate. In landline samples the most recent birthday method was used to select among multiple eligible participants within the household. The AAPOR Response Rate 3 was 37.2% (AAPOR, 2008). Given the focus on purchasing and consumption of alcohol, the sample of interest was those respondents who reported purchasing and consuming alcohol in the past six months (86%). The current study focused on 1,684 respondents, 59.8% male, with a mean age of 43.8 (SD=16.7).

Measures

This Australian study was part of the International Alcohol Control (IAC) study and the cross-national study methodology guided many of the survey questions reported here (Casswell et al., 2012).

Attitudes to alcohol policy were assessed via 12 questions starting with the following text, “Now we have some questions about whether or not you support the various ways in which alcohol can be managed in society. We are interested in whether you would strongly oppose, oppose, neither support or oppose, support or strongly support the following:” The three items relevant to this study were:

- *An increase in the price of alcohol*
- *Introducing a minimum price for alcohol (i.e., per standard drink)*
- *Taxing drinkers to pay for the cost of alcohol related harm to society*

We focused on each of these items as well as the average level of support across all three price-based policies.

Drinks per day was assessed using beverage specific location-based loops with a six-month reference period. Respondents were first asked if they consumed alcohol at eight different

locations. For each of these locations they were asked how often they drank there, and what they would normally drink on a *usual* drinking occasion including the beverage type, container they would use and usual quantity. This information was compiled to get a measure of total volume consumed which was then divided by 182 (days in six-months) in order to get a mean number of drinks per day. This approach has been shown to provide excellent coverage of per-capita consumption, suggesting it is relatively reliable (Casswell, Huckle & Pledger, 2002).

Purchase price was again assessed using location-based beverage-specific loops.

Respondents were asked about where they purchased their alcohol and for each location, they gave the frequency of their visits, the alcohol purchased on a usual visit and the usual price paid for each drink type. The average price paid per standard drink was calculated with this information – we only examine off-premise purchasing in order to avoid a confound based on the proportion of alcohol purchased on-premise (where alcohol is significantly more expensive). This off premise consumption made up 78.6% of all alcohol purchased by respondents.

Price Salience was assessed by asking respondents how much, on a scale of 1 to 10, they think the amount of alcohol they purchased would be affected by an increase in price.

Respondents were also asked about their household income, age and sex. All continuous variables were categorised into three or four roughly equal groups. More detailed information on the recruitment and measures used can be found in the study's technical report (Jiang, Callinan & Room, 2014). Ethical approval was obtained from Eastern Health (E07 12-13).

Analysis

All analyses were pre-weighted to adjust for number of people in the household and risky drinker status and post-weighted to adjust for differences with population estimates based on

age, sex and geographic location. Descriptive statistics and multiple logistic regression models were conducted using Stata version 15. Missing data ranged from 0.7 to 2.6% on the outcome variables and from 0 to 1.3% on the predictor variables except for household income which had 12.8% missing data. For this variable the missing data was not assumed to be missing at random and therefore a missing category was included in the regression models (but not shown) as we did not want these participants omitted. For the remaining variables respondents were omitted from any regression models when they were missing on any variable.

Results

The mean level of support for the three-individual price-based policies and the average level of support for these three policies combined are shown in Table 1. Increasing the price of alcohol was the least likely to be supported by all demographic groups. Overall younger male and heavier drinking respondents were generally less likely to support the policies presented. In order to investigate these relationships more thoroughly, regression models predicting each of the attitude-based outcome variables were run.

Regression results show support for increasing price and taxing drinkers to pay for the cost of alcohol (earmarked tax increases) was more likely in older respondents. We found no relationship between income or price salience and support for any policies. High-risk drinkers (those who consumed five or more standard drinks per day) were significantly less likely to support all price-based policies, while the price paid per drink was not significantly related to attitudes to any policies.

[Table 1 Here]

Discussion

Our overall findings regarding the demographic determinants of support are consistent with several previous studies, including increasing support among older participants (Callinan et al., 2014; Parry et al., 2018; Wilkinson et al., 2009), and findings of an inverse relationship between level of support and drinking patterns (Parry et al., 2018). In our sample, high-risk consumption seems to be the most significant predictor of support. While some other studies have found this association to be relatively modest (Karlsson et al., 2020), here all price-based policies were significantly less likely to be supported by those consuming at risky levels (5+).

We found that young men and heavier drinkers were least likely to support all price-based policies. This partly reflects that they are more likely to be affected by such policies, as a result of consuming more alcohol than other drinkers (AIHW, 2016), although the consistency of findings across different price policy options suggests that respondents were probably not making calculations about the specific impacts of each policy on their purchasing and this opposition may reflect broad resistance to alcohol control policies. In general though, heavy drinkers are most affected by pricing policies (at least in absolute terms) (Callinan et al., 2015; Holmes et al., 2014), so there is likely some self-interest involved here as well.

There are several non-significant findings that warrant attention. Firstly, there was no relationship between income and policy support. Secondly, price paid per drink was not significantly related to attitudes to any of the price-based policies. The absence of significant associations regarding price and income are notable given the lack of previous research on this topic. From these results it seems that price-based policies are equally unpopular

irrespective of their likely financial impact on respondents. Broader attitudes towards state control or beliefs regarding the source of alcohol problems may be potential drivers of support for price policies, as previously proposed (Karlsson et al., 2020). In other words, heavier drinkers may be inherently unlikely to support price-based policies even when these policies would have little impact on their actual purchasing. More research is needed to explore whether pricing policy support can be altered via clearer communication about the specific impacts these policies would have.

Despite overall fluctuations in policy support (Livingston & Callinan, 2017; Wilkinson et al., 2009) and the general low level of support for price-based policies, these results do partly support the notion of self-interest as a determinant of support in as much as those who drink more are more opposed to increased prices. However, the lack of association between income or price-paid and support for pricing policies complicates this simple relationship somewhat. Implementing a MUP would only affect those people who purchase cheap alcohol, however price paid for alcohol did not predict support for these policies, only the amount of alcohol consumed, suggesting policy support may reflect broader attitudes to alcohol control or taxation rather than self-interested calculations of actual policy impact. Where public support and opinion in relation to health policies remains negative it is unlikely policies will gain ground and be successfully implemented (Karlsson et al., 2020). In future, policy makers and governments need to consider whether they can better communicate the specific effects of alcohol policies both to highlight where financial impacts may be small and to better communicate the likely benefits of such policies in terms of reduced harm at the population level.

Some study limitations need to be kept in mind when interpreting these results. Firstly, only those participants with access to either a landline or mobile telephone and who were proficient in English were included in the study. Secondly, being based on cross-sectional survey data, these results cannot say much about change in support for price-based policies. Additionally, and common to survey methodologies, there is the potential for recall bias to affect the accuracy of reporting consumption over the past six months. In conclusion, the present study has investigated support for alcohol-price policies finding patterns of consumption are a major factor affecting the success of alcohol policies, while price paid per drink and price salience were found to have no effect.

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Table 1. Mean level of support for price-based policies and linear regression models predicting level of support by demographic and drinking-related variables

		Mean level of support (n=1,727)				Regression Models			
		Increase price	Taxing drinkers	MUP	Price attitudes	Increase price (n=1647)	Taxing drinkers (n=1635)	MUP (n=1616)	Price attitudes (n=1594)
Age	<35	2.23 (2.05, 2.40)	2.88 (2.71, 3.05)	2.94 (2.77, 3.11)	2.68 (2.55, 2.82)	0 (Ref)	0 (Ref)	0 (Ref)	0 (Ref)
	35-49	2.22 (2.04, 2.40)	2.96 (2.70, 3.21)	3.08 (2.88, 3.27)	2.75 (2.59, 2.91)	-0.10	0.03	-0.05	0.20
	50+	2.52 (2.37, 2.67)	3.13 (2.97, 3.28)	3.16 (3.03, 3.29)	2.94 (2.83, 3.06)	0.38	0.39*	0.12	0.53**
Sex	Male	2.23 (2.11, 2.36)	2.95 (2.82, 3.09)	2.96 (2.84, 3.08)	2.72 (2.62, 2.82)	0 (Ref)	0 (Ref)	0 (Ref)	0 (Ref)
	Female	2.44 (2.30, 2.59)	3.04 (2.86, 3.22)	3.18 (3.03, 3.31)	2.89 (2.76, 3.01)	0.07	-0.09	0.16	0.10
Income#	low	2.23 (2.05, 2.41)	2.98 (2.79, 3.17)	2.99 (2.81, 3.17)	2.74 (2.60, 2.88)	0 (Ref)	0 (Ref)	0 (Ref)	0 (Ref)
	mid	2.47 (2.26, 2.68)	3.19 (2.96, 3.42)	3.12 (2.92, 3.33)	2.92 (2.75, 3.09)	0.41	0.35	0.20	0.43
	high	2.33 (2.19, 2.47)	2.96 (2.77, 3.13)	3.01 (2.86, 3.15)	2.77 (2.65, 2.90)	0.32	0.05	-0.07	0.24
Price paid per drink	<\$1.00 (a)	2.45 (2.24, 2.67)	3.07 (2.74, 3.39)	3.08 (2.83, 3.34)	2.88 (2.66, 3.10)	0 (Ref)	0 (Ref)	0 (Ref)	0 (Ref)
	\$1.00-\$1.49 (b)	2.24 (2.07, 2.40)	2.79 (2.61, 2.98)	3.06 (2.90, 3.23)	2.70 (2.56, 2.84)	-0.11	-0.10	0.14	-0.29
	\$1.50-\$1.99 (c)	2.09 (1.92, 2.26)	3.04 (2.82, 3.27)	2.95 (2.77, 3.12)	2.69 (2.54, 2.83)	-0.40	0.23	0.09	-0.20
	\$2.00+ (d)	2.60 (2.41, 2.80)	3.15 (2.94, 3.36)	3.16 (2.98, 3.34)	2.97 (2.83, 3.12)	0.29	0.28	0.17	0.28
Drinks per day	< 2 per day (e)	2.57 (2.43, 2.70)	3.17 (3.01, 3.32)	3.22 (3.09, 3.34)	2.98 (2.87, 3.09)	0 (Ref)	0 (Ref)	0 (Ref)	0 (Ref)
	2-4.9 per day (f)	2.11 (1.95, 2.26)	2.90 (2.71, 3.08)	2.91 (2.75, 3.06)	2.63 (2.51, 2.77)	-0.83***	-0.33	-0.36*	-0.71***
	5+ per day (g)	1.73 (1.60, 1.86)	2.44 (2.24, 2.63)	2.70 (2.51, 2.88)	2.30 (2.16, 2.44)	-1.19***	-0.80***	-0.73***	-1.05***
Price Salience	Low	2.34 (2.18, 2.51)	2.97 (2.76, 3.18)	3.02 (2.83, 3.17)	2.77 (2.63, 2.90)	0 (Ref)	0 (Ref)	0 (Ref)	0 (Ref)
	Medium	2.41 (2.25, 2.57)	3.02 (2.84, 3.20)	3.15 (3.00, 3.30)	2.87 (2.73, 3.00)	0.04	0.09	0.19	0.15
	High	2.25 (2.08, 2.42)	2.97 (2.78, 3.16)	3.02 (2.85, 3.18)	2.74 (2.60, 2.88)	-0.14	0.04	0.01	0.06

MUP = Minimum Unit Price. # A category for respondents missing on this variable was included in the model to avoid losing respondents but is not shown here.

*p < .05. ** p < .01. *** p < .001